

Title

Distally Based Peroneus Brevis Rotation Flap in a Tongue-Type Calcaneus Fracture with Large Soft Tissue Deficit

Submit Date

10/14/2024

Correspondent

Last Name: Leyk

Full Name: Madison G Leyk, DPM

Practice/Company/Residency Program:

Email: madison.leyk@hcmcd.org

Hennepin Healthcare

Authors

Author 1: Madison G Leyk, DPM

Author 2: Bobbie M Sternad, DPM

Author 3: Kimberly L Bobbitt, DPM FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case study reviews a distally based peroneus brevis rotational flap with a split thickness skin graft (STSG) to cover a large calcaneal soft tissue deficit after a tongue-type calcaneus fracture with soft tissue necrosis complicated by postoperative noncompliance and calcaneal osteomyelitis.

Methodology

Procedures

40-year-old smoker sustained a tongue-type calcaneus fracture with soft tissue necrosis that was complicated by postoperative falls and noncompliance resulting in incision dehiscence and calcaneal osteomyelitis. A peroneus brevis rotational flap with a STSG and circular external fixator was utilized for final wound closure.

Results

Patient underwent urgent ORIF of the tongue-type calcaneus fracture August 2022 and presented 2 weeks postoperatively with an incision dehiscence and exposed hardware. He underwent repeat debridements for his calcaneal osteomyelitis that resulted in a large soft tissue deficit. A peroneus brevis rotational flap and STSG with an external fixator was utilized for final wound closure September 2022. He healed uneventfully and returned to regular shoe gear July 2023 and returned to clinic January 2024 for unrelated complaints.

Discussions

Tongue-type calcaneus fractures carry a 21% risk of soft tissue compromise and a 3% below the knee amputation risk. A peroneus brevis rotational flap is a robust flap not commonly described in foot and ankle literature when compared to our plastic surgery colleagues. Our case study demonstrates the use of this routine plastic surgery technique for lower extremity limb salvage that was complicated by calcaneus osteomyelitis.

Format

Case Study

Case Rpt Followup

16

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Madison G Leyk, DPM	madison.leyk@hcmcd.org	I/We have nothing to disclose	
Bobbie M Sternad, DPM	bobbie.sternad@hcmcd.org	I/We have nothing to disclose	
Kimberly L Bobbitt, DPM FACFAS	kimberly.bobbitt@hcmcd.org	I/We have nothing to disclose	

Title

Midfoot Charcot Reconstruction Utilizing A 3-Dimensional Custom Implant: A Case Report

Submit Date

10/14/2024

Correspondent

Full Name: Yoakim

Full Name: Michelle K. Yoakim, DPM, AACFAS

Practice/Company/Residency Program:

Email: michelleyoakim@gmail.com

Newport Advanced Foot & Ankle Surgery Fellowship Program

Authors

Author 1: Michelle K. Yoakim, DPM, AACFAS

Author 2: Callie L.H. Morlock, DPM, AACFAS

Author 3: Robert A. Burdi, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Treating acute Charcot neuroarthropathy with foot and ankle collapse is challenging. The primary goal is to restore stability and achieve a plantigrade foot. This case report demonstrates the successful use of a custom 3-dimensional (3D) printed titanium implant for arthrodesis in Charcot neuroarthropathy management.

Methodology

Procedures

In March 2023, our patient presented with sepsis and group B streptococcus necrotizing fasciitis, secondary to coral puncture wound. Despite recommendation for below-knee amputation, he chose limb salvage. He underwent irrigation and debridement, a four-compartment fasciotomy, and negative pressure wound therapy. He required close infectious disease follow-up and wound care, including grafts. In June 2023, an acute Charcot event with Lisfranc joint dislocation prompted bone biopsies that confirmed osteomyelitis. Staged reconstruction included tarsal bone excision, bone cement, multiplanar external fixation with computer-guided distraction, and subtalar and calcaneocuboid joint fusions with custom 3D-printed cuboid-sparing titanium midfoot implant.

Results

A staged procedure involving implantation of a custom 3D-printed cuboid-sparing midfoot implant resulted in successful limb salvage. At 15-months post-presentation, he retained a functional leg with no open wounds. Although deconditioning and weakness were anticipated, he is now able to safely proceed with physical therapy and regain strength.

Discussions

The custom implant enabled precise anatomical reconstruction, addressing the structural collapse and instability of Charcot deformities. A stable plantigrade foot was achieved with no complications, suggesting superior biomechanical outcomes compared to traditional methods. While long term studies are needed to explore outcomes, we believe customization reduces malalignment and hardware failure risks, offering long-term stability.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Michelle K. Yoakim, DPM, AACFAS	michelleyoakim@gmail.com	I/We have nothing to disclose	
Callie L.H. Morlock, DPM, AACFAS	CLHMorlock@gmail.com	I/We have nothing to disclose	
Robert A. Burdi, DPM, FACFAS	DrewBurdi@gmail.com	I/We have nothing to disclose	

Title

Unique presentation of cutaneous larva migrans: A Case Report

Submit Date

10/13/2024

Correspondent

Last Name:Green

Full Name:Mikayla A

Practice/Company/Residency Program:

Email:mgreen21@hfhs.org

Henry Ford Wyandotte

Authors

Author 1:Mikayla A. Green, DPM

Author 2:Marcell R. Brikho, DPM

Author 3:Edmund Kowalchick, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Cutaneous larva migrans, a skin infestation caused by the ancylostoma duodenale and nectar americanus hookworm is rarely encountered in the United States. It is important for physicians to be able to recognize parasitic infections in patients that have recently traveled from tropical regions. This hookworm is known to burrow into the skin on the top of the foot causing winding and serpiginous pruritic rash on the top of the foot. Without prompt diagnosis and treatment, the hookworm can lead to a pruritic self limiting rash if not properly treated.

Methodology

Procedures

This case study documents the rare presentation, diagnosis and treatment of a 21 year old male with recent travel to Dominican Republic who presented to the emergency room with a pruritic rash mimicking pustular tinea pedis to the right dorsal and plantar foot along with sand flea bites to the extremities. Serpiginous lesions were noticed the following day leading to the diagnosis of cutaneous larva migrans. Diagnosis was then confirmed by infectious disease confirming cutaneous larva migrans.

Results

Patient was treated with a dose of ivermectin and clotrimazole

Discussions

Cutaneous larva migrans is rarely seen in the United State, however physicians must be aware of the presentation to ensure proper, effective treatment for these patients. It is critical to perform thorough history and physical examinations also including travel history. Patients who are promptly treated with extraction, identification of the parasite and appropriate treatment recover without persistent infection or deformities long term.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Mikayla A. Green, DPM	mgreen21@hfhs.org	I/We have nothing to disclose	
Marcell R. Brikho, DPM	mbrikho@hfhs.org	I/We have nothing to disclose	
Edmund Kowalchick, DPM, FACFAS	kowalche@gmail.com	I/We have nothing to disclose	

Title

Fish Skin Xenografts in the Management of Gas Gangrene Foot Infections Following Source Control

Submit Date

10/13/2024

Correspondent

Last Name: Seymour

Full Name: McKayla, R, Seymour, DPM

Practice/Company/Residency Program:

Email: mckayla.seymour5@gmail.com

Macon & Joan Brock Virginia Health Sciences at Old Dominion University

Authors

Author 1: Richard R. Bruno, DPM, FACFAS

Author 2:

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Explore the usage of fish skin xenograft in patients with wounds following surgical management of gas gangrene infections.

Methodology

Procedures

Gas gangrene infections of the lower extremity can be devastating and lead to wounds following source control procedures. Immunocompromised states such as diabetes mellitus have a higher rate of mortality as compared to the general population. An immunocompromised state can make healing these large soft tissue deficits challenging due to insufficient angiogenesis and fibroblast production leading to a stagnant chronic wound. The long a wound remains open in immunocompromised patients, the greater the likelihood of recurrent infection. This case series observed time to healing following application of fish skin xenografts in patients with open wounds following surgical management of gas gangrene infections.

Results

Six patients were included in the case series with a total of 8 gas gangrene infections. Age ranged from 35 to 61 years of age. Prevalent comorbidities included diabetes, CKD, PAD, and hypertension. Source control obtained prior to graft application. Culture directed antibiotic regimen provided following discharge from initial hospitalization. Application of fish xenografts ranged from 1-5 applications with 3-4 weeks between application. Seven of the eight cases of gas gangrene went on to heal with xenograft application. One patient had unknown healing. Complete wound healing ranged from 14 weeks to 32 weeks.

Discussions

There is a lack of literature exploring options for soft tissue wounds following source control procedures for gas gangrene infections. Fish skin xenografts appear to be a viable option to decrease the amount of time a wound remains open following source control procedures.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Richard R. Bruno, DPM, FACFAS	RRBruno@sentrara.com	Consultant/Advisor/Speaker (List all affiliations)	Kerecis

Title

Overcoming the Trifecta: Addressing Non-Union in the Tobacco Dependent Patient Following Crush Injury and Compartment Syndrome

Submit Date

10/13/2024

Correspondent

Last Name: Hutchinson

Full Name: Jana P. Hutchinson, DPM

Email: janaphutchinson@gmail.com

Practice/Company/Residency Program: Memorial Healthcare System

Authors

Author 1: Jana P. Hutchinson, DPM

Author 2: Gabriela A. Florentino, DPM

Author 3: Luis D. Perez, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Soft tissue injuries especially following high-energy trauma, can lead to inflammation and swelling, increasing intra-compartmental pressure. When accompanied by fractures, the risk escalates as bone fragments may disrupt surrounding tissues and exacerbate swelling. Smoking further complicates this scenario. Circulation is impaired, reducing oxygen, and ultimately hindering the healing process. The interplay of these factors can create an environment conducive to compartment syndrome along with non-union. This case study will document successful treatment of fracture non-union following crush injury and compartment syndrome in a tobacco dependent patient.

Methodology

Procedures

A tobacco dependent patient who developed compartment syndrome of the left foot, along with isolated medial malleolar fracture following crush injury is included in this study.

Results

Non-union of ankle fracture in a tobacco dependent patient, healed using electrical bone stimulation and immobilization following delayed fixation due to compartment syndrome.

Discussions

The interplay between smoking, fracture healing, and compartment syndrome underscores the need for a comprehensive approach to patient management. By understanding the challenges posed by smoking, complications are better anticipated. While many non-unions can be treated with rest and immobilization, others require bone stimulation and additional procedures.

Format

Case Study

Case Rpt Followup

20

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jana P. Hutchinson, DPM	janaphutchinson@gmail.com	I/We have nothing to disclose	
Gabriela A. Florentino, DPM	gabflorentino16@gmail.com	I/We have nothing to disclose	
Luis D. Perez, DPM	drluisdperez@gmail.com	I/We have nothing to disclose	

Title

Interpositional Arthroplasty of the Fourth and Fifth Tarsometatarsal Joint with an Autologous Gastrocnemius Aponeurosis Graft. A Surgical Technique Guide and Case Series

Submit Date

10/14/2024

Correspondent

Last Name: Leyk

Full Name: Madison G Leyk, DPM

Practice/Company/Residency Program:

Email: madison.leyk@hcmed.org

Hennepin Healthcare

Authors

Author 1: Madison G Leyk, DPM

Author 2: Scott F Jorgensen, DPM FACFAS

Author 3: Kristen M Brett, DPM AACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Operative management of lateral column osteoarthritis remains controversial as the current techniques require violation of normal anatomy or implantation of a foreign body. This case series and surgical technique guide demonstrates use of a novel, joint motion preserving surgical technique capable of resolving fourth and fifth tarsometatarsal osteoarthritis pain with an average of 30 months of follow up.

Methodology

Procedures

Fifteen patients from January 2016 to December 2020 underwent a novel gastrocnemius aponeurosis interpositional arthroplasty for treatment of fourth and fifth tarsometatarsal joint osteoarthritis.

Results

Six patients returned for follow-up three years after their initial operation for unrelated complaints with resolution of their lateral column pain and no patients were lost to follow-up. All patients had discharged from clinic with resolution of their osteoarthritic pain. One complication was encountered in the setting of non-compliance on anti-coagulation that did not require re-operation. No neuritis, calf weakness, graft subsidence or dislocation was observed.

Discussions

Operative management of symptomatic lateral column osteoarthritis remains challenging to treat due to the required motion of the joint. Arthrodesis of the lateral column remains controversial in an otherwise healthy patient experiencing degenerative changes from overuse, and should not be done as an isolated procedure. Literature suggests that indications for lateral column arthrodesis are limited to patients with neuropathic foot deformity. No study has demonstrated a joint motion preserving surgical technique that does not violate adjacent tendons or introduce a foreign body at risk for subsidence and dislocation into the joint.

Format

Case Study

Case Rpt Followup

30

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Madison G Leyk, DPM	madison.leyk@hcmed.org	I/We have nothing to disclose	
Scott F Jorgensen, DPM FACFAS	scott.jorgensen@allina.org	I/We have nothing to disclose	
Kristen M Brett, DPM AACFAS	kristen.brett@hcmed.org	I/We have nothing to disclose	

Title

Anatomic Lateral Ankle Reconstruction with Tendon Allograft. A Case Series and Surgical Technique Guide

Submit Date

10/14/2024

Correspondent

Last Name: Leyk

Full Name: Madison, G, Leyk, DPM

Practice/Company/Residency Program:

Email: madison.leyk@hcmcd.org

Hennepin Healthcare

Authors

Author 1: Madison G Leyk, DPM

Author 2: Scott F Jorgensen, DPM FACFAS

Author 3: Kristen M Brett, DPM AACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case series and surgical technique guide demonstrates a new lateral ankle ligament reconstruction construct capable of withstanding repeat injuries, preserves normal anatomy, and offers numerous points of fixation.

Methodology

Procedures

Twenty-two ankles from January 2016 to December 2020 underwent a novel lateral ankle ligament reconstruction using a semitendinosus allograft after a failed Brostrom-Gould.

Results

Eleven patients required MRI postoperatively, ranging 4 - 65 months postoperatively, after sustaining a new lateral ankle injury and all but one construct remained intact. Three postoperative complications required return to the operating room. Patients returned to regular shoe gear on average by 11 weeks. The average follow-up was 30 months and three patients were lost to follow-up.

Discussions

Anatomic reconstruction of the lateral ankle ligaments remains a topic of debate with numerous techniques described in the literature. Current techniques offer a single point of fixation on the fibula, although this raises concern for peroneal tendon irritation and construct failure. The current report displays a new lateral ankle ligament reconstruction technique implementing multiple points of fixation without compromising native anatomy.

Format

Case Study

Case Rpt Followup

30

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Madison G Leyk, DPM	madison.leyk@hcmcd.org	I/We have nothing to disclose	
Scott F Jorgensen, DPM FACFAS	scott.jorgensen@allina.org	I/We have nothing to disclose	
Kristen M Brett, DPM AACFAS	kristen.brett@hcmcd.org	I/We have nothing to disclose	

Title

Knee-Ankle Spanning External Fixator in the Setting of Knee Contracture and Drop Foot after Sciatic Nerve Injury

Submit Date

10/13/2024

Correspondent

Last Name: Sweeney

Full Name: Michael R. Sweeney, DPM

Practice/Company/Residency Program:

Email: msween19@kent.edu

Fellow Deformity Correction and Advanced Surgical Skills Fellowship

Authors

Author 1: Michael R. Sweeney, DPM

Author 2: Riya R. Chadha

Author 3: Chuda M. Rijal

Author 4: Mahima J. Mahida

Author 5: Lee M. Hlad, DPM, FACFAS

Author 6:

Author 7:

Author 8:

Purpose

Two-year case report displaying the use of a knee-ankle spanning external fixator for the management of a severe knee contracture with concurrent drop foot from gunshot wound to sciatic nerve.

Methodology

Procedures

16-year-old male with a significant knee-contracture and drop foot following sciatic nerve injury secondary to a gunshot. The treatment involved the application of a knee-spanning external fixator with gradual correction.

Results

16-year-old male underwent gradual correction over a course of 10-12 weeks utilizing a knee-ankle spanning external fixator to correct the severe knee contracture as well as to prevent ankle contracture while undergoing correction. After the removal the patient was ambulating pain free in an ankle foot orthosis with no recurrence of deformity at the two-year follow-up.

Discussions

Gradual correction using an external fixator offers an alternative for treating contractures compared to soft tissue release or osteotomy, which can lead to significant complications. This method minimizes the risk of acute soft tissue stretch injuries and prevents anterior joint compression. It allows for the gradual mechanical extension and realignment of the knee which promotes soft tissue lengthening and reduces the likelihood of contracture recurrence. When combined with comprehensive physical therapy, this approach can enhance functional outcomes in individuals.

Format

Case Study

Case Rpt Followup

24

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Michael R. Sweeney, DPM	msween19@kent.edu	I/We have nothing to disclose	
Riya R. Chadha	riya.chadha@my.rfums.org	I/We have nothing to disclose	
Chuda M. Rijal	chuda.rijal@my.rfums.org	I/We have nothing to disclose	
Mahima J. Mahida	mahima.mahida@my.rfums.org	I/We have nothing to disclose	
Lee M. Hlad, DPM, FACFAS	LeeHlad@hotmail.com	I/We have nothing to disclose	

Title

Oblique Closing Wedge Osteotomy for Tailor Bunion Deformity: A Case Series

Submit Date

10/13/2024

Correspondent

Last Name: Sweeney

Full Name: Michael R. Sweeney, DPM

Practice/Company/Residency Program:

Email: msween19@kent.edu

Fellow, Deformity Correction and Advance Surgical Skills Fellowship

Authors

Author 1: Michael R. Sweeney, DPM, Fellow

Author 2: Riya R. Chida

Author 3: Chuda M. Rijal

Author 4: Mahima J. Mahida

Author 5: Lee M. Hlad, DPM, FACFAS, Director

Author 6:

Author 7:

Author 8:

Purpose

This poster documents a case series of 8 patients (10 feet) who underwent correction of a tailor bunion deformity utilizing an oblique closing wedge osteotomy of the fifth metatarsal.

Methodology

Procedures

A series of 7 patients (8 feet) presented with an abnormal IM 4-5 angle, lateral deviation angle, and/or 5th MPJ angle underwent correction utilizing an oblique closing wedge at the apex of deformity of the fifth metatarsal.

Results

8 procedures were performed on 7 patients with an oblique closing wedge osteotomy at the apex of deformity in the fifth metatarsal with fixation via a interfragmentary screw and neutralization plate technique. Patients who underwent correction with no adjunctive procedures were able to be weight bearing immediately. All patients at their most recent follow-up had no recurrence of the deformity and were ambulating pain free with no complications.

Discussions

In conclusion, the oblique closing wedge osteotomy is an alternative and effective procedure for treating the variable deformities that are present in a tailor bunion. The above case series advocates for the use of this osteotomy as all patients were ambulating pain free with no complications and no recurrence in deformity at most recent follow-up.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Michael R. Sweeney, DPM, Fellow	msween19@kent.edu	I/We have nothing to disclose	
Riya R. Chida	riya.chadha@my.rfums.org	I/We have nothing to disclose	
Chuda M. Rijal	chuda.rijal@my.rfums.org	I/We have nothing to disclose	
Mahima J. Mahida	mahima.mahida@my.rfums.org	I/We have nothing to disclose	
Lee M. Hlad, DPM, FACFAS, Director	LeeHlad@hotmail.com	I/We have nothing to disclose	

Title

Management and Outcome Following Reimplantation of a Posterior Total Talus Extrusion: A Case Report

Submit Date

10/13/2024

Correspondent

Last Name: Morlock

Full Name: Callie, LH., Morlock, DPM

Practice/Company/Residency Program:

Email: clhmorlock@gmail.com

Advanced Foot and Ankle Center

Authors

Author 1: Callie, LH., Morlock, DPM

Author 2: Michelle, K., Yoakim, DPM

Author 3: Travis, Wilson, MD

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Total talar dislocation, characterized by talar displacement from the tibiotalar, talocalcaneal, and talonavicular joints, represents a rare injury resulting from high-energy trauma to an inverted and plantarflexed foot. The complex talar anatomy and delicate blood supply, predisposes these injuries to significant complications, including avascular necrosis (AVN), infection, and arthritis. This case report highlights successful replantation of a posteriorly extruded talus, with no discernible long-term neurovascular compromise or evidence of talar AVN.

Methodology

Procedures

The patient presented following a fall from an eight-foot ladder onto concrete. Examination revealed a five-centimeter horizontal laceration to the posterior medial rearfoot, posterior extruded talus, lateral process avulsion fracture, complete deep deltoid rupture, and absent sensation within the tibial nerve distribution. The patient received intravenous antibiotics and underwent debridement with immediate talar reimplantation. Deep deltoid rupture was meticulously repaired with 2-0 PDS suture.

Results

Reimplantation yielded excellent clinical results at greater than one year, characterized by the absence of AVN and complete restoration of sensory function. Pain and anticipated post-traumatic arthritis were observed within the subtalar joint without varus malalignment, necessitating subtalar joint arthrodesis. Despite this, the patient successfully resumed all activities of daily living and ambulates without the need for assistive devices.

Discussions

The severity of initial fracture displacement/dislocation has the greatest effect on developing AVN. However, total talar posterior extrusion injuries are rare with no standardized treatment to minimize AVN risk. Thus, we present this case report to highlight our treatment protocol which resulted in proper rearfoot positioning with no malalignment or AVN.

Format

Case Study

Case Rpt Followup

17

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Callie, LH., Morlock, DPM	clhmorlock@gmail.com	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Murray
Michelle, K., Yoakim, DPM	michelleyoakim@gmail.com	I/We have nothing to disclose	
Travis, Wilson, MD	travis.wilson@bannerhealth.com	I/We have nothing to disclose	

Title

Retrograde Femoral Nail Implications in Diabetic and Neuropathic Trauma

Submit Date

10/13/2024

Correspondent

Last Name: Leo

Full Name: Trenton Leo, DPM

Email: TLEO@kent.edu

Practice/Company/Residency Program: Ohio Foot and Ankle Specialists

Authors

Author 1: Jonathan Westerveld, DPM

Author 2: Trenton Leo, DPM

Author 3: Bradley Levitt, DPM, FACFAS

Author 4: Brittany Wright

Author 5: Julianna Sabile

Author 6: Patcharathorn Pookun

Author 7: Jasmine Atri

Author 8: Faris Hussain

Purpose

Illustrate the versatility and effectiveness of retrograde femoral nails for diabetic and neuropathic patients in the setting of primary and revisional ankle trauma.

Methodology

Procedures

Two patients underwent TTC fusion with a retrograde femoral nail for a primary and revision ankle fracture . BMI, comorbidities, vascular status, ambulatory status, and follow up time were evaluated. Inclusion criteria was primary or secondary trauma to the affected extremity. Exclusion criteria included charcot neuroarthropathy. Studied outcomes included rate of clinical and radiographic union, infection, ulceration and amputation over 12 months. A successful procedure was defined as return to preoperative level of activity and absence of major complication (post-operative infection, hardware removal, hardware failure).

Results

Both procedures were deemed successful as patient were able to use their extremity for transfer within 6 weeks of the procedure. The average age was 70.5 years old at the time of procedure. Both of the patients were female. BMI ranged from 33.2 -64.4 kg/m^2. Comorbidities included CHF, CKD, atrial fibrillation, neurofibromatosis, type II diabetes mellitus, and COPD Both patients used their lower extremity for transfer prior to injury. Both patients had normal vascular status portrayed by non-invasive vascular studies.

Discussions

Complex ankle fractures, particularly in high-risk populations such as diabetic, neuropathic, and obese patients, necessitates the exploration of innovative treatment options. This study demonstrates that femoral nails serve not only a viable alternative to the traditional TCC nail, but also enhances clinical outcomes by allowing improved distal fixation and stability which subsequently can lead to early weight-bearing and return to adequate function.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jonathan Westerveld, DPM	westerJA@evms.edu	I/We have nothing to disclose	
Trenton Leo, DPM	TLEO@kent.edu	I/We have nothing to disclose	
Bradley Levitt, DPM, FACFAS	bradley.a.levitt@gmail.com	I/We have nothing to disclose	
Brittany Wright	brittany32788@gmail.com	I/We have nothing to disclose	
Julianna Sabile	juliannasabile@gmail.com	I/We have nothing to disclose	
Patcharathorn Pookun	ppookun@gmail.com	I/We have nothing to disclose	
Jasmine Atri	jasmineatri98@gmail.com	I/We have nothing to disclose	
Faris Hussain	faris.hussain@my.rfums.org	I/We have nothing to disclose	

Title

Rip-Stop Technique in Anterior Talofibular Ligament Repair

Submit Date

10/14/2024

Correspondent

Last Name: Seymour

Full Name: McKayla R Seymour

Practice/Company/Residency Program:

Email: mckayla.seymour5@gmail.com

Macon & Joan Brock Virginia Health Sciences at Old Dominion University

Authors

Author 1: William Simon, DPM, FACFAS

Author 3:

Author 5:

Author 7:

Author 2:

Author 4:

Author 6:

Author 8:

Purpose

Review rip-stop technique previously described in shoulder literature as a primary repair method for the anterior talofibular ligament.

Methodology

Procedures

There are many different types of techniques utilized to repair the ATFL including suture anchors, pants over vest technique, or anatomic repairs. When the remaining ligament is of poor quality and a simple interrupted or mattress suture technique is utilized suture pull-through can occur leading to suture failure. Utilizing a rip-stop technique previously described in shoulder literature allows the surgeon to lock the suture on itself preventing suture pull-through. This case study reviews the rip-stop technique utilized in 5 patients.

Results

Two anchors with 1-2 sutures each are placed along the distal aspect of the fibula. The sutures are passed parallel to the fibers of the ATFL toward the talus. Next, the suture is ran 90 degrees to the initial throw, perpendicular to the ATFL fibers. Lastly the suture is ran parallel to the ATFL fibers back toward the fibula locking the suture in place and at this point hand tied off. This is complete 2-4 times while the foot is held in eversion to reconstruct the ATFL. No reoccurrence seen in 5 patients when the rip-stop technique was utilized.

Discussions

The rip-stop technique is a viable option to prevent suture pull through when repairing the ATFL. Comparative studies need to be completed to determine if there is increased pull out strength observed with the rip-stop technique when used in the ankle as has previously been documented in shoulder literature.

Format

Case Study

Case Rpt Followup

12

Student Club

Rearfoot and Ankle Reconstruction

Classification

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:

William Simon, DPM, FACFAS

Email:

Wsimon4860@aol.com

Disclosure(s) selected:

I/We have nothing to disclose

Disclosed Organisation(s):

Title

Repair of Traumatic Extensor Hallucis Longus Tendon Rupture by Stingray Injury: A Case Report

Submit Date

10/14/2024

Correspondent

Last Name: Yoakim

Full Name: Michelle K. Yoakim, DPM, AACFAS

Practice/Company/Residency Program:

Email: michelleyoakim@gmail.com

Newport Advanced Foot & Ankle Surgery Fellowship Program

Authors

Author 1: Michelle K. Yoakim, DPM, AACFAS

Author 2: David J. Haupt, DPM, FACFAS

Author 3: Raquel K. Sugino, DPM, MS, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

While superficial lower extremity wounds from stingray injuries are relatively common, complete tendon lacerations, particularly in the foot, are rarely reported. We present a unique case of complete extensor hallucis longus (EHL) tendon rupture following stingray injury including our treatment strategy.

Methodology

Procedures

A 38-year-old healthy male sustained an acute EHL tendon rupture from a stingray injury while surfing in Huntington Beach, California. Following direct sting to the dorsal foot, he experienced complete loss of dorsiflexion with first ray paresthesias. Imaging confirmed full-thickness EHL rupture with retraction and extensive tenosynovitis. Surgical exploration revealed degeneration and fraying. Surgery included end-to-end tendon repair, reinforced with an amniotic membrane graft to minimize adhesion formation, and optimize the repair's strength and flexibility.

Results

At 3 months postoperatively, following immobilization, protected weight-bearing, and physical therapy, the patient had complete resolution of symptoms and restored dorsiflexion. By 36 months, he demonstrated full functional recovery without recurrence of symptoms or complications.

Discussions

Previous reports of stingray injuries typically describe full-thickness skin penetration with subsequent inflammation and tissue necrosis. However, complete tendon rupture is rarely documented. Stingrays in shallow waters can cause significant trauma and pose an injury risk to beachgoers. Stingray barbs are known to cause significant soft tissue trauma and can penetrate deeply into structures such as tendons, as observed in this case. This case highlights the importance of recognizing the potential for tendon injury in stingray envenomation and underscores the need for timely surgical repair in cases of complete laceration.

Format

Case Study

Case Rpt Followup

36

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Michelle K. Yoakim, DPM, AACFAS	michelleyoakim@gmail.com	I/We have nothing to disclose	
David J. Haupt, DPM, FACFAS	drhaupt27@gmail.com	I/We have nothing to disclose	
Raquel K. Sugino, DPM, MS, FACFAS	raquel.sugino@gmail.com	I/We have nothing to disclose	

Title

Primary Fusion Following Traumatic Pilon Fracture: A Case Report

Submit Date

10/15/2024

Correspondent

Last Name: Yoakim

Full Name: Michelle K. Yoakim, DPM, AACFAS

Practice/Company/Residency Program:

Email: michelleyoakim@gmail.com

Newport Advanced Foot & Ankle Surgery Fellowship Program

Authors

Author 1: Michelle K. Yoakim, DPM, AACFAS

Author 2: Bryant Mercado, DPM, FAFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Pilon fractures, involving distal tibia intra-articular disruption, are frequently associated with significant displacement, comminution, and soft tissue injury. Optimal management remains debated, with staged approaches generally favored due to high complication risk like infection and non-union. Traditionally, ankle arthrodesis has been reserved for late-stage management of post-traumatic osteoarthritis. However, recent literature suggests its potential as a primary treatment strategy for a broader subset of pilon fractures. This case report demonstrates the successful use of primary arthrodesis for pilon fractures.

Methodology

Procedures

Our patient presented with a closed, comminuted, and displaced intra-articular tibial pilon fracture with associated Weber C fibular fracture following a fall from height in July 2023. Initial management involved delta-frame stabilization and ligamentotaxis due to the presence of hemorrhagic blisters. Definitive treatment included primary ankle arthrodesis using anterior plate fixation, supplemented by intramedullary K-wire fibular stabilization, later removed during follow-up.

Results

At 15 months post-operatively, the patient demonstrated successful ankle fusion with a stable, pain-free, plantigrade foot and no signs of adjacent joint arthritis. Functional assessment using the American Orthopaedic Foot and Ankle Society score showed significant improvement, consistent with reported outcomes.

Discussions

While primary ankle arthrodesis for pilon fracture management remains controversial, recent studies report high fusion rates, ranging from 90-100% with fewer complications, and improved functional outcomes when compared to staged open reduction and internal fixation. Despite limited long-term data, emerging evidence supports primary arthrodesis as a viable treatment, warranting further exploration in larger, prospective studies.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Michelle K. Yoakim, DPM, AACFAS	michelleyoakim@gmail.com	I/We have nothing to disclose	
Bryant Mercado, DPM, FAFAS	bmercado0703@gmail.com	I/We have nothing to disclose	

Title

Case Study – Flexor Digitorum Longus Tendon Entrapment Secondary to Ganglion Cyst

Submit Date

10/15/2024

Correspondent

Last Name:Guerrero

Full Name:Celine Guerrero, DPM

Practice/Company/Residency Program:

Email:guerreroc@mlhs.org

Main Line Health - Bryn Mawr Hospital

Authors

Author 1:Celine Guerrero, DPM

Author 2:Ifeoma Nwaedozie, DPM

Author 3:Siyeon Hwang, DPM

Author 4:Louis Ciliberti, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Ganglion cysts are commonly found in the dorsal foot, while those located in the plantar foot are less frequent. This case study presents a rare occurrence of flexor digitorum longus (FDL) tendon entrapment secondary to a plantar ganglion cyst.

Methodology

Procedures

A ganglion cyst is a cystic lesion with a thin wall containing synovial like fluid. The cyst originates from connective tissue, usually the joint capsule or tendon sheath. It is commonly found in the hand and wrist, though it can also occur in the lower extremity. A 52-year-old female presented with worsening left foot pain for three months. The pain was localized to the base of the left second and third digits. She reported diminished range of motion (ROM) to these digits, primarily with extension, and additionally noted numbness. MRI findings revealed a "1.5 x 1 cm likely ganglion cyst plantar to the Lisfranc ligament." Despite conservative treatment, her symptoms persisted, and the patient elected to undergo surgery.

Results

The patient underwent neuroma excision of left foot, as well as a plantar midfoot fasciotomy with excision of a deep soft tissue mass. The mass was consistent with a ganglion cyst, and its removal freed the FDL tendon from entrapment. Post-operatively, the patient reported decreased pain and improved ROM to her digits.

Discussions

This case highlights the importance of obtaining a thorough history and utilizing MRI for differentiating soft tissue conditions. Given the unusual presentation, clinicians should also consider the possibility of ganglion cysts in the plantar foot, despite their relatively low incidence.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Celine Guerrero, DPM	guerreroc@mlhs.org	I/We have nothing to disclose	
Ifeoma Nwaedozie, DPM	nwaedoziei@mlhs.org	I/We have nothing to disclose	
Siyeon Hwang, DPM	hwangs@mlhs.org	I/We have nothing to disclose	
Louis Ciliberti, DPM	CilibL@mlhs.org	I/We have nothing to disclose	

Title

Tibial Sesamoid Fracture Core Decompression with k-wire Fenestration

Submit Date

10/14/2024

Correspondent

Last Name: Dang

Full Name: Alex Dang, DPM

Practice/Company/Residency Program:

Email: alex.dang@medstar.net

MedStar Washington Hospital Center

Authors

Author 1: Alex Dang, DPM

Author 2: Justin Lewis, DPM, FACFS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Non-union of a tibial sesamoid fracture is a condition characterized by failure in sesamoid bone healing and ultimately requires surgical intervention. Such a condition can result in generalized hallux pain, avascular necrosis, and first metatarsophalangeal joint pain.

Methodology

Procedures

A 26-year-old healthy female presented with right foot pain localized to the first metatarsophalangeal joint for over 6 months. A clinical exam revealed pain with dorsiflexion and plantarflexion of the right hallux. The patient has failed conservative treatment with offloading in a CAM boot for the last 3 months. Repeat MRI compared to MRI from the initial clinic visit demonstrated no evidence of any healing of the sesamoid fracture consistent with a nonunion. Sesamoid core decompression with k-wire fenestration and augment with BMAC harvest and inject mesenchymal stem cells (MSCs) into the fracture site, first MPJ arthrotomy were performed

Results

Complete resolution of the tibial sesamoid fracture with significant reduction in pain level

Discussions

nonunion of a sesamoid fracture can contribute to pain with the range of motion of the MPI. A comprehensive understanding of the condition along with early diagnosis and prevention can lead to appropriate management. Several studies have explored the effectiveness of k-wire fenestration in promoting osseous union. However, there is no recent literature utilizing fenestration for nonunion tibial sesamoid fracture. Fenestration offers an alternative and less invasive approach than the traditional sesamoid ORIF and sesamoidectomy.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Alex Dang, DPM	alex.dang@medstar.net	I/We have nothing to disclose	
Justin Lewis, DPM, FACFS	justinlewis@mdfootandankle.com	I/We have nothing to disclose	

Title

Synthetic Wound Matrix Application in Wound Secondary to Subcutaneous Xylazine Injection

Submit Date

10/14/2024

Correspondent

Last Name: McLean

Full Name: David M McLean, DPM

Practice/Company/Residency Program:

Email: david.mclean@sluhn.org

St. Luke's

Authors

Author 1: Melissa Shukla, DPM

Author 2: Kripa Santhosh, DPM

Author 3: David M. McLean, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Xylazine, a potent α 2-adrenergic agonist primarily used in veterinary medicine as a sedative, analgesic, and muscle relaxant, has gained attention for its complications when administered subcutaneously secondary to intravenous drug abuse. While effective in its intended therapeutic applications, inadvertent subcutaneous injection of Xylazine can lead to significant local tissue damage, and wound formation. The purpose of this case report is to elucidate on a patient with extensive bilateral lower extremity necrotic wounds secondary to Xylazine injection, with subsequent debridement and application of synthetic wound matrix.

Methodology

Procedures

The illicit use of xylazine, an alpha-2 adrenergic agonist primarily used in veterinary medicine, has emerged as a significant public health concern, particularly due to its association with severe ulcerations at injection sites. Xylazine's ability to cause ulcerations is primarily attributed to its vasoconstrictive properties. In this case study, one patient with bilateral necrotic leg wounds underwent multi-staged surgery in the OR for separate debridements with application of synthetic tissue matrix, and subsequent STSG.

Results

Patient went on to STSG after multiple debridements and applications of synthetic graft. After several months lower extremity wounds mostly resolved, however the patient was lost to follow up.

Discussions

Ulcerations associated with illicit xylazine use presents several serious clinical challenges to podiatric medicine. These ulcerations can cause significant pain, discomfort, and functional impairment. The potential for secondary infections is also high, given the compromised tissue integrity and the increased risk of introducing pathogens during illicit drug administration.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Authors/Financial Disclosures			
Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Melissa Shukla, DPM	melissa.shukla@SLUHN.org	I/We have nothing to disclose	
Kripa Santhosh, DPM	kripa.santhosh@sluhn.org	I/We have nothing to disclose	
David M. McLean, DPM	david.mclean@sluhn.org	I/We have nothing to disclose	

Title

Limb Salvage and Charcot Reconstruction: A Hybrid Surgical Approach in a Complex Case

Submit Date

10/14/2024

Correspondent

Last Name: Perez

Full Name: Liset, DPM

Practice/Company/Residency Program:

Email: lperez@barry.edu

HCA Mercy Hospital and Barry University School of Podiatric Medicine

Authors

Author 1: Liset Perez

Author 2: Mario Cala, DPM

Author 3: Hannah Herring, DPM

Author 4: Stephanie Rivera Tavarez, DPM

Author 5: Alexander Nguyen, DPM

Author 6: Gabriel Ocasio Martinez, BS

Author 7:

Author 8:

Purpose

The purpose of this study is to report our experience with limb salvage surgery and Charcot reconstruction using a hybrid surgical approach.

Methodology

Procedures

Case Study: The patient is a 54-year-old male that presented to Mercy ED on 07/14/2023 with a chief complaint of red, hot and swollen right foot. The patient denied any history of trauma to the right lower extremity. Patient had no open wounds and initial x-rays resulted in age indeterminate fracture dislocation at the base of the fourth and fifth metatarsals which may be pathologic in nature leading to collapse of the plantar arch and medial subluxation of the metatarsals with respect to the proximal talar row. Immediate suspicions for Charcot were raised and an MRI was performed for further evaluation.

Procedures: Osteotomy of the navicular, 135 mm medial column beam, 100 mm lateral column beam and application of circular external fixator.

Results

At one-year post-op, the patient reported overall satisfaction with the surgical treatment and no other pedal complaints.

Discussions

This case report demonstrates the successful use of a hybrid surgical approach for Charcot Foot Reconstruction, leading to positive post-operative outcomes and high patient satisfaction. By restoring alignment and stability in the foot, the procedure not only salvaged the limb but also preserved the patient's mobility and quality of life. These results highlight the importance of early intervention and innovative surgical techniques in the management of Charcot neuroarthropathy.

Format

Case Study

Case Rpt Followup

15

Student Club

Rearfoot and Ankle Reconstruction

Classification

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Liset Perez	reyken1101@gmail.com	I/We have nothing to disclose	
Mario Cala, DPM	calam27@yahoo.com	I/We have nothing to disclose	
Hannah Herring, DPM	hherring@barry.edu	I/We have nothing to disclose	
Stephanie Rivera Tavarez, DPM	sriveratavarez@barry.edu	I/We have nothing to disclose	
Alexander Nguyen, DPM	anguyen@barry.edu	I/We have nothing to disclose	
Gabriel Ocasio Martinez, BS	gabriel.ocasiomartinez@mymail.barry.edu	I/We have nothing to disclose	

TitleManaging Melanoma: A Multidisciplinary Approach to Malignant Melanoma in the Foot

Submit Date10/14/2024

CorrespondentLast Name: ReddyFull Name: Apeksha Reddy, DPM, MPHEmail: areddy@barry.eduPractice/Company/Residency Program: HCA Florida Mercy Hospital

AuthorsAuthor 1: Apeksha Reddy, DPM, MPHAuthor 2: Adam Reece, DPMAuthor 3: Zaib Latif-Jangda, DPMAuthor 4: Melissa Perurena-Hernandez, DPMAuthor 5: Amit Khitani, MDAuthor 6: Ronald Reyna, MDAuthor 7: Author 8:

PurposeA multidisciplinary approach is crucial for managing malignant melanoma of the foot as it integrates expertise from PCP, podiatry, oncology, and plastic surgery to optimize treatment outcomes, improve limb preservation, and address complex tumor behavior.

Methodology

ProceduresMost melanomas occur on UV exposed sites, however, a small percentage can occur on sun-protected sites such as the plantar foot (Cho et al, 2021). Patient with 24 months of established care with her podiatrist presented with recurring melanoma to previous graft site of the left plantar foot. Due to the irregular margins, surgical oncology and plastic surgery were consulted for management of the melanoma. After resection of the melanoma, patient had wound vac applied to the plantar foot prior and after the split-thickness skin graft (STSG). Within weeks, the graft adhered to the skin and the patient was able to ambulate and resume daily activities.

ResultsAfter wide resection of melanoma to the plantar fascia, pathology showed no metastasis. The tumor was Clark’s level 4 with a 4.2mm Breslow thickness and margins were melanoma-free. STSG was applied and secured, followed by 3 weeks of wound vac therapy. The graft fully healed, and the patient resumed ambulation at six weeks.

DiscussionsFew reports exist of melanoma arising at a skin graft site, and none showing recurrence. This case underscores the need for aggressive resection and follow-up. Through a multidisciplinary approach of managing malignant melanoma, the patient was able to resume ambulation and heal within six weeks without complications.

FormatCase Study

Case Rpt Followup24

Student Club

ClassificationSoft Tissue/Tumor

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Apeksha Reddy, DPM, MPH	areddy@barry.edu	I/We have nothing to disclose	
Adam Reece, DPM	areece@barry.edu	I/We have nothing to disclose	
Zaib Latif-Jangda, DPM	zlatifjangda@barry.edu	I/We have nothing to disclose	
Melissa Perurena-Hernandez, DPM	areddy@barry.edu	I/We have nothing to disclose	
Amit Khitani, MD	areddy@barry.edu	I/We have nothing to disclose	
Ronald Reyna, MD	areddy@barry.edu	I/We have nothing to disclose	

Title

Bone Marrow Edema Core Decompression with K-Wire Fenestration

Submit Date

10/14/2024

Correspondent

Last Name: Dang

Full Name: Alex Dang, DPM

Practice/Company/Residency Program:

Email: alex.dang@medstar.net

Medstar Washington Hospital Center

Authors

Author 1: Alex Dang, DPM

Author 2: Justin Lewis, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Bone marrow edema of the metatarsal heads in the setting of chronic low-impact trauma characterized by fluid build-up secondary to bone inflammation. This condition can result in metatarsalgia, avascular necrosis, and metatarsophalangeal joint pain. In instances where delayed healing is encountered after extensive conservative measures, intervention is warranted to prevent further debilitating complications.

Methodology

Procedures

58-year-old healthy male presented with right 2nd and 3rd metatarsophalangeal joints pain for over 12 months status post ground level fall. Clinical exam revealed pain to palpation of the 2nd and 3rd MPJ. The patient has failed conservative treatment with offloading in a CAM boot, custom orthotics, and physical therapy. MRI shows bone marrow edema in the 2nd and 3rd metatarsal heads consistent with physical exam. A 2nd and 3rd MPJ arthrotomy, metatarsal head decompression with k-wire fenestration, and augment with BMAC PRP were performed

Results

Complete resolution of bone marrow edema on post-op MRI and no pain with range of motion of the 2nd and 3rd toe at 12-month visit.

Discussions

The metatarsal heads are prone to injury due to a lack of blood supply, thus The use of k-wire fenestration for bone marrow edema core decompression reduces pressure and increases blood supply to the metatarsal heads. This case study demonstrates a successful outcome for a patient with chronic pain due to traumatic injury to the metatarsal heads.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Alex Dang, DPM	alex.dang@medstar.net	I/We have nothing to disclose	
Justin Lewis, DPM, FACFAS	justinlewis@mdfootandankle.com	I/We have nothing to disclose	

Title

13-Year Follow-Up Limb Salvage of a Malaligned Total Ankle Replacement: From Joint Replacement to Antibiotic Nail

Submit Date

10/14/2024

Correspondent

Last Name: Moon

Full Name: Zohaib Moon, DPM AACFAS

Practice/Company/Residency Program: Orthopedic Center of Florida

Email: zohaibmoon3@gmail.com

Authors

Author 1: Maria Hidalgo, BS

Author 2: Zohaib Moon, DPM AACFAS

Author 3: Andrew Belis, DPM FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study is to document a successful 13-year limb salvage of a malaligned total ankle replacement (TAR) complicated with chronic osteomyelitis utilizing tibiototalcaneal (TTC) arthrodesis with femoral head allograft and subsequent antibiotic-cement coated intramedullary nail.

Methodology

Procedures

A 60 year-old female presented to our institution in 2011 with malaligned TAR and concomitant osteomyelitis. Staged approach was performed with initial debridement, prosthesis removal, and application of vancomycin-impregnated antibiotic spacer with external fixation. After confirming absence of infection, TTC arthrodesis was performed with femoral head allograft and intramedullary nail fixation. Patient healed uneventfully with radiographs revealing bony fusion. In 2018, patient suffered traumatic injury resulting in acute osteomyelitis, requiring TTC hardware removal with implantation of antibiotic cement spacer. Patient subsequently developed cellulitis in 2020, prompting reaming out of the intramedullary canal with implantation of antibiotic-cement coated nail.

Results

6 months after implantation of the antibiotic cement nail, patient healed uneventfully without further complications or pain. Patient remains fully ambulatory to date at 13-year follow-up. Computed tomography confirms complete osseous bridging of the arthrodesis sites without evidence of infection, subsidence, or resorption.

Discussions

Total ankle replacement failure poses a complex reconstructive challenge for foot and ankle surgeons with devastating complications including high rates of aseptic loosening, malalignment, and infection. Our case study describes successful management of failed TAR using a variety of procedures to manage both chronic osteomyelitis and acute complications along the way. Limb salvage is a feasible option with staged reconstruction and proper infection management, avoiding amputation and preserving quality of life.

Format

Case Study

Case Rpt Followup

156

Student Club

Rearfoot and Ankle Reconstruction

Classification

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Maria Hidalgo, BS	mariaphidalgo05@gmail.com	I/We have nothing to disclose	
Zohaib Moon, DPM AACFAS	zohaibmoon3@gmail.com	I/We have nothing to disclose	
Andrew Belis, DPM FACFAS	abelis@ocfla.net	I/We have nothing to disclose	

Title

Peripheral Mononeuropathy in a Pediatric Patient Following Episode of Severe Diabetic Ketoacidosis (DKA): A Case Report

Submit Date

10/14/2024

Correspondent

Last Name: Fahey

Full Name: Kelly Fahey DPM

Practice/Company/Residency Program:

Email: kelly.fahey@aah.org

Advocate Christ Medical Center Podiatric Medicine and Surgery Residency Program

Authors

Author 1: Kelly Fahey DPM

Author 2: Andrew Silman DPM

Author 3: Eyad Xoubi DPM

Author 4: Patrick Sanchez DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this case report is to highlight a rare complication of diabetic ketoacidosis in the pediatric population and delineate potential pathogenesis.

Methodology

Procedures

Peripheral mononeuropathy is a rare complication of diabetic ketoacidosis; only a small number of cases have been reported in the pediatric population. We report a case of a 14 year old female with PMHx of type 1 diabetes mellitus and hypothyroidism who developed numbness and tingling to the right foot following treatment for severe diabetic ketoacidosis (DKA).

Results

Upon arrival at an outside hospital, the patient was noted to be tachypneic with Kussmaul respirations. The patient was found to have a glucose of 1,135, HbA1c of 10.5, K+ of 6.0, venous blood pH of <6.8, and WBC of 34,0. IV fluids, insulin drip at 0.1 units/kg, and broad-spectrum antibiotics were initiated. Podiatry was consulted for evaluation of numbness and tingling to the right foot. Right foot and ankle MRI imaging demonstrates no evidence of space-occupying lesion in the tarsal tunnel, soft tissue mass, or osseous abnormality. Additional etiologies of peripheral neuropathy were ruled out.

Discussions

The patient was seen by physical therapy and gradual improvement in symptoms was noted throughout her admission. Recommendations upon discharge included daily supplementation with alpha-lipoic acid and vitamin B1, B6, and B12 supplementation, outpatient follow-up with pediatric endocrinologist, and outpatient neurology consultation. This case illustrates a rare complication of DKA in the pediatric population. This case reaffirms the need for additional research outlining the pathogenesis, prevention, and treatment options for this complication of DKA.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kelly Fahey DPM	kelly.fahey@aah.org	I/We have nothing to disclose	
Andrew Silman DPM	andrew.silman@aah.org	I/We have nothing to disclose	
Eyad Xoubi DPM	eyad.xoubi@aah.org	I/We have nothing to disclose	
Patrick Sanchez DPM	patrick.sanchez@aah.org	I/We have nothing to disclose	

Title

Traumatic Bunion from a Motorcycle Accident: A case study.

Submit Date

10/15/2024

Correspondent

Last Name:Adorno Rivera

Full Name:Linnet E. Adorno Rivera, DPM

Practice/Company/Residency Program:

Email:linet.adornorivera@gmail.com

Morristown Medical Center

Authors

Author 1:Linnet Enid Adorno Rivera, DPM

Author 2:Maryellen Brucato, DPM, FACFAS

Author 3:Skylar Acker BA

Author 4:Steven Cohen, DPM

Author 5:Alisha Joshi, DPM

Author 6:

Author 7:

Author 8:

Purpose

Hallux abductovalgus (HAV) is one of the common pathologies seen in the foot and ankle. HAV deformity has different etiologies either from a biomechanical instability or neuromuscular disease. However, it's rare to encounter cases of HAV secondary to a traumatic injury as cases in literature have been overlooked and underreported. The purpose of this case is to report a subtle lisfranc injury with development of a painful bunion deformity 5 months after a motorcycle accident.

Methodology

Procedures

We present a 39 y/o smoker and opioid dependent male who suffered a motorcycle accident, leading to lisfranc sprain, metatarsal fractures 2-4 and traumatic dislocation of the first MPJ resulting in HAV. Pre-operative radiographs display severely increased intermetatarsal angle, chronic hallux fracture, subtle displacement of the TMT joint, and healed fractures of the metatarsal necks 2 through 4. Patient underwent a 1st MPJ fusion, and 1st, 2nd, 3rd TMT fusion and ORIF of the 2nd through 4th metatarsals.

Results

After reconstructive procedure patient utilized bone stimulator to aid in healing along with follow up with the pain management team. Successful decrease in IM angle and reduction of TMT joint was achieved. Patient reported 0 pain on the VAS scale and ability to return to pre-accident activity level.

Discussions

There are published cases of traumatic HAV that were treated with soft tissue procedures as well as isolated proximal osteotomies which resulted in inadequate reduction of deformity. This case study highlights an example of the rare traumatic HAV deformity successfully treated with double arthrodesis.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Linnet Enid Adorno Rivera, DPM	linet.adornorivera@gmail.com	I/We have nothing to disclose	
Maryellen Brucato, DPM, FACFAS	marebeary1@gmail.com	I/We have nothing to disclose	
Skylar Acker BA	ack.skylar@gmail.com	I/We have nothing to disclose	
Steven Cohen, DPM	cohensteven882@gmail.com	I/We have nothing to disclose	
Alisha Joshi, DPM	alishajjoshi@gmail.com	I/We have nothing to disclose	

Title

Concurrent Treatment of Painful Brachymetatarsia of Metatarsals 3 and 4 by Corticotomy and Gradual Callus Distraction: A Case Report.

Submit Date

10/14/2024

Correspondent

Last Name: Evans

Full Name: Paul M. Evans, DPM

Practice/Company/Residency Program:

Email: paul.evans@hcmcd.org

Hennepin Healthcare

Authors

Author 1: Paul M. Evans, DPM

Author 2: Kimberly L. Bobbitt, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To report the indications, surgical technique, and outcome of concurrent treatment of brachymetatarsia of adjacent metatarsals.

Methodology

Procedures

Gradual callus distraction has been well reported for isolated single metatarsia and is supported for correcting deformities of over 10-15 mm of shortening. There is limited literature when correcting multiple metatarsals simultaneously. Patient is a 27 year old female with congenital brachymetatarsia of the bilateral 3rd and 4th metatarsals with a painful plantar deep fissure. Conservative care, such as shoe gear modification, arch supports, and OTC analgesics failed. Patient then underwent corticotomy of metatarsals 3 and 4 with application of external fixator, pinning of toes, followed by gradual callus distraction. We are presenting a technique for application of multiple mini-rails in adjacent metatarsals.

Results

The patient was doing well at the most recent follow up with maintained, satisfactory correction. Returned to weightbearing as tolerated in regular shoe gear 7 weeks s/p hardware removal. Completed physical therapy for mild peroneal tendonitis after advancing weight bearing status, and is now ambulating in regular shoe gear without complaints.

Discussions

This case study demonstrates that a patient can undergo simultaneous correction of multiple short metatarsals by callus distraction with good outcomes, and without increased risk of complications.

Format

Case Study

Case Rpt Followup

23

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Paul M. Evans, DPM	paulevans26.219@gmail.com	I/We have nothing to disclose	
Kimberly L. Bobbitt, DPM, FACFAS	Kimberly.Bobbitt@hcmcd.org	I/We have nothing to disclose	

Title

Treatment of Talar Avascular Necrosis and Ankle Arthrosis with Total Talus and Total Ankle Replacement Using a Custom Tibial Component: A Case Study

Submit Date

10/14/2024

Correspondent

Last Name: Naveed

Full Name: Anooshay Naveed, DPM

Practice/Company/Residency Program:

Email: a.naveed1504@gmail.com

Detroit Medical Center

Authors

Author 1: Erik C. Kissel, DPM, FACFAS

Author 2: Anooshay Naveed, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case study presents what may be the first reported case of advanced talar AVN successfully treated with combined total talus-total ankle replacement with a custom tibial component.

Methodology

Procedures

Advanced avascular necrosis of the talus is a challenging problem to treat, especially in the case of concomitant arthrosis of the tibial articular surface. Combined total ankle and total talus replacement has recently been used as a motion-preserving treatment option. Given advances in 3D printing technology, custom manufactured tibial components may be useful option to combine with the total talus implant. The patient described here was a 32-year-old male with a history of traumatic peritalar dislocation 16 months prior to presentation and subsequent AVN of the talus. He presented with severe arthrosis of the subtalar and ankle joints and mostly used crutches for ambulation. He underwent total talus and total ankle replacement with a custom stemmed tibial component.

Results

The patient had an unremarkable postoperative course and was fully ambulatory without significant pain at 12 months follow-up.

Discussions

While total ankle-total talus replacement is still a new concept in foot and ankle surgery, it is the only motion-preserving surgical intervention available for patients whose disease is beyond treating with core decompression. This case provides an example of using the same CT scans obtained for creation of the total talus to create a perfectly sized tibial component with extra tibial fixation. More study is required to see if custom designed tibial components offer an advantage over the medium and long terms.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Erik C. Kissel, DPM, FACFAS	ekissel@gmail.com	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Vice Chair of State of Michigan Board of Podiatric Medicine and Surgery
Anooshay Naveed, DPM	a.naveed1504@gmail.com	I/We have nothing to disclose	

Title

Intramedullary Delivery of Antibiotic-Impregnated Resorbable Bone Substitute Containing Calcium Sulfate and Hydroxyapatite for the Treatment of Residual Osteomyelitis in Multiple Tarsal and Metatarsal Bones

Submit Date

10/14/2024

Correspondent

Last Name: Robinson

Full Name: Patrick M. Robinson, DPM, MS

Practice/Company/Residency Program:

Email: patrick.robinson1@bswhealth.org

Baylor Scott and White Medical Center and Central Texas Veterans Affairs Hospita

Authors

Author 1: Patrick M. Robinson, DPM, MS

Author 2: Sonali R. Lucitt, DPM, MA

Author 3: Dy Chin, DPM, MS

Author 4: Alden L. Simmons, DPM AACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The primary purpose of this single case report is to demonstrate a novel technique for intramedullary delivery of antibiotic via a resorbable bone substitute containing calcium sulfate and hydroxyapatite in the treatment of residual osteomyelitis in multiple tarsal and metatarsal bones, focusing on the efficacy, bone healing, and functional outcomes. To our knowledge, this is the first time this novel technique has been implemented for limb salvage for multiple tarsal-metatarsal bones with residual osteomyelitis.

Methodology

Procedures

Osteomyelitis of the foot can be a debilitating condition leading to amputations. While intravenous antibiotics have been shown to resolve osteomyelitis, recurrence is still a concern. Another antibiotic delivery option is intramedullary. Intramedullary antibiotic-coated nails have been used since the early 2000s (Paley et al.). This methodology has been performed in upper and lower extremity long bones for chronic osteomyelitis with low recurrence rates, however literature containing tarsal and metatarsal bones is lacking.

Results

The novel technique yielded successful outcomes in our patient. The cortical margins of the treated bones were well-demarcated, and the bioabsorbable compound was effectively incorporated. At the 12-month follow-up, the patient did not require any additional surgical interventions or amputations. Radiographic analysis showed successful bone regeneration with no signs of residual infection or recurrence.

Discussions

This novel technique presents a promising proof of concept in the surgical management of chronic osteomyelitis. This approach may reduce the need for amputations while promoting bone healing. Further long-term studies are needed to validate these findings and refine treatment protocols.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Diabetic Foot

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Patrick M. Robinson, DPM, MS	patrick.robinson1@bswhealth.org	I/We have nothing to disclose	
Sonali R. Lucitt, DPM, MA	sonali.sukumar@bswhealth.org	I/We have nothing to disclose	
Dy Chin, DPM, MS	dy.chin@bswhealth.org	I/We have nothing to disclose	
Alden L. Simmons, DPM AACFAS	dr.simmons.dpm@gmail.com	I/We have nothing to disclose	

Title

Surgical Management of Untreated Cerebral Palsy Forefoot Deformity

Submit Date

10/14/2024

Correspondent

Last Name:Somma

Full Name:Jessica

Practice/Company/Residency Program:

Email:jsomma07@gmail.com

Phoenixville Hospital

Authors

Author 1:Brady Biscorner, DPM

Author 2:Jessica Somma, DPM PGY3

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Case study presenting surgical management of an adult male with severe forefoot deformity secondary to completely untreated and neglected cerebral palsy induced cavus foot with extensor substitution deformity to digits 1, 2, 3, 4, 5.

Methodology

Procedures

There are three types of CP: fixed, dynamic, and mixed. CP is not a progressive disease, and muscle imbalances are present young. Therefore, treatment is generally managed while the patient is young to limit complications in the future. Most cases can be managed nonoperatively, however some cases require surgical correction. The surgeon must know the type of CP they are treating, as fixed and dynamic CP should not be treated the same. Surgical correction was achieved via 1st MPJ arthrodesis, pan metatarsal head resection, arthrodesis of PIPJ for digits 2 and 3, and arthroplasty for digits 4 and 5.

Results

Patient satisfaction achieved. Very pleased with both appearance and functionality of foot. Does not report pain to any of the digits anymore. Hyperkeratotic lesions to medial hallux IPJ and submetatarsal 2, 3 still present however manageable via pumice stone for the patient. He states he may be interested in removal of hardware in the future, but not at this time.

Discussions

This patient shows an excellent outcome for this procedure for management of untreated CP pathology in the foot. Most treatment options are focused on younger patients or with prevention of deformities using modifications. This is an excellent example of surgical correction of CP deformity in older patients who have been unsuccessful at managing the progression of the disease.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Brady Biscorner, DPM	bbiscorner@gmail.com	I/We have nothing to disclose	
Jessica Somma, DPM PGY3	jsomma07@gmail.com	I/We have nothing to disclose	

TitleTransverse Tibial Transport in Patient with Chronic Non-Healing Diabetic Ulcer

Submit Date10/14/2024

Correspondent

Last Name:McLeanFull Name:David M McLean, DPMEmail:david.mclean@sluhn.orgPractice/Company/Residency Program:St. Luke's

Authors

Author 1:Kevin D. Wotring, DPMAuthor 2:Michaela M. Bosico, DPMAuthor 3:Emily K. Darr, DPMAuthor 4:Thomas M Rocchio, DPMAuthor 5:David M Mclean, DPMAuthor 6:Author 7:Author 8:

PurposeTransverse tibial transport (TTT), has emerged as a promising technique for promoting wound healing, tissue regeneration, and increased vascularity. This technique involves the controlled application of mechanical forces to induce bone transport across the tibia, creating new bone and soft tissue in the distraction gap. This method stimulates regeneration of vascularized tissue, facilitates wound closure, and ultimately targets limb salvage, reducing the need for proximal amputation. This case report evaluates the outcome of a patient undergoing transmetatarsal amputation (TMA) with TTT as an alternative to proximal amputation, focusing on functional recovery and quality of life.

Methodology

ProceduresDiabetic patient with a non-healing grade 1 ulcer on her left forefoot. Treatment plan consisting of transmetatarsal amputation (TMA) and a transverse tibial corticotomy to improve circulation and wound healing potential. Tibial transverse corticotomy was performed using a MIS technique, involving multiple drill holes creating a rectangular wedge in the tibia. An unilateral external fixator was applied, with distraction after 1 week.

ResultsStudy included one patient with chronic diabetic foot ulcer previously offered both a proximal amputation and limb salvage. Patient underwent TMA with TTT and external fixation. Progressed to heal the amputation site, and has since been functional as per her last follow up 4 months post operatively.

DiscussionsTMA with TTT offers a viable alternative to proximal amputation in high risk patients, resulting in favorable functional outcomes and satisfaction. TTT may also preserve more proximal limb structures and enhance rehabilitation prospects. Further research is needed to validate these findings and optimize patient selection.

FormatCase Study

Case Rpt Followup12

Student ClubDiabetic Foot

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kevin D. Wotring, DPM	kevin.wotring@sluhn.orh	I/We have nothing to disclose	
Michaela M. Bosico, DPM	michaelabosico@gmail.com	I/We have nothing to disclose	
Emily K. Darr, DPM	emily.darr@sluhn.org	I/We have nothing to disclose	
Thomas M Rocchio, DPM	trocc8@gmail.com	I/We have nothing to disclose	
David M Mclean, DPM	david.mclean@sluhn.org	I/We have nothing to disclose	

Title

Treatment of superficial peroneal nerve entrapment post ankle inversion injury

Submit Date

10/15/2024

Correspondent

Last Name: Baum

Full Name: Andrew

Practice/Company/Residency Program:

Email: abaum779@gmail.com

Adventist Health White Memorial

Authors

Author 1: Brian H. Hong DPM

Author 2: Alex Kramer DPM PGY3

Author 3: Andrew Baum DPM PGY3

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Purpose of the case presentation is to investigate the clinical presentation and surgical treatment of superficial peroneal nerve entrapment after sustaining an ankle inversion injury

Methodology

Procedures

Fibrosis/entrapment of the Superficial peroneal nerve is an uncommonly reported symptom post inversion ankle sprain. Peroneal nerve impingement can be an extremely difficult pathology to diagnosis clinically. Patient presented with anterior/lateralankle pain for two years post ankle inversion injury, after unremarkable studies patientwas given a diagnostic block into the region of the nerve to which resolution of symptoms occurred for several hours. The patient was then taken to surgery for a decompression neurolysis of the nerve over the area of maximum tenderness that was marked pre-op.

Results

Resolution of symptoms was achieved by surgical dissection, mobilization, and decompression of the superficial peroneal nerve. After fibrotic and adhesive tissue was surgically released, the patient fully recovered with complete resolution of their paresthesia symptoms.

Discussions

Superficial peroneal nerve entrapment is uncommon and often a diagnosis of exclusion that can occur after ankle inversion injuries. Diagnosis can be difficult, with no imaging modalities or nerve conduction studies that are sensitive enough to indicate pathology, the clinician must rely on thorough history and physical exam with a diagnostic block to ascertain the etiology of the symptoms. Once pathology is confirmed, surgical nerve decompression is indicated, in this instance with full resolution of symptoms.

Format

Case Study

Case Rpt Followup

12

Student Club

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Brian H. Hong DPM	brianhongdpm@gmail.com	I/We have nothing to disclose	
Alex Kramer DPM PGY3	alex.kramer.dpm@gmail.com	I/We have nothing to disclose	
Andrew Baum DPM PGY3	andrew.dale.baum@gmail.com	I/We have nothing to disclose	

Title

Application of a 3-Dimensional Implant After Combatting Infection and Traumatic Injury Following a Total Ankle Replacement

Submit Date

10/14/2024

Correspondent

Last Name: Samant

Full Name: Vikram N

Practice/Company/Residency Program:

Email: vsamant@kent.edu

Corewell Health - Wayne

Authors

Author 1: Vikram N Samant, DPM PGY3

Author 2: Lawrence M Fallat, DPM FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Osteoarthritis of the foot and ankle can be debilitating, leading to complete loss of function of the lower extremity. Conservative treatment and surgical intervention using a custom prosthesis can restore stability and appropriate alignment, creating a stable plantigrade foot.

Methodology

Procedures

The patient is a 53 year old male presenting with complaints of pain due to osteoarthritis of the left ankle. Physical examination revealed severe osteoarthritis of the ankle joint and the subtalar joint. The patient then decided to undergo a total ankle replacement procedure.

Results

During the postoperative period, the patient underwent a traumatic injury and he displaced his total ankle joint and fractured his medial malleolus. The patient first underwent a removal of the total ankle replacement and had an antibiotic spacer placed along with open reduction and internal fixation of the medial malleolus fracture. The patient had a postoperative infection which was treated with consults with an infectious disease physician. Once her infection was treated, she underwent surgical intervention for the 3-D custom prosthetic implant with an intramedullary nail. The patient healed uneventfully since then.

Discussions

This case highlights the complications that can be associated with trauma following a total ankle replacement procedure. The left lower extremity deformities were finally corrected, the rectus plantigrade foot structure of the left lower extremity was restored, and the patient has no infection. At 12 months after surgery, the patient is ambulating with pain rated at 1/10.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Vikram N Samant, DPM PGY3	vsamant@kent.edu	I/We have nothing to disclose	
Lawrence M Fallat, DPM FACFAS	lawrence.fallat@corewellhealth.org	I/We have nothing to disclose	

Title

Application of a 3-Dimensional Implant for Severe Rearfoot Varus and Charcot Neuroarthropathy While Combatting Recurring Infection and Ulcerations

Submit Date

10/14/2024

Correspondent

Last Name: Samant

Full Name: Vikram N Samant

Practice/Company/Residency Program:

Email: vsamant@kent.edu

Corewell Health - Wayne

Authors

Author 1: Vikram N Samant, DPM PGY3

Author 2: Lawrence M Fallat, DPM FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Changes due to diabetes mellitus can be debilitating leading to complete loss of function of the lower extremity. Conservative treatment and surgical intervention using a custom prosthesis can restore appropriate alignment, creating a stable plantigrade foot.

Methodology

Procedures

The patient is a 56 year old female presenting with complaints of an unstable left ankle. Physical examination revealed diabetic neuropathy as well as radiographic changes consisted with Charcot neuroarthropathy with severe rearfoot varus. The patient already has had previous surgery to the left foot in which intramedullary bone screws are placed. The patient was adamant against receiving any amputation and she agreed to surgical intervention surgery consisting of placement of a 3-D custom prosthetic implant, as well as a tibiototalcaneal arthrodesis with intramedullary fixation of the right foot and ankle. Initially during surgical planning, she had presented with ulcerations and possible osteomyelitis and she was taken to surgery.

Results

Bone biopsies and wound cultures yielded negative results for osteomyelitis. Once her infection was treated, she underwent surgical intervention for the 3-D custom prosthetic implant as planned. Initially postoperatively, while inpatient, her surgical site had dehiscd and she was taken back to the operating room for incision and debridement. Intraoperative cultures revealed the presence of Gram negative bacilli for which she was placed on antibiotics through infectious disease. The patient healed uneventfully since then.

Discussions

The malalignment of the right lower extremity was corrected, the rectus plantigrade foot structure of the right lower extremity was restored. At 12 months postoperatively, the patient is ambulating with pain rated at 1/10.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Vikram N Samant, DPM PGY3	vsamant@kent.edu	I/We have nothing to disclose	
Lawrence M Fallat, DPM FACFAS	lawrence.fallat@corewellhealth.org	I/We have nothing to disclose	

Title

Patient Specific Polyetherketoneketone Implant for Treatment of Tibiototalcalcaneal Arthrodesis Failure

Submit Date

10/14/2024

Correspondent

Last Name: Kennedy

Full Name: Matthew D Kennedy, DPM

Practice/Company/Residency Program:

Email: kennedy.x.matthew@kp.org

Kaiser San Francisco Bay Area Foot and Ankle Residency Program

Authors

Author 1: Joseph Dickinson, DPM

Author 2: Jason Pollard, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To outline the case of a patient who suffered severe bone loss due to deep space infection after TCC fusion for Charcot ankle which was treated with IM nailing with patient specific implant made with polyetherketoneketone (PEKK) to bridge bone defect.

Methodology

Procedures

58-year-old obese diabetic female who sustained nondisplaced fibula fracture which was treated conservatively in a cast who subsequently developed Charcot of the ankle with complete valgus collapse of the tibial plafond. Patient was taken for TTC fusion with IM nail, which was complicated by deep hardware infection with significant bone loss. Initial treatment was hardware removal, abx spacer, external fixation and wound vac. After deep space infection and all wounds were healed, she was taken back for revision TTC with IM nail with patient specific implant made with polyetherketoneketone (PEKK).

Results

At four months post operatively, patient has returned to ambulating in a CAM boot, has healed all wounds, and radiographs show increased consolidation into PEKK implant space.

Discussions

PEKK is a polymer chain composed of monomers of diphenyl ether, terephthaloyl chloride, and isophthaloyl chloride. PEKK has a rougher surface compared to PEEK which allows for greater osseous integration. A recent comparative study in sheep comparing PEKK to other implanted materials, found PEKK to have higher mechanical strength and more osseous integration. Another study in rats, found that PEKK had twice as much bony ingrowth compared to PEEK. We present this case study as an example of limb salvage case with PEKK implant to span significant bone defect.

Format

Case Study

Case Rpt Followup

16

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Joseph Dickinson, DPM	joseph.d.dickinson@kp.org	I/We have nothing to disclose	
Jason Pollard, DPM	jason.pollard@kp.org	I/We have nothing to disclose	

Title

We Did Not Nail It - Intramedullary Fibular Nail Infection Case Study

Submit Date

10/14/2024

Correspondent

Last Name:Gallagher

Full Name:Amanda, L, Gallagher, DPM

Practice/Company/Residency Program:

Email:agallagher0306@gmail.com

Cooperman Barnabas Medical Center

Authors

Author 1:Amanda, L, Gallagher, DPM

Author 2:Denisse, Velez, DPM

Author 3:Aamir, Ahmed, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The subsequent management of post-operative infection with fibula intramedullary nails has not been well documented. This case study presents a staged approach to surgical removal of intramedullary fibular nail prior to fibula fracture consolidation due to postoperative infection.

Methodology

Procedures

A 43 year old male with diabetes, hypertension, and asthma underwent staged fibula intramedullary nail removal, construction of temporary polymethyl-methacrylate antibiotic rod with threaded K-wire, and hydroxyapatite-calcium sulfate/vancomycin mixture backfill following trauma and infection complication. In a retrospective analysis of distal fibula fractures treated with intramedullary fibular nail fixation performed in 2023 by Schumann et al., 151 patients were evaluated that were treated with intramedullary rod fixation for fibula fractures resulting in 1.3% of deep infections post-operatively.

Results

After serial operative incision and drainages, final wound cultures grew methylene-sensitive staph aureus. Patient was treated with long term IV antibiotics. Remaining open wound was treated with negative pressure therapy. As a result of described treatment, wounds healed, and painless range of motion of ankle joint was achieved with adequate dorsiflexion 6 months following original fixation.

Discussions

In various studies, there is a question regarding proper management of infection status post open reduction internal fixation while maintaining proper anatomical alignment. This case underscores the complexity of managing deep infection following intramedullary fibular nail fixation. Prompt surgical intervention, effective antibiotic therapy, and comprehensive wound care were essential in achieving full recovery. This approach managed the infection and preserved the patient's joint function and mobility, highlighting the importance of individualized, multidisciplinary care in managing such complications.

Format

Case Study

Case Rpt Followup

21

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Amanda, L, Gallagher, DPM	agallagher0306@gmail.com	I/We have nothing to disclose	
Denisse, Velez, DPM	vdenisse08091012@gmail.com	I/We have nothing to disclose	
Aamir, Ahmed, DPM	aahmeddpm@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Arthrex

Title

S. pyogenes group A Discovered in Hand and Foot Abscesses Secondary to Recent Dental Cleaning: A Case Report

Submit Date

10/14/2024

Correspondent

Last Name: Wolfe

Full Name: Trenton Wolfe, DPM, MBA, PGY-2

Practice/Company/Residency Program:

Email: twolfe@mercy.com

Mercy Health - St. Rita's Medical Center

Authors

Author 1: Trenton Wolfe, DPM, MBA, PGY-2

Author 2: Justin Snow, DPM, PGY-2

Author 3: Darryl Haycock, DPM, FACFAS

Author 4: Solomon Beraki, MD

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this case study is to present an unusual occurrence of 5th finger septic arthritis and tenosynovitis (L) and abscess of foot (R) requiring multiple Incision and Drainage, likely secondary to dental cleaning leading to septicemia and hematogenous seeding.

Methodology

Procedures

69-year-old female initially presented to ED for right foot swelling. She relates that 2 days later, she had left hand swelling, blistering of her left 5th digit. Denies any trauma to the right foot or left hand. Denies any previous diagnoses of gout, RA, psoriasis. Patient reports of dental cleaning around 2-3 weeks ago. Xiaojing et al., related that the oral cavity can act as the site of origin for dissemination of pathogenic organisms to distant body sites. Yumoto et al., illustrated two major pathways by which oral bacterial infectious diseases affect systemic disease.

Results

Procedure #1: Left small finger excisional debridement. Procedure #2: Right Foot I&D. Procedure #3: Right Foot I&D with Closure. Interval MRI reveals significant improvement since previous MRI; however, a 1.2 x 1.2 x 1.7 cm fluid collection noted medial to calcaneus. Procedure #4: Right Foot I&D. Procedure #5: Right Ankle I&D; Excision of Wound 2 cm Right Ankle. Patient spent total of 29 days in the hospital

Discussions

Lacking the commonly associated clinical manifestations of infection including erythema, calor and often clear portals of entry it's common for GAS to be missed on initial presentation. Detailed history to include procedures involving any variation of dental work is of necessity, as shown by the incidence of GAS from the oral cavity site.

Format

Case Study

Case Rpt Followup

13

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Trenton Wolfe, DPM, MBA, PGY-2	twolfe@mercy.com	I/We have nothing to disclose	
Justin Snow, DPM, PGY-2	jsnow@mercy.com	I/We have nothing to disclose	
Darryl Haycock, DPM, FACFAS	haycockdm@gmail.com	I/We have nothing to disclose	
Solomon Beraki, MD	SXBeraki@mercy.com	I/We have nothing to disclose	

Title

Progressive Techniques for Salvage Surgery in Failed Total Ankle Replacement: Application of PEKK Implant with Anterior Ankle Muscle Flap

Submit Date

10/14/2024

Correspondent

Last Name: Qadri

Full Name: Ali A. Qadri, DPM

Practice/Company/Residency Program:

Email: aliqadri631@gmail.com

Medstar Georgetown University Hospital

Authors

Author 1: Ali A. Qadri, DPM

Author 2: Tiffanie Liu, DPM

Author 3: Paul S. Cooper, MD

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case study showcases the use of a custom polyetherketoneketone (PEKK) implant for ankle fusion in a patient with severe arthritis following failed total ankle replacement (TAR) complicated by infection. Total ankle replacement (TAR) is an effective surgical option for severe ankle arthritis, particularly in older adults. However, complications such as failed TARs or infections may require more invasive procedures, often involving femoral head allografts, which carry increased risks. Recent advancements in implant technology, such as custom PEKK implants, aim to improve healing outcomes and reduce complications.

Methodology

Procedures

An 83-year-old patient underwent a TAR in 2009, but subsequent subsidence led to two revision TARs by 2015. A severe infection following the last revision necessitated irrigation and debridement (I&D) and the removal of the TAR. Following further interventions, including an antibiotic spacer and a lateral thigh myocutaneous flap procedure, the patient ultimately received a custom PEKK implant with an intramedullary nail during a revision pantalar fusion.

Results

Successful healing was confirmed one year post-surgery with the patient ambulating without any functional limitations.

Discussions

This case exemplifies the challenges of managing severe ankle arthritis through multiple surgeries, a myocutaneous flap, and post-surgical infection. The successful use of the PEKK implant offers advantages over traditional allografts, including better biocompatibility and mechanical strength. Achieving fusion despite previous infection and a complex surgical history highlights the potential of PEKK technology to improve outcomes. This case underscores the importance of innovative solutions to enhance healing and restore function, emphasizing the need for tailored treatment strategies.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Ali A. Qadri, DPM	aliqadri631@gmail.com	I/We have nothing to disclose	
Tiffanie Liu, DPM	Tiffanie.Liu@medstar.net	I/We have nothing to disclose	
Paul S. Cooper, MD	Paul.S.Cooper@gunet.georgetown.edu	I/We have nothing to disclose	

Title

Ankle Pain Unveiled: The Impact of Synovial Chondromatosis

Submit Date

10/14/2024

Correspondent

Last Name: Bernard

Full Name: Neil Bernard, DPM

Practice/Company/Residency Program:

Email: neilbernard36@gmail.com

Mercy Health Regional Medical Center

Authors

Author 1: Brianna Lach, DPM

Author 2: Neil Bernard, DPM

Author 3: Nikhil Raj, MS-4

Author 4: Andy Orta, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Ankle pain is a frequently encountered complaint. Synovial chondromatosis is rarely diagnosed as the cause of atraumatic ankle pain. The small loosely encapsulated intra-articular mass of loose bodies can cause arthritis type symptoms in an otherwise healthy joint. We aim to describe the proper workup and treatment.

Methodology

Procedures

51 year old male with chronic recurrent right ankle pain relating to activity without precipitating injury. X-rays showed radiopaque bodies grouped into large spheres at the anteromedial aspect of the ankle joint. MRI confirmed multiple intracapsular cartilaginous masses in the ankle. Open synovectomy performed including tarsal tunnel release, ganglion removal, and joint aspiration.

Results

Path/histo results showed cartilaginous bodies with ossification consistent with synovial chondromatosis. Synovial fluid showed no malignant cells present. Remaining loose bodies within the ankle joint removed after 5 months. Postoperative course without complications.

Discussions

Synovial Chondromatosis is a benign condition with little published in literature. Occurrence is in the third to fifth decades of life and more common in males (3). Usually begins as an insidious onset, with slow progression of increased pain, swelling, and decreased range of motion to the affected joint. Synovial chondromatosis must be considered in instances of chronic ankle pain. Although benign, recurrence is possible and malignant conversion has been reported. The calcified loose bodies are evident in later stages thus advanced imaging is recommended to fully assess the possibility of radiolucent masses.Histopathologic analysis is important to rule out malignancy (3). A review of published literature shows that excision of loose bodies is the standard for treatment.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Brianna Lach, DPM	blach2@kent.edu	I/We have nothing to disclose	
Neil Bernard, DPM	neilbernard36@gmail.com	I/We have nothing to disclose	
Nikhil Raj, MS-4	nrj@kent.edu	I/We have nothing to disclose	
Andy Orta, DPM	aorta.dpm@gmail.com	I/We have nothing to disclose	

Title

Innovative Strategies for Complex Ankle Conditions with Custom PEKK Implants: A Tale of Two Ankle Fusions

Submit Date

10/14/2024

Correspondent

Last Name: Qadri

Full Name: Ali A. Qadri

Practice/Company/Residency Program:

Email: aliqadri631@gmail.com

Medstar Gerogetown University Hospital

Authors

Author 1: Ali A. Qadri, DPM

Author 2: Paul S. Cooper, MD

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case study highlights the use of a custom polyetherketoneketone (PEKK) implant in two patients with bone loss due to deformity/infection. Ankle fusion for significant bone loss typically employs allografts, autografts, and metallic cages. While allografts and autografts address bone defects, they carry risks of immune rejection, disease transmission, and donor site complications. Metallic cages enhance stability but can cause stress shielding and restrict screw placement. Recent innovations, such as custom PEKK implants, offer potential improvements in clinical outcomes for complex ankle fusion cases.

Methodology

Procedures

Case 1: A 41-year-old male suffered a work-related ankle injury in 2018, followed by surgical intervention and hardware removal in 2020. By 2023, he had significant joint collapse, leading to pantalar arthrodesis with a custom PEKK implant. Case 2: A 61-year-old male presented with a MRSA-infected ankle wound, leading to osteomyelitis of the distal tibia and fibula, alongside Charcot arthropathy. After irrigation and debridement, followed by the placement of a multiplanar external fixator, he underwent a repeat I&D. Ultimately, he received a pantalar arthrodesis using a custom PEKK implant and a retrograde intramedullary nail for stabilization.

Results

Both cases resulted in successful fusion.

Discussions

Custom PEKK implants offer significant advantages over traditional methods in ankle fusion, particularly for significant bone loss. They provide superior biocompatibility without the risks associated with grafts, address challenges of metallic cages, and enhance stability. Their mechanical properties/lightweight nature contribute to improved patient outcomes, making PEKK implants a promising advancement in ankle fusion procedures where bone loss is present.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Ali A. Qadri, DPM	aliqadri631@gmail.com	I/We have nothing to disclose	
Paul S. Cooper, MD	Paul.S.Cooper@gunet.georgetown.edu	I/We have nothing to disclose	

Title

Treatment of Chronic Wound with Vertical Contour Calcanectomy and Myotendinous Transfer: case report

Submit Date

10/14/2024

Correspondent

Last Name: Volodina

Full Name: Kseniya, Volodina, DPM

Practice/Company/Residency Program:

Email: kseniya.volodina@hmhn.org

HMH Jersey Shore University Medical Center

Authors

Author 1: Kseniya Volodina

Author 2: Inshal Malik, DPM

Author 3: Chrisovalantis Lakhiani, MD

Author 4: James R. Polowczyk, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Chronic wounds with underlying osteomyelitis are challenging, requiring a multidisciplinary approach for successful management. This case involves progression from free tissue transfer and skin grafting to managing osteomyelitis with partial calcanectomy and tendon repairs illustrates the complexity of this condition and the extensive collaborative care between multiple teams.

Methodology

Procedures

48-year-old female with a medical history including poorly controlled type 2 diabetes, obesity and chronic smoking. Presented with a chronic wound, originating from a pinpoint lesion on the lateral malleolus, worsened to an unstable, open wound with peroneal rupture.

Results

Initial management included incision/drainage and bone biopsy of the fibula, talus and calcaneus. No evidence of osteomyelitis on initial biopsies. The plastic surgery team performed a free myotendinous transfer from the left vastus lateralis to the left lateral ankle, along with tendon transfer from the vastus lateralis tendon to the peroneus longus and brevis tendons. A skin graft was placed over the flap. Subsequent complications included re-admission 3 months later due to ongoing elevated WBC count, suggestive of infection, and was started on antibiotics as per Infectious disease team. Osteomyelitis of the calcaneus was suspected based on MRI findings. Bone biopsy confirmed osteomyelitis. Care included partial calcanectomy, debridement, and applied antibiotic beads, followed by primary wound closure. At one month, repeat biopsies of the superior and inferior calcaneus were negative for osteomyelitis. Achilles tendon was repaired with flexor hallucis longus (FHL) tendon transfer to address tendon damage and maintain functionality.

Discussions

This case highlights the complexity of treating chronic wounds with underlying osteomyelitis.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kseniya Volodina	kseniya.volodina@hmhn.org	I/We have nothing to disclose	
Inshal Malik, DPM	inshal.malik@hmhn.org	I/We have nothing to disclose	
Chrisovalantis Lakhiani, MD	chrisovalantis.lakhiani@gmail.com	I/We have nothing to disclose	
James R. Polowczyk, DPM	j.polowczyk@gmail.com	I/We have nothing to disclose	

Title

Treatment of Metatarsus Adductus with First Metatarsal Cuneiform Arthrodesis with Intermediate Cuneiform Fixation and Metatarsal Osteotomy

Submit Date

10/14/2024

Correspondent

Last Name: Krueger

Full Name: Seth, W, Krueger, DPM

Practice/Company/Residency Program:

Email: seth.krueger@osumc.edu

The Ohio State University Wexner Medical Center

Authors

Author 1: Seth, W, Krueger, DPM

Author 2: Said, Atway, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

We propose bunion correction with an isolated 1st TMT arthrodesis along with a transfixation screw from the 1st metatarsal to the intermediate cuneiform, in the presence of metatarsus adductus along with a single osteotomy, results in correction of the metatarsus adductus deformity without need for adjunctive procedure. We feel this may lead to improved treatment options for bunion correction in the presence of metatarsus adductus with less need for fusion and continue to allow for adequate reduction of the foot deformity.

Methodology

Procedures

This is a retrospective case review study which analyzed the results of using a transfixation screw from the first ray to the intermediate cuneiform by fixing the deformity at the lesser tarsus. All patients in the study underwent first TMT fusion (Lapidus) procedure along with distal metatarsal osteotomy. In total, 6 adults diagnosed with metatarsus adductus and bunion deformity undergoing surgery were treated and followed for greater than 12 months. Serial radiographs were taken noting improvement of MAA and IMA.

Results

Following surgical 1st TMT Arthrodesis with transfixation screw, patients with metatarsus adductus and bunion deformities resulted in radiographically decreased MAA and IMA without need for additional surgical intervention.

Discussions

We propose fixing the TMT fusion to the lesser tarsus results in a degree of correction of the overall forefoot metatarsus adductus deformity allowing the distal osteotomy to further reduce the retrograde force at the metatarsal. This fixation has been shown to contribute to successful deformity correction with less complications and time to heal compared to more involved midfoot fusions or osteotomy procedures.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Seth, W, Krueger, DPM	seth.krueger@osumc.edu	I/We have nothing to disclose	
Said, Atway, DPM	said.atway@osumc.edu	I/We have nothing to disclose	

Title

Pediatric Charcot Neuropathic Arthropathy: a case report

Submit Date

10/14/2024

Correspondent

Last Name: Volodina

Full Name: Kseniya, Volodina, DPM

Practice/Company/Residency Program:

Email: kseniya.volodina@hmn.org

Jersey Shore University Medical Center

Authors

Author 1: Kseniya, Volodina, DPM

Author 2: James, Sullivan, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Charcot neuropathic arthropathy is an uncommon condition among pediatric population. We present a pediatric case Charcot neuropathic arthropathy in a patient with spina bifida.

Methodology

Procedures

A 9-year-old female with a medical history of spina bifida and ADHD/anxiety presented with sudden onset of cellulitis in the left foot, initially affecting the hallux, followed by cellulitis of the posterior heel.

Results

Initial treatment involved amputation of the left hallux. The patient was discharged with a three-week course of oral antibiotics. Five weeks later, she returned with erythema to the left posterior heel, secondary to a minor wound sustained while roughhousing. Radiographs showed fragmentation of the calcaneal apophysis, consistent with apophysitis or Sever’s disease. MRI showed the presence of osteomyelitis in the calcaneus, distal aspects of the intermediate and lateral cuneiform bones and the cuboid bone. An intraoperative bone biopsy of the medial cuneiform showed no acute inflammation, while a biopsy of the calcaneus revealed acute osteomyelitis. Bone cultures showed no growth. Secondary MRI was obtained, despite the radiologist and treating podiatrist agreeing on findings, they were unable to definitively differentiate between Charcot foot and chronic osteomyelitis. Further discussions with the pathologist revealed that the focus of acute osteomyelitis involved 5-10% of the core biopsy, with only reactive changes beyond that area. A bone scan was ordered, which yielded findings similar to those of the MRI.

Discussions

Multidisciplinary approach had concluded the clinical picture mostly consisting with charcot arthropathy and antibiotics were discontinued. To this date patient is without further clinical complications.

Format

Case Study

Case Rpt Followup

12

Student Club

Neurological/Peripheral Nerve Disorders

Classification

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kseniya, Volodina, DPM	kseniya.volodina@hmn.org	I/We have nothing to disclose	
James, Sullivan, DPM	james.sullivan@hmn.org	I/We have nothing to disclose	

TitleAPEX 3D Total Ankle Replacement System: An Ambispective Early Outcomes Study

Submit Date10/15/2024

Correspondent

Last Name: Shoemaker

Full Name: Evan P. Shoemaker, B.A. Email: evanshoemaker@tcomn.com

Practice/Company/Residency Program: Twin Cities Orthopedics

Authors

Author 1: Evan P. Shoemaker, BA Author 2: Rebecca Stone McGaver, MS, ATC

Author 3: Jeffrey C. Christensen, DPM, FACFAS Author 4: Andrew P. Kapsalis, DPM, AACFAS

Author 5: Douglas K. Blackledge, DPM Author 6: John C. Tanner, MD

Author 7: Paul M. Cammack, MD Author 8:

PurposeTo assess the safety, clinical/radiographic outcomes, and benefits of this index device

Methodology

ProceduresFirst-generation total ankle arthroplasty(TAA) had low survivorship and suboptimal outcomes relative to arthrodesis. With device evolution, improvement in the long-term viability of TAA has been reported. Second-generation designs reported 10+ year survival rates at 90%-95.4% respectively. Newer third-generation devices' 5-year survivorship averaged 90.6%. Currently, fourth-generation TAA aims to improve by minimizing bone resection through preoperative planning systems. Currently, no literature exists reporting on APEX 3D Total Ankle Replacement (TAR)(Paragon 28) outcomes. As an IRB-approved, ambispective, single-arm, nonrandomized, multisite, consecutive case series, patients with APEX 3D TAR who had adequate radiographs were included/followed prospectively. Safety and performance of the device were assessed through radiographic alignment, clinical examination, implant retention, patient-reported outcomes, and incidence of secondary-related procedures/related adverse events.

ResultsA cohort of 89 patients had a mean age of 67.1 years and follow up of 14.9 months. One-year metal component survivorship rate was 96.6%. Incidence of radiolucency was 15.7%, heterotrophic ossification was 3.4%, and subsidence was 3.4%. No significant differences were observed in coronal or sagittal alignment of the tibial/talar components to the 6-month postoperative baseline at 12 or 24-months. Mean AOFAS(+29.2, P=0.002), Buechel-Pappas(+15.2, P=0.009), SF-36 Physical Function(+26.9, P=0.011), and Pain Scores(-2.5, P<0.001) significantly improved at 12-months.

DiscussionsThe APEX 3D TAR displays promising outcomes. Improvement in patient-reported outcomes, tibiotalar alignment, and pain scores support the procedural efficacy and safety of the index device. Extended follow-up will add definitiveness of long-term device performance.

FormatCase Study

Case Rpt Followup15

Student Club

ClassificationRearfoot and Ankle Reconstruction

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Evan P. Shoemaker, BA	evanshoemaker@tcomn.com	I/We have nothing to disclose	
Rebecca Stone McGaver, MS, ATC	beckystone@tcomn.com	I/We have nothing to disclose	
		Grant/Research funding	Paragon 28.
		Consultant/Advisor/Speaker (List all affiliations)	Consultant – Paragon 28. Speaker – International Foot & Ankle Foundation. Speaker – Washington State Podiatric Medical Association.
Jeffrey C. Christensen, DPM, FACFAS	jjcdpm@gmail.com	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Appointment – Research Director for International Foot & Ankle Foundation.
Andrew P. Kapsalis, DPM, AACFAS	Andrew_Kapsalis@ahni.com	Consultant/Advisor/Speaker (List all affiliations)	Consultant - Fusion Orthopedics
		Consultant/Advisor/Speaker (List all affiliations)	Consultant – Paragon 28.
		Intellectual Property rights owned	Royalties/Intellectual Property Rights – Stryker Corporation.
Douglas K. Blackledge, DPM	Douglas_Blackledge@ahni.com	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Appointment – Board of Managers for Community Surgery Center Howard.
John C. Tanner, MD	johtanner@tcomn.com	I/We have nothing to disclose	
Paul M. Cammack, MD	paulcammack@tcomn.com	Consultant/Advisor/Speaker (List all affiliations)	Consultant – Paragon 28. Consultant – Arthrex.

Title

Pedal Malignant Melanoma Reconstruction Utilizing Synthetic Electrospun Fiber Matrix

Submit Date

10/14/2024

Correspondent

Last Name: Abicht

Full Name: Bradley P. Abicht, DPM, FACFAS

Practice/Company/Residency Program: Gundersen Health System

Email: bpabich1@gundersenhealth.org

Authors

Author 1: Levi Smith, DPM

Author 2: Bradley P. Abicht, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Pedal melanomas can be rare and aggressive due to delayed presentation. The standard treatment is wide local excision, which may leave large, deep defects to ensure clean margins. The resultant wounds rely on the reconstructive armamentarium for additional options. This study aims to assess the clinical outcomes of soft tissue reconstruction treated with an electrospun fiber matrix (SEFM) following wide local excision of pedal melanomas.

Methodology

Procedures

Patients undergoing local or marginal wide excision for melanocytic lesions and subsequent soft tissue defect repair to the dorsal and plantar surfaces were examined for this series. Each defect was treated with an intraoperative SEFM immediately post-resection. Long term follow-up monitoring for each patient revealed full wound closure with no melanoma recurrence.

Results

Five patients with post-oncologic soft tissue surgical defects, with a mean area of 7.952 ± 5.073 sq. cm. (range: 2.52-16), achieved complete re-epithelialization following 1-2 SEFM applications within a mean 74.4 ± 43.9 days (range: 37-148). No complications were observed.

Discussions

Melanoma, the most dangerous form of skin cancer, of the foot is commonly diagnosed in later stages due to location and indiscernible symptoms. Acral lesions found on the plantar surface are generally thicker than those found elsewhere on the body. Surgical solutions often result in a significant soft tissue defect to ensure clear margins and the eradication of existing malignancies. These defects are usually reconstructed with skin grafts or flaps when primary closure is not achievable, which introduces donor site morbidity. Treatment with the SEFM eliminates the need for additional procedures on these post-oncologic wounds.

Format

Case Study

Case Rpt Followup

20

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Levi Smith, DPM	Levi.smith@gundersenhealth.org	I/We have nothing to disclose	
Bradley P. Abicht, DPM, FACFAS	bpabich1@gundersenhealth.org	Consultant/Advisor/Speaker (List all affiliations)	Acera Surgical, Enovis Foot & Ankle, ConMed Foot & Ankle, Invibio, SupraFusion Technologies
		Member of a medical publication or editorial governing board	FASTRAC, Podiatry Today

Title

Resection Calcaneoplasty with External Fixation and Microsurgical Free Flap: A Multidisciplinary Case Report of Limb Salvage for Calcaneal Osteomyelitis in a Compromised Host

Submit Date

10/14/2024

Correspondent

Last Name: Fullmer

Full Name: Taylor C. Fullmer, DPM

Practice/Company/Residency Program:

Email: taylor.fullmer@gundersenhealth.org

Gundersen Health System

Authors

Author 1: Taylor C. Fullmer, DPM

Author 2: Rosemary J. Thompson, DPM

Author 3: Devin C. Simonson, DPM, FACFAS

Author 4: Andrew D. Elliott, DPM, JD, FACFAS

Author 5: Jordan Bruce, MD

Author 6:

Author 7:

Author 8:

Purpose

Plantar heel wounds with calcaneal osteomyelitis in complicated patients pose significant challenges for achieving clinical cure and maintaining foot function. Preserving a durable plantar heel pad and resolving infection are critical for successful reconstruction. In cases of drug-resistant osteomyelitis, subtotal or total calcanectomy may be necessary, though this can limit ambulation and impact activities. Selecting appropriate soft tissue coverage is vital to support body weight. This report presents a case of an IV drug user with a large heel wound complicated with osteomyelitis which included infectious disease management, partial calcaneal resection with application of external fixation and plastic surgery anterolateral thigh (ALT) microsurgical free flap.

Methodology

Procedures

A 66-year-old male with past medical history of diabetes complicated with IV drug abuse was admitted to our hospital system for sepsis. Pertinent physical exam findings included a massive full thickness wound with exposed calcaneus. The patient underwent serial surgical debridement until bone biopsies confirmed clean margins. The infectious disease team managed culture-driven antibiotic therapy. Plastic surgery performed an ALT microsurgical free flap for soft tissue coverage, immediately followed by application of an external fixation via static circular frame. The patient later transitioned to a lower leg orthosis.

Results

n/a

Discussions

Calcaneal osteomyelitis requires a multidisciplinary approach. Standardized treatment algorithms involving plastic surgery, infectious disease, and foot and ankle specialists could improve outcomes, but individualized strategies are essential due to varied patient co-morbidities. In this case, interdisciplinary patient care played a major role in preserving this patient's lower limb.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Taylor C. Fullmer, DPM	taylor.fullmer@gundersenhealth.org	I/We have nothing to disclose	
Rosemary J. Thompson, DPM	rosie.thompson@gundersenhealth.org	I/We have nothing to disclose	
Devin C. Simonson, DPM, FACFAS	dcsimons@gundersenhealth.org	I/We have nothing to disclose	
Andrew D. Elliott, DPM, JD, FACFAS	adelliot@gundersenhealth.org	I/We have nothing to disclose	
Jordan Bruce, MD	jordan.bruce@gundersenhealth.org	I/We have nothing to disclose	

Title

Treatment of Pediatric Talar Osteochondral Defect (OCD) with use of Distal Tibial Metaphyseal Autograft: A Case Study

Submit Date

10/14/2024

Correspondent

Last Name: Becoja

Full Name: Becoja, DPM

Practice/Company/Residency Program:

Email: besim.becoja@corewellhealth.org

Corewell Health East - Wayne

Authors

Author 1: Besim Becoja, DPM

Author 2: Lawrence Fallat, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

An osteochondral defect (OCD) is a term used to describe lesions involving the articular cartilage and subchondral bone. Second to the knee, the talus is the most common bone to experience osteochondral lesions. Due to its restricted vascular supply, the talus has a limited reparative capacity which is reflected in cases of chronic osteochondral defects which progress to degenerative osteoarthritis of the ankle joint. This case report describes the treatment of a pediatric osteochondral defect with use of distal tibial metaphyseal autograft through a medial malleolar takedown approach.

Methodology

Procedures

A pediatric patient with a talar OCD underwent OCD repair with autogenous bone graft from the distal tibial metaphysis and osteotomy of the medial malleolus. Preoperative x-rays and MRI revealed a large osteochondral defect of the medial aspect of the talar dome measuring 8 mm in diameter.

Results

Complete consolidation and repair of the OCD of the talus, full ankle joint range of motion, return to full activity with no restriction, complete resolution of ankle pain.

Discussions

The most common osteochondral defect (OCD) of the foot and ankle occurs in the talus. Acute osteochondral defects compare to acute ankle injuries with symptoms of deep ankle pain, swelling, and instability. Chronic osteochondral defects may progress to degenerative osteoarthritis of the ankle which may warrant surgical correction. In the case of a pediatric patient open repair of the OCD with use of distal tibial metaphyseal autograft via medial malleolar takedown is a viable option with excellent results that aims to prevent progression of disorder.

Format

Case Study

Case Rpt Followup

18

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Besim Becoja, DPM	besim.becoja@corewellhealth.org	I/We have nothing to disclose	
Lawrence Fallat, DPM, FACFAS	lfallatdpm@aol.com	I/We have nothing to disclose	

Title

Comparison of Pitcher Velocities in Bullpens with Different Type of Turf Shoes

Submit Date

10/14/2024

Correspondent

Last Name:Patel

Full Name:Neil R. Patel, DPM

Practice/Company/Residency Program:

Email:neil2695@gmail.com

Kentucky/Indiana Foot and Ankle Specialists

Authors

Author 1:Paul Klutts, DPM, FACFAS

Author 2:Amanda Denzik, DPM, FACFAS

Author 3:Chad Miller, M.A.

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

With the increasing diversity in baseball footwear, understanding how various shoe designs, including traditional cleats, turf shoes, and hybrid models, influence performance has become essential. The purpose of the study is to compare the throwing velocity of pitchers in bullpens with different types of Turf shoes, comparing Sqairz Velo Trainers with Adidas, New Balance, Nike, and Under Armour.

Methodology

Procedures

This study analyzed 54 collegiate players and how throwing velocity changed by switching shoes from traditional footwear to Sqairz Velo Trainers. Pitchers were studied utilizing a radar gun and completed their standard activation that included their arm and body activation protocols and throwing routines. The players followed the format with 10 step throughs, 10 fastballs, 10 mix, 10 four seam fastballs with normal shoes on, and 10 four seam fastballs with Sqairz Velo Turfs.

Results

41 out of 54 players saw increases in throwing velocity during their sessions. The largest variance in velocity was with Nike with an average of 3.12 mph and smallest variance in velocity of 1.06 mph with New Balance. In normal shoe gear, players displayed increased medial to lateral translation at the ankle and subtalar joints. When players wore Sqairz, it was visibly more stable at these joints.

Discussions

Sqairz Velo Turfs showed a significant improvement in pitchers' velocity across the fifty-four pitchers that were studied and assisted the players in improving their balance, which allowed them to then improve on their direction and consistent timing of their release. The average velocity increase was 2.1 mph across the group when players changed from their normal shoes to Sqairz Velo Turfs.

Format

Case Study

Case Rpt Followup

12

Student Club

Biomechanics and Anatomy

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Paul Klutts, DPM, FACFAS	pklutts@kyinfas.com	I/We have nothing to disclose	
Amanda Denzik, DPM, FACFAS	adenzik@kyinfas.com	I/We have nothing to disclose	
Chad Miller, M.A.	cmiller@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Sqairz

Title

Lisfranc Fracture Dislocation VAS and Radiographic Improvement with Suture Button Fixation

Submit Date

10/14/2024

Correspondent

Last Name: Thomas

Full Name: Tayler

Practice/Company/Residency Program:

Email: tayler.thomas@rochesterregional.org

Rochester General Hospital

Authors

Author 1: Tayler, A, Thomas, DPM

Author 2: Kate, A, Cryderman, DPM

Author 3: Paul, A, Stasko, DPM AACFAS

Author 4: Peter, M, Stasko, DPM AACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Lisfranc fracture-dislocation injuries are uncommon in the general population but are becoming more frequent. Traditionally, isolated ligamentous injuries have been treated with ORIF or primary arthrodesis. This study aims to assess midterm outcomes of Suture Button fixation for Lisfranc injuries using VAS scores and radiographic evaluations.

Methodology

Procedures

Two surgeons from Finger Lakes Bone and Joint (Rochester Regional Health) treated 10 patients with suture button fixation for Lisfranc fractures/dislocations between 02/2018 and 07/2023, with at least one year of follow-up (Avg 14.9 months +/- 4.1 months). Patient's ranged from 25 to 64 years old, with an equal gender distribution. AP radiographic diastasis between the 1st and 2nd metatarsals was measured pre-surgery, immediately post-op, and at six months. VAS scores were recorded pre-surgery, immediately post-op, at six months, and one year.

Results

Radiograph reviews showed a decrease in diastasis (pre-op average 4.94 mm to post-op 3.51 mm). All patients reported significant VAS score reductions (pre-op average 8.7 to post-op 1.8), indicating improved satisfaction. Diastasis was maintained for at least one-year post-op. No significant differences in VAS or diastasis were found ($p < .05$), but changes in diastasis and VAS scores were nearing significance based on age ($<$ or $>$ 50 years).

Discussions

Suture button fixation promoted diastasis maintenance and VAS improvement, suggesting an effective treatment for Lisfranc injuries. A larger sample size may reveal significant differences. Future studies will include more cases and a comparative analysis with ORIF.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Tayler, A, Thomas, DPM	tayler.thomas@rochesterregional.org	I/We have nothing to disclose	
Kate, A, Cryderman, DPM	Kate.cryderman@rochesterregional.org	I/We have nothing to disclose	
Paul, A, Stasko, DPM AACFAS	paul.a.stasko@gmail.com	I/We have nothing to disclose	
Peter, M, Stasko, DPM AACFAS	pmstasko25@gmail.com	I/We have nothing to disclose	

Title

Outcomes of Malerba Calcaneal Osteotomy without Lateralization in the Treatment of Rearfoot Varus

Submit Date

10/16/2024

Correspondent

Last Name:Jameson

Full Name:Ryan C. Jameson, DPM

Practice/Company/Residency Program:

Email:ryan.jameson@sanfordhealth.org

Sanford Health Podiatry Medicine and Surgery Residency

Authors

Author 1:Ryan C. Jameson, DPM

Author 2:Alexander CM. Chong, MSAE MSME

Author 3:Timothy P. Uglem, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study was to report the incidence of union, complications, and revisions associated with the Malerba calcaneal osteotomy without lateralization of the calcaneal tuberosity in the treatment of rearfoot varus foot deformity.

Methodology

Procedures

Numerous types of calcaneal osteotomies exist in the treatment of adult rearfoot varus deformity; however, the preferred surgical option remains controversial. The Malerba calcaneal osteotomy which is a lateral closing wedge Z-osteotomy of the posterior calcaneus designed with an axis of rotation to primarily address frontal plane deformity while avoiding the risk of damaging the subtalar joint, the peroneal tendons, and the sural nerve. Basic science papers demonstrate high corrective potential of this technique. A paucity of data exists on union, complication, and reoperation/revision rates associated with this procedure, and no outcomes study exists that evaluates this procedure specifically without lateralization of the calcaneal tuberosity. This retrospective case series reviewed patients who underwent a Malerba calcaneal osteotomy at a single institution between January 2018 and March 2024.

Results

A total of 46 cases were identified and included. At mean follow up of 14.7 months. There was a 100% union rate. The overall complication rate was 7% (3/46 cases) with one patient requiring hardware removal, one case of dehiscence, and one superficial infection. The dehiscence case underwent revision due to under correction of rearfoot deformity during the initial procedure.

Discussions

This study illustrates that the Malerba calcaneal osteotomy without lateralization is a safe and reliable method in the treatment of adult rearfoot varus foot deformity

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Ryan C. Jameson, DPM	ryan.jameson@sanfordhealth.org	I/We have nothing to disclose	
Alexander CM. Chong, MSAE MSME	alexander.chong@sanfordhealth.org	I/We have nothing to disclose	
Timothy P. Uglem, DPM	timothy.uglem@sanfordhealth.org	I/We have nothing to disclose	

Title

Adenocarcinoma with metastasis to first metatarsal: management in the setting of superimposed infection

Submit Date

10/14/2024

Correspondent

Last Name: Karam

Full Name: Yara I. Karam, DPM, M.Ed

Email: ykaram@kent.edu

Practice/Company/Residency Program: Detroit Medical Center

Authors

Author 1: Yara I. Karam, DPM, M.Ed

Author 2: Razdum Ahmed, DPM

Author 3: Rebecca L. Cena, DPM

Author 4: Bruce F. Kallou, DPM, ABFAS, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Adenocarcinoma of the breast is the most common type of breast cancer. The occurrence of this form of carcinoma metastasizing to the lower extremity has a low incidence rate. This case study documents a patient who presented with symptoms of osteomyelitis of the first metatarsal, which was then diagnosed as metastatic carcinoma. The aim of this study is to assess the prevalence and management protocol of metastatic carcinoma to the foot to prevent delay in treatment.

Methodology

Procedures

This case study presents a 72-year-old female with significant medical history of metastatic triple negative breast cancer with metastasis to lungs and vertebrae, chronic obstructive pulmonary disease, who presented with left foot ulcers and concerns of osteomyelitis. Radiographs of the left foot displayed a mottled appearance of the first ray, including distal phalanx, proximal phalanx, and first metatarsal bones. Patient was consented for debridement of left foot ulcerations and bone biopsy of the first metatarsal.

Results

Pathology report finalized as metastatic carcinoma consistent with breast primary, and the bone of left foot negative for acute osteomyelitis.

Discussions

Adenocarcinoma of the breast has prevalence of metastasis to bones, but rare to occur in the lower extremity. Treatment options for metastasis proposed in previous studies include chemotherapy, debridement, and even amputation. Within the lower extremity, osteomyelitis and metastasis carcinoma of the foot can appear with overlapping symptoms. That is why bone biopsy should be added to the diagnostic panel to prevent misdiagnosis and provide early treatment.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Yara I. Karam, DPM, M.Ed	ykaram@kent.edu	I/We have nothing to disclose	
Razdum Ahmed, DPM	razdumahmed@gmail.com	I/We have nothing to disclose	
Rebecca L. Cena, DPM	rebeccalcena@gmail.com	I/We have nothing to disclose	
Bruce F. Kallou, DPM, ABFAS, FACFAS	brucekallou@gmail.com	I/We have nothing to disclose	

Title

Overcorrected Cavus Reconstruction: A case report

Submit Date

10/14/2024

Correspondent

Last Name: Schwab

Full Name: Anthony, Joseph, Schwab, DPM, MS

Practice/Company/Residency Program: Inova Fairfax Medical Campus

Email: anthonyjschwab7@gmail.com

Authors

Author 1: Anthony, J, Schwab, DPM, MS

Author 2: Gabrielle Uptegraph, DPM

Author 3: Yong Lee, DPM

Author 4: Corine L. Creech, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To report a case of overcorrected cavus deformity with subsequent flatfoot reconstruction and midfoot nonunion repair.

Methodology

Procedures

One patient had followed up with our institution 15 months status post cavus foot deformity reconstruction including a lateralizing displacement calcaneal osteotomy, midfoot arthrodesis, dorsiflexory wedge osteotomy of the 1st metatarsal, Steindler stripping, and posterior tibial tendon transfer. This patient had presented with continued pain along the medial longitudinal arch and plain films as well as CT scan of the right foot and ankle had demonstrated flatfoot deformity with nonunion about the navicular cuneiform joint. Ultimately the decision was made to perform a medial displacement calcaneal osteotomy, Evans calcaneal osteotomy, and naviculocuneiform arthrodesis.

Results

Prior to initial cavus foot reconstruction, pre operative radiographic measurements were as follows: Calcaneal inclination angle 48.3 degrees, angle of Hibbs 101.9 degrees. Following revision surgery these have improved to 21.3 and 121.4 respectively.

Discussions

To our knowledge, this is the first case of flatfoot reconstruction reported for an overcorrected cavus deformity. We postulate that overcorrection at the calcaneus led to undo stress upon the apex of the ensuing flatfoot deformity that led to subsequent nonunion and midfoot pain. At a follow up of 28 months after index procedure and 12 months after subsequent reconstruction, the patient has returned to ambulation and walking around 1.5 miles daily in normal shoe gear.

Format

Case Study

Case Rpt Followup

29

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Anthony, J, Schwab, DPM, MS	anthonyjschwab7@gmail.com	I/We have nothing to disclose	
Gabrielle Uptegraph, DPM	gabriellemuptegraph@gmail.com	I/We have nothing to disclose	
Yong Lee, DPM	ys.lee.dpm@gmail.com	I/We have nothing to disclose	
Corine L. Creech, DPM, FACFAS	creecher17@me.com	I/We have nothing to disclose	

Title

Treatment of concomitant Osteomyelitis of the hallux and dislocated ankle fracture secondary to Charcot Neuroarthropathy with multi-staged approach

Submit Date

10/14/2024

Correspondent

Last Name: Cena

Full Name: Rebecca L. Cena, DPM

Practice/Company/Residency Program:

Email: rebeccalcena@gmail.com

Detroit Medical Center

Authors

Author 1: Rebecca Cena

Author 2: Tushar I. Singh, DPM

Author 3: Yara I. Karam, DPM, M.Ed

Author 4: Brian G. Kissel, DPM, MBA

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Treatment of Charcot Neuroarthropathy (CN) with associated osteomyelitis is one of the most challenging issues involving the diabetic foot. Specifically, ankle-associated CN which can be treated with single-stage or multi-staged procedures that includes internal fixation, external fixation, or a combination of the two. This case documents the stepwise approach for a multi-staged procedure to treat concomitant osteomyelitis of the hallux and a dislocated ankle fracture secondary to acute CN.

Methodology

Procedures

This case study presents a 67-year-old male with no reported past medical history that presented to the hospital with right ankle pain and associated swelling. The patient denied history of trauma to the ankle but did also report an ulcer to the right hallux. Radiographs were obtained which revealed osteomyelitis to the distal phalanx of the right hallux and a pilon fracture of the right ankle secondary to acute Charcot Neuroarthropathy.

Results

This staged reconstruction approach resulted in an ulcer-free, stable, plantigrade foot at one-year postoperative follow-up.

Discussions

Treatment of ankle-associated CN with concomitant osteomyelitis of the hallux must be treated with a multi-staged surgical approach. The initial stage involves eradicating the infection and stabilizing the deformity with external fixation. External fixation has the advantage of deformity correction with limited neurovascular compromise. However, arthrodesis is the gold standard for treatment. Therefore, the final surgery in this multi-staged approach entailed removal of external fixation and arthrodesis utilizing a retrograde intramedullary nail.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Diabetic Foot

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Rebecca Cena	rebeccalcena@gmail.com	I/We have nothing to disclose	
Tushar I. Singh, DPM	emailtusharsingh@gmail.com	I/We have nothing to disclose	
Yara I. Karam, DPM, M.Ed	ykaram@kent.edu	I/We have nothing to disclose	
Brian G. Kissel, DPM, MBA	kisselbg@gmail.com	I/We have nothing to disclose	

Title

Orthopedic Indication of Borjeson-Forssman-Lehmann Syndrome

Submit Date

10/14/2024

Correspondent

Last Name: Dong

Full Name: Johnny

Practice/Company/Residency Program:

Email: johnnydong101@gmail.com

The Pediatric Foot and Ankle Fellowship

Authors

Author 1: Mark Solomon

Author 2:

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case discusses the complex surgical correction of a 13-year-old female with progressive, painful Right forefoot deformities, including hallux valgus, hammertoes, and an elongated third metatarsal.

Methodology

Procedures

A 13-year-old female with BFLS, anxiety, hypercholesterolemia, and hypothyroidism presented with bilateral hallux valgus and hammertoes, with the right foot being more symptomatic than the left. Borjeson-Forssman-Lehmann Syndrome(BFLS) is a rare X-linked recessive disorder caused by mutations in the PHF6 gene and can be fully expressed in both males and females. The procedures performed on the Right foot include: hallux valgus correction through a minimal incision double osteotomy of the first metatarsal and proximal phalanx, hammertoe correction through joint sparring osteotomies with implant fixation for digits 2 through 5, and third metatarsal osteotomy.

Results

The patient’s right forefoot remained pain-free with no recurrence of deformity following the initial surgical intervention.

Discussions

This case presentation highlighted patient satisfaction achieved through minimally invasive first ray surgery and joint-sparing hammertoe correction. The patient’s right forefoot remained pain-free with no recurrence of deformity after the initial surgery, prompting left forefoot surgery for hallux valgus and hammertoe deformities one year later, reflecting high satisfaction from both the patient and her parents.

Format

Case Study

Case Rpt Followup

21

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Mark Solomon	drsolomon@advfoot.com	Consultant/Advisor/Speaker (List all affiliations)	Orthofix, Ossio

Title

Application of Split-Thickness Skin Graft Following Traumatic Hematoma: A Case Report

Submit Date

10/14/2024

Correspondent

Last Name: Burandt

Full Name: Madison, K, Burandt

Email: madison.burandt12@gmail.com

Practice/Company/Residency Program: West Penn Hospital Foot and Ankle Institute

Authors

Author 1: Madison, K, Burandt, DPM

Author 2: Isaac, M, Kline, DPM

Author 3: Michael, R, Huther, DPM

Author 4: Karl, Saltrick, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Split-thickness skin grafts are a viable option in the foot and ankle population for wounds. We present a case of a traumatic hematoma later covered with a split thickness skin graft.

Methodology

Procedures

A 58-year-old female endured a trauma resulting in a hematoma to the medial aspect of her hindfoot/ankle. This was evacuated in full leaving a deficit measuring 8cmx5cmx1.5cm. A skin graft substitute was applied to the area. The patient returned to the operating room 21 days after the application of the skin graft substitute. At this time, a split thickness skin graft was obtained from the patient's ipsilateral calf after the wound bed was prepared and bleeding was controlled. This was stapled into place. The patient was instructed to remain non-weightbearing immediately post-operatively.

Results

Successful graft incorporation was seen; staples were removed at the second post operative visit. Patient was able to begin weightbearing as tolerated 5 weeks post procedure.

Discussions

Split-thickness skin grafts are a viable option for covering foot and ankle wounds in properly selected patients with adequate vascular supply, controlled infection and a healthy wound bed. At our institution, grafts are harvested from the ipsilateral calf offering advantages such as ease of access and reduced morbidity. Post-operative care emphasizes immobilization, elevation, and proper dressing techniques to prevent complications like graft failure, infection or contracture.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Madison, K, Burandt, DPM	madison.burandt12@gmail.com	I/We have nothing to disclose	
Isaac, M, Kline, DPM	isaac.kline@ahn.org	I/We have nothing to disclose	
Michael, R, Huther, DPM	michael.huther2@ahn.org	I/We have nothing to disclose	
Karl, Saltrick, DPM, FACFAS	karl.saltrick@ahn.org	I/We have nothing to disclose	

Title

The Extruded Talus with Traumatic Transection of the Flexor Hallucis and Digitorum Longus Tendons: A Case Report

Submit Date

10/14/2024

Correspondent

Last Name: Joseph

Full Name: Nevin

Practice/Company/Residency Program:

Email: njoseph1212@gmail.com

OhioHealth Grant Medical Center

Authors

Author 1: Nevin Joseph DPM

Author 2: Alexa Bykowski DPM

Author 3: Meghan Roby DPM

Author 4: Sara Judickas DPM

Author 5: Joseph Temperato DO

Author 6:

Author 7:

Author 8:

Purpose

The extruded talus is a high-energy, open total dislocation of the peritalar joint complex with historically poor outcomes such as avascular necrosis (AVN), infection and arthrosis. We present a unique case of an extruded pan-talar dislocation with associated transection of the long flexor tendons of the ankle.

Methodology

Procedures

A 30-year-old male presented as a polytrauma from a motor vehicle collision. On physical exam, he was neurovascularly intact with a large medial traumatic wound with an extruded pan-talar dislocation with periosteal stripping and transection of the long flexor tendons. Intraoperatively, the flexor hallucis and digitorum longus were transected in full with complete shear of the deltoid ligament complex. Given there was retraction of the proximal ends of the long flexor tendons, we utilized the distal tendon stumps to create a make-shift deltoid sling which was secured to the medial malleolus. Intra-operative stress demonstrated a stable talus within the mortise.

Results

Superficial wound dehiscence healed in 1 month, no radiographic signs of AVN, weakness in ankle and hallux plantarflexion

Discussions

Traumatic extrusion of the talus is an uncommon injury representing around 2.0% of all talar injuries. Historically, these injuries were treated with primary talectomy and tibiocalcaneal arthrodesis due to high rates of infection, which ranges from 11%-40%, and AVN. Recently, there has been a trend to primary reimplantation of the talus with thorough irrigation and debridement. Even with re-implantation, the risk of hindfoot arthritis and collapse which may require secondary procedures remains prevalent.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Nevin Joseph DPM	njoseph1212@gmail.com	I/We have nothing to disclose	
Alexa Bykowski DPM	alexa.bykowski@ohiohealth.com	I/We have nothing to disclose	
Meghan Roby DPM	meghan.robby@ohiohealth.com	I/We have nothing to disclose	
Sara Judickas DPM	sara.judickas@ohiohealth.com	I/We have nothing to disclose	
Joseph Temperato DO	Joseph.Temperato@ohiohealth.com	I/We have nothing to disclose	

Title

Gradual Correction of Pediatric Cavus Foot Deformity

Submit Date

10/14/2024

Correspondent

Last Name: Dong

Full Name: Johnny

Practice/Company/Residency Program:

Email: johnnydong101@gmail.com

The Pediatric Foot and Ankle Fellowship

Authors

Author 1: Mark Solomon

Author 2:

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this publication is to discuss the complex surgical correction of a 13 year old female with Bilateral Cavus foot deformity secondary to spina bifida. The right foot deformity is more severe than the left.

Methodology

Procedures

Children with spina bifida develop a wide variety of congenital and acquired orthopedic deformities. Varus deformity of the hind foot has been reported in 8-17% of the patients with spina bifida. The patient underwent 1. R Foot Tarsal Tunnel Release, 2. R Steindler Stripping, 3. R Calcaneus Osteotomy, 4. R Midfoot Osteotomy, 4 Application of Multiplanar Ex Fix with Sterostactic computer assisted adjustments at the RLE.

Results

The patient achieved gradual correction of the deformity, with her right lower extremity remaining pain-free and showing no recurrence of the deformity after the initial surgical intervention.

Discussions

In a patient with the potential for ambulation, the goal of the treatment of foot deformity in spina bifida is a plantigrade, supple, and braceable foot with maximally preserved range of motion. Even in non-ambulatory patients, treatment may be necessary if foot deformity prevents shoe wear or positioning in a wheelchair.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Mark Solomon	drsolomon@advfoot.com	Consultant/Advisor/Speaker (List all affiliations)	Orthofix, Ossio

Title

Two-Stage Total Ankle Arthroplasty Without Total Talus Implant for End-Stage Avascular Necrosis of the Talus: A Case Report

Submit Date

10/14/2024

Correspondent

Last Name: Joseph

Full Name: Nevin

Practice/Company/Residency Program:

Email: njoseph1212@gmail.com

OhioHealth Grant Medical Center

Authors

Author 1: Nevin Joseph DPM

Author 2: Alexa Bykowski DPM

Author 3: Meghan Roby DPM

Author 4: Sara Judickas DPM

Author 5: Brian Steginsky DO

Author 6:

Author 7:

Author 8:

Purpose

Avascular necrosis (AVN) of the talus with associated hindfoot and ankle collapse is a challenging pathology to treat. Scant literature is available regarding joint salvage procedures for late-stage AVN without the use of a total talus implant. We present a case utilizing a two-stage approach for talar AVN with the initial procedure consisting of hindfoot arthrodesis for revascularization of the talus, followed by total ankle arthroplasty (TAA) without a concomitant total talus implant.

Methodology

Procedures

A 68-year-old female presented with right ankle pain after multiple procedures performed by an outside provider for diffuse AVN of the talus. The patient did not want to pursue any joint destructive procedures. We pursued a two-stage total ankle arthroplasty with the initial stage consisting of a subtalar and talonavicular arthrodesis. The second stage consisted of a total ankle arthroplasty with a long-stemmed tibial implant without the use of a total talus implant due to revascularization of the talus with the index hindfoot fusion.

Results

Unremarkable post-operative course without evidence of talar component subsidence or implant failure

Discussions

Historically, AVN of the talus was a contraindication for TAA. More recently, the introduction of total talus implants has allowed for more joint salvage procedures for end-stage talar AVN. Our case presents an alternative option to total talus implants with revascularization of the talus with hindfoot arthrodesis and the continued use of a standard talar component.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Nevin Joseph DPM	njoseph1212@gmail.com	I/We have nothing to disclose	
Alexa Bykowski DPM	alexa.bykowski@ohiohealth.com	I/We have nothing to disclose	
Meghan Roby DPM	meghan.robby@ohiohealth.com	I/We have nothing to disclose	
Sara Judickas DPM	sara.judickas@ohiohealth.com	I/We have nothing to disclose	
Brian Steginsky DO	brian.steginsky@ohiohealth.com	I/We have nothing to disclose	

Title

Dual Plate Fixation for Vertical, Impacted Medial Malleolar Fractures: A Novel Technique and Case Report

Submit Date

10/14/2024

Correspondent

Last Name: Joseph

Full Name: Nevin DPM

Practice/Company/Residency Program:

Email: njoseph1212@gmail.com

OhioHealth Grant Medical Center

Authors

Author 1: Nevin Joseph DPM

Author 2: Alexa Bykowski DPM

Author 3: Meghan Roby DPM

Author 4: Sara Judickas DPM

Author 5: Joseph Scheschuk DO

Author 6:

Author 7:

Author 8:

Purpose

Dual plate fixation in lower extremity trauma has been described in femur, tibial and distal fibular fractures, however, there is no current literature of the use in medial malleolar fractures. Vertical medial malleolar fractures have been found to have high rates of marginal impaction, and proper anatomic plafond reduction is paramount to outcomes. We present a case of bilateral bimalleolar ankle fractures with treatment of dual plate fixation and fracture specific fixation of the medial malleolus.

Methodology

Procedures

A 19-year-old female presented as a polytrauma from a motor vehicle collision. She was found to have bilateral supination-adduction bimalleolar ankle fractures. Advanced imaging of the right ankle was performed, and she was found to have a marginally impacted vertical medial malleolar fractures with anterior and posterior extension of the tibial plafond. She underwent a right ankle open reduction internal fixation, and the medial malleolar fracture was fixated with dual radial styloid plates, one plate to reduce each the anterior and posterior impacted portions.

Results

Uneventful postoperative course with fracture healing at 6 weeks. No evidence of hardware failure or clinical/radiologic signs of post-traumatic arthritis at 1 year follow-up

Discussions

Supination-adduction ankle fractures are uncommon rotational fractures, with rates varying from 5-20%. With these fractures, joint impaction is common which is associated with cartilage injury and worse joint survivorship. Historically, these fractures have been described as pilon fracture variants. With this, anatomic reduction is paramount, and fracture specific fixation could mitigate the risk of post traumatic arthritis.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Nevin Joseph DPM	njoseph1212@gmail.com	I/We have nothing to disclose	
Alexa Bykowski DPM	alexa.bykowski@ohiohealth.com	I/We have nothing to disclose	
Meghan Roby DPM	meghan.robby@ohiohealth.com	I/We have nothing to disclose	
Sara Judickas DPM	sara.judickas@ohiohealth.com	I/We have nothing to disclose	
Joseph Scheschuk DO	Joseph.Scheschuk@ohiohealth.com	I/We have nothing to disclose	

Title

Angioleiomyoma of the Lower Extremity; A Unique Presentation

Submit Date

10/14/2024

Correspondent

Last Name: Bakri

Full Name: Salma

Email: salma.bakri@tuhs.temple.edu

Practice/Company/Residency Program: Chestnut Hill Podiatric Surgery Residency Program

Authors

Author 1: Salma M Bakri, DPM

Author 2: Aurora G Oliva, DPM

Author 3: Yevgeniy Shagas, DPM, DABPM, DABFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Angioleiomyomas are benign smooth muscle tumors that arise from the tunica media of small vessels. They are rare and make up 5% of all benign soft tissue neoplasms. This study aims to contribute to the understanding and diagnosis of this soft tissue mass that occurs commonly in extremities, but rarely around tendons.

Methodology

Procedures

A 61-year-old male presented to clinic with a complaint of a painful mass on the posterior left heel present for 5 years. Preoperative MRI showed an ovoid soft tissue mass along the posterior margin of the distal achilles tendon measuring 32 x 12 x 31 mm. The mass showed heterogenous enhancement on post contrast imaging and was hyperintense on T1 and intermediate intensity on T2 imaging. Secondary to patient's increased discomfort, the mass was surgically resected. Intraoperatively, it was well circumscribed, made up of soft tissue with the lumena of vessels visible upon transection of the mass.

Results

Pathology results yielded a proliferation of eosinophilic spindle cells surrounding blood vessels from the specimen that was submitted. The spindle cells were positive for smooth muscle actin, calponin, and desmin. CD31 and CD34 highlight the abundant blood vessels in the mass. These findings were consistent with an angioleiomyoma.

Discussions

This case aims to provide insight into the clinical characteristics, histopathological findings, and treatment outcomes of this soft tissue tumor. With differential diagnosis including synovial sarcoma, giant cell tumor, and myxofibrosarcoma, early diagnosis and treatment are paramount. This can be challenging due to the rarity of this tumor and lack of interdisciplinary approach to diagnosis.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Salma M Bakri, DPM	salma.bakri@tuhs.temple.edu	I/We have nothing to disclose	
Aurora G Oliva, DPM	auroraoliva170@gmail.com	I/We have nothing to disclose	
Yevgeniy Shagas, DPM, DABPM, DABFAS	eugeneshagas@gmail.com	I/We have nothing to disclose	

Title

Plantaris Weave Graft to Augment in Achilles Tendon Rupture: A case study

Submit Date

10/14/2024

Correspondent

Last Name: Ayazi

Full Name: Tarina

Practice/Company/Residency Program:

Email: tarinaayazi@gmail.com

MedStar Washington Hospital Center

Authors

Author 1: Tarina Ayazi

Author 2: Paul Carroll, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

It is estimated that Achilles tendon injuries account for 50% of all sports related injuries. The most common surgical repair is the end-to-end repair. However, large may require tendon lengthening, tendon transfers or grafts to repair the tendon. Directly adjacent to the Achilles tendon is the plantaris longus tendon. This tendon has been used as an augmentation to various surgical repairs of the Achilles tendon.

Methodology

Procedures

This case report of 61 year old male with several year history of right Achilles tendinitis as well as posterior calcaneal heel spur came to our clinic after failed conservative treatment subsequently sustained Achilles tendon rupture while riding his bike 10 days prior to initial scheduled visit. History revealed rupture of Achilles tendon after chronic tendinitis. Physical examination revealed positive Thompson's test and a palpable 2 cm defect at the watershed area. MRI confirmed Achilles tendon rupture.

Results

Surgical management consisted of open repair of the Achilles tendon which led to a large proximal medial gap defect when performing the V-Y tendon lengthening. The plantaris tendon was identified. In a weave fashion, the tendon was tenodesed to the medial aspect of the Achilles tendon to reinforce the medial aspect of the v-Y tendon lengthening where the gap was noted.

Discussions

This case report introduces a promising surgical management in active patients with large gap defects in Achilles tendon. The plantaris tendon was viable option due to its anatomic orientation allowing for coverage over Achilles tendon repair where the medial gap was noted.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Tarina Ayazi	tarina.ayazi@gmail.com	I/We have nothing to disclose	
Paul Carroll, DPM	paul.carroll@medstar.net	Consultant/Advisor/Speaker (List all affiliations)	Altrazeal

Title

Case series on plantar fascia tear and review of recent literature

Submit Date

10/14/2024

Correspondent

Last Name: Nguyen

Full Name: Khoa Nguyen, DPM

Practice/Company/Residency Program:

Email: khoanguyen2571@gmail.com

Phoenixville hospital

Authors

Author 1: Jason Miller, DPM, FACFAS

Author 2: Briravina Hymms, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

While plantar fasciitis is a common condition found in athletes, plantar fascia tear is a much rarer condition. A series of patients were seen in the office with this injury. This paper aims to review these cases and correlate them with clinical presentation, diagnosis, role of imaging studies, such as ultrasound and MRI, in confirming the diagnosis and a review of recent literature on treatment of these rare injuries.

Methodology

Procedures

Multiple patients were seen in clinic with physical examination as well as MRI results with acute plantar fascia tears relating to physical activities. All patients were treated with a combination of steroid injection, supportive orthotics and physical rehabilitation. All recovered without complications and none needed to be escalated to surgical intervention.

Results

Plantar fascia tears and ruptures can be treated conservatively with supportive orthotics, shoe gear as well as physical rehabilitation. 100% of the patients reported improvement in their symptoms as well as some patients reported improvement in their plantar fasciitis pain.

Discussions

The baseline treatment for plantar fascia tears is conservative, with surgery recommended only if these methods fail. Conservative therapy includes immobilization, rest, analgesia, and physical therapy. Studies by Cocco et al., Costa et al., and Logroscino et al. show favorable patient outcomes and recovery of function through non-surgical approaches. Ultrasound results demonstrated healing, with no residual inflammation in patients. Based on these studies, patients treated with conservative care returned to normal function, reinforcing that surgical intervention is rarely necessary.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jason Miller, DPM, FACFAS	jrmiller1371@gmail.com	I/We have nothing to disclose	
Briravina Hymms, DPM	Bri.Hymms@gmail.com	I/We have nothing to disclose	

Title

Pediatric Pedal Bilateral Excision of Longitudinal Epiphyseal Brackets

Submit Date

10/14/2024

Correspondent

Last Name: Rifai

Full Name: Amer, J, Rifai, DPM

Practice/Company/Residency Program:

Email: amer.rifai@luhs.org

Loyola University Medical Center

Authors

Author 1: Amer J Rifai, DPM

Author 2: Edwin J Harris, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Longitudinal epiphyseal bracket is a rare growth deformity in which the etiology is not completely understood. As the deformity progresses, there is progressive shortening and angular deformity of the affected bone. The purpose of this case study is to present a rare incidence of bilateral pedal longitudinal epiphyseal bracket of the first metatarsal subsequently leading to a hallux varus and metatarsus adductus deformity bilaterally.

Methodology

Procedures

A 9-month old female presents with a provisional diagnosis of metatarsus adductus. Initial radiographs demonstrated bilateral hallux varus at the level of the metatarsophalangeal joint, shortened first metatarsal, with the possibility of a longitudinal epiphyseal bracket. Bilateral abductor hallucis longus tendons were transferred and subsequently following identification on radiographs bilateral longitudinal epiphyseal brackets were excised followed by placement of polymethylmethacrylate to the region of the identified bracket.

Results

Resolution of progression of bilateral pedal deformity

Discussions

Pedal longitudinal epiphyseal bracket is a rare osseous dysplasia of the long bones. This case report demonstrates a staged approach of an abductor hallucis tendon transfer and subsequent excision of longitudinal epiphyseal bracket of the first metatarsal bilaterally. By detailing this case, it is the goal to raise awareness of this uncommon condition to emphasize importance of early diagnosis and aggressive treatment to arrest the progression of worsening metatarsus adductus and hallux varus seen that may be seen with longitudinal epiphyseal bracket.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Amer J Rifai, DPM	amer.rifai@luhs.org	I/We have nothing to disclose	
Edwin J Harris, DPM, FACFAS	eharri1@lumc.org	Member of a medical publication or editorial governing board	Editor JFAS

Title

A rare Case of Spitz Nevus in the Foot in a young healthy male

Submit Date

10/14/2024

Correspondent

Last Name: Nguyen

Full Name: Khoa Nguyen

Practice/Company/Residency Program:

Email: khoapete@gmail.com

Phoenixville hospital

Authors

Author 1: Jason Miller DPM FACFAS

Author 2: Mubat Dohvoma DPM PGY2

Author 3: Justine Cardino DPM PGY2

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Spitz nevus is a benign melanocytic tumor that presents as a rapidly growing, pigmented skin lesion. Most commonly in children and adolescents but can occur at any age. Spitz nevi are typically dome-shaped, symmetric, and well-demarcated, with a red-brown coloration. This study presents a case of this rare lesion.

Methodology

Procedures

A 19-year-old male presented after a traumatic injury to the right 5th digit, which required surgical repair. On examination, the patient also had a left lateral heel lesion which was noted to be mobile and rapidly growing in size in the past 5 months. During surgery, the lesion was resected and sent for pathology. Pathologic analysis of the lesion was consistent with a spitz nevus.

Results

After removal of the Spitz nevus, the patient was noted to have mild focal edema at excision site. Sutures were kept intact for another 7 days, which was then removed without any immediate complications. Patient remains healed with no recurrent appreciated.

Discussions

A confirmed case of Spitz Nevi by presentation and biopsy are linked with favorable prognosis as they rarely lead to metastasis. Biopsy results should be taken in the context of patient specific presentation of recent change, pain, bleeding, pruritus, location, age, personal and family history, or other melanoma risk factors. Differential diagnosis histologically includes Reed nevi, cellular blue nevi, or pigmented epithelioid melanocytoma which reinforces importance of histopathology and clinical presentation in the diagnosis and management of spitz nevi.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jason Miller DPM FACFAS	jrmiller1371@gmail.com	I/We have nothing to disclose	
Mubat Dohvoma DPM PGY2	mdohvoma@gmail.com	I/We have nothing to disclose	
Justine Cardino DPM PGY2	jcardino1996@gmail.com	I/We have nothing to disclose	

Title

Running Against the Odds: Bilateral Tarsal Tunnel Syndrome from Accessory Muscle in an 18-year-old Collegiate Cross-Country Runner: A Case Report

Submit Date

10/14/2024

Correspondent

Last Name: Bhalala

Full Name: Yashkumar Anilkumar Bhalala DPM

Practice/Company/Residency Program:

Email: ybhalala@kent.edu

Corewell Health Hospital - Michigan

Authors

Author 1: Yashkumar Anilkumar Bhalala DPM

Author 2: Blake Brannick DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Tarsal tunnel syndrome (TTS) is a rare nerve compression condition involving the posterior tibial nerve as it passes through the tarsal tunnel on the inside of the ankle. While unilateral cases are more common, bilateral tarsal tunnel syndrome is relatively rare and presents unique diagnostic and therapeutic challenges. Bilateral cases often indicate underlying systemic or anatomical causes, such as accessory muscles, trauma, or metabolic conditions.

Methodology

Procedures

An 18-year-old female collegiate cross-country runner presented with bilateral foot pain, tingling, and numbness along the medial aspect of both ankles, initially diagnosed as plantar fasciitis. She received multiple corticosteroid injections, with no symptom relief. The persistent pain led her to consider ending her athletic career. Physical examination revealed positive Tinel's sign bilaterally, and MRI identified an accessory muscle compressing the tibial nerve in both tarsal tunnels. After failed conservative treatments bilateral surgical decompression with excision of the accessory muscle was performed.

Results

13 months post operation, the patient experienced significant relief from symptoms. She returned to full training and competition without pain, successfully resuming her athletic career.

Discussions

Misdiagnosis of tarsal tunnel syndrome (TTS) as plantar fasciitis is common, especially in rare bilateral cases involving anatomical issues like accessory muscles. Conservative treatments may fail, often requiring surgical decompression. Misdiagnosis can lead to unnecessary procedures and delayed recovery. Early imaging and a high suspicion index are crucial for proper diagnosis and timely surgical intervention, allowing symptom resolution and athletic recovery.

Format

Case Study

Case Rpt Followup

13

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Yashkumar Anilkumar Bhalala DPM	ybhalala@kent.edu	I/We have nothing to disclose	
Blake Brannick DPM	Bbrann1@hfhs.org	I/We have nothing to disclose	

TitlePediatric Pigmented Dermatofibrosarcoma Protuberans (Bednar Tumor) in the Foot

Submit Date10/14/2024

Correspondent

Last Name: Luu

Full Name: Sandra J Luu, DPMEmail: sandra.luu@luhs.org

Practice/Company/Residency Program: Loyola University Medical Center

Authors

Author 1: Sandra J Luu, DPMAuthor 2: Amer J. Rifai, DPM

Author 3: Edwin J. Harris, DPM, FACFASAuthor 4:

Author 5: Author 6:

Author 7: Author 8:

PurposeThis case study examines a rare presentation of Bednar tumor in a 10-year-old girl. We hope to inform the reader of this potential differential diagnosis when presented in the foot.

Methodology

ProceduresPigmented dermatofibrosarcoma protuberans (PDFSP), also known as Bednar tumor, is a rare fibrous skin tumor that infiltrates deep into the dermis and adipose tissue, characterized by a fascicular growth pattern. Its pigmentation, due to melanin, distinguishes it from dermatofibromasarcoma protuberans. Although of intermediate malignancy with low metastatic potential, it has been shown to have a high local recurrence rate, quoted between 20% and 50%. Our patient presented with a misdiagnosed lesion on the dorsal aspect of her foot. Initial MRI showed hypodensity on T1 and hyperintensity on T2 without tendon or bone involvement.

ResultsThe patient underwent an initial unplanned 1-cm wide excision with positive margins findings of PDFSP. A subsequent chest X-ray ruled out pulmonary metastasis. Follow-up MRI indicated infiltrative soft tissue lesions around the second and third metatarsals, prompting a re-excision with 3-cm margins five months later, resulting in clear margins. At the 24-month follow-up, the patient remains symptom-free with no recurrence.

DiscussionsThis case highlights a rare instance of Bednar tumor in the pediatric population. It underscores the importance of recognizing pigmented variants of dermatofibrosarcoma protuberans, which may mimic other skin lesions, and emphasizes the necessity of thorough pre- and post-operative evaluations for accurate diagnosis and management.

FormatCase Study

Case Rpt Followup24

Student Club

ClassificationSoft Tissue/Tumor

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Sandra J Luu, DPM	sandra.luu@luhs.org	I/We have nothing to disclose	
Amer J. Rifai, DPM	amer.rifai@luhs.org	I/We have nothing to disclose	
Edwin J. Harris, DPM, FACFAS	eharri1@lumc.edu	I/We have nothing to disclose	

TitleHyperbaric Oxygen: A Lifeline for Amputated Digits

Submit Date10/14/2024

CorrespondentLast Name: EspinozaFull Name: Maribel, Espinoza, DPM, MS, PGY2Email: maribel.espinoza@jax.ufl.eduPractice/Company/Residency Program: UF Health

AuthorsAuthor 1: Maribel, Espinoza, DPM, MS, PGY2Author 2: Divya, S, Paramasivam, DPM, PGY2Author 3: Kristine, D, Gillenwater, DPM, PGY2Author 4: John, S, Anderson, DPM, FACFASAuthor 5: Jason, A, Piraino, DPM, MS, FACFASAuthor 6: Author 7: Author 8:

PurposeOpen fractures of the digits are frequently encountered injuries. In trauma, physicians must determine when salvage may no longer be viable. While some advocate for primary amputation, others recommend limb salvage. This case aims to evaluate the efficacy of hyperbaric oxygen therapy (HBOT) in the management of a near-total traumatic hallux amputation.

Methodology

ProceduresA 24-year-old male with no medical history presented with an open, comminuted, partially amputated, right hallux following an injury with a circular saw. Initial management included irrigation, debridement, and primary closure. In addition to standard trauma care, the patient subsequently underwent HBOT as part of the postoperative regimen. HBOT is a safe intervention where the patient breathes oxygen at two times normal atmospheric pressure. Enhanced oxygen delivery increases the blood's oxygen-carrying capacity, triggering the release of growth factors and stem cells, reducing edema, and improving leukocyte function.

ResultsThe patient underwent multiple rounds of HBOT. Initially, treatments occurred daily, and as the wound stabilized, sessions were reduced to weekly intervals. Despite the initial severity of the injury, the patient retained the digit with intact capillary refill.

DiscussionsHBOT is not a universally accessible treatment, with availability and insurance coverage posing significant barriers to care. Despite this, evidence supports its role in wound healing, particularly for chronic conditions. However, few studies have explored its use in acute trauma. This case highlights the potential of HBOT as a valuable adjunct in the management of severe, acute limb injuries, providing a perspective on its applications beyond chronic wound care.

FormatCase Study

Case Rpt Followup12

Student Club

ClassificationTrauma

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Maribel, Espinoza, DPM, MS, PGY2	maribel.espinoza@jax.ufl.edu	I/We have nothing to disclose	
Divya, S, Paramasivam, DPM, PGY2	divya.paramasivam@ufl.jax.edu	I/We have nothing to disclose	
Kristine, D, Gillenwater, DPM, PGY2	kristine.gillenwater@ufl.jax.edu	I/We have nothing to disclose	
John, S, Anderson, DPM, FACFAS	john.anderson@ufl.jax.edu	I/We have nothing to disclose	
Jason, A, Piraino, DPM, MS, FACFAS	jason.piraino@ufl.jax.edu	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	ACFAS Board

Title

Catastrophic Open 1st Metatarsal Trauma due to Chainsaw Treated via External Monorail followed by Internal Fixation with Bicortical Calcaneal Autograft

Submit Date

10/14/2024

Correspondent

Last Name: Moradia

Full Name: Bhakti Moradia, DPM

Practice/Company/Residency Program:

Email: bmoradia@kent.edu

Mercy Health Regional Medical Center

Authors

Author 1: Bhakti, Moradia, DPM

Author 2: Denis, Agbor, DPM

Author 3: Alex, Bischoff, DPM AACFAS

Author 4: Joseph, Saxon, DPM AACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Initial staging of open isolated 1st metatarsal shaft trauma poses a unique challenge to foot and ankle surgeons due to the devastating nature of a Gustilo Anderson 3A type of injury. Severely comminuted metatarsal shaft fractures with large soft tissue deficits that are not amenable to open reduction internal fixation can reasonably be treated by a first stage of temporary external fixation to restore limb length and allow soft tissue healing. The final surgical stage consists of removal of the external monorail, open reduction internal fixation of 1st metatarsal fracture, procurement of calcaneal autograft. The combination of and calcaneal autograft and injectable allograft maximizes incorporation potential.

Methodology

Procedures

This 44 year old male presents with an open comminuted shortened displaced fracture of the first metatarsal and 8 cm laceration on the dorsum of the left foot.

Results

Excellent postoperative alignment maintained with 100% consolidation of fracture. Patient has returned to all regular activities inside his normal shoe gear

Discussions

Large bone voids following trauma in the metatarsal are difficult to overcome. Cadaveric graft incorporation greater than 3 cm is unlikely without autogenous supplementation. Autogenous calcaneal autograft in combination with injectable allograft provides all 3 osteoconductive, osteoinductive, and osteogenic properties. The autograft must fit tightly with proper bone apposition to increase the creeping substitution healing process, but not compressed to prevent graft subsidence. The use of dual plate construct dorsally and medially at the shaft with bicortical purchase of all screws provides rigid triplanar stability of the proximal and distal bone as well as the autograft.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Bhakti, Moradia, DPM	bmoradia@kent.edu	I/We have nothing to disclose	
Denis, Agbor, DPM	adgbor@kent.edu	I/We have nothing to disclose	
Alex, Bischoff, DPM AACFAS	bischoff91@gmail.com	I/We have nothing to disclose	
Joseph, Saxon, DPM AACFAS	saxon@balancecle.com	I/We have nothing to disclose	

Title

A Multidisciplinary Approach to a Rare Case of Cutaneous Keratinizing Squamous Cell Carcinoma of the Foot

Submit Date

10/14/2024

Correspondent

Last Name: Poonja

Full Name: Alisha J Poonja DPM FACFAS

Practice/Company/Residency Program:

Email: alishapoonja@gmail.com

Rose Zivot Fellowship in Limb Salvage and Foot Reconstruction

Authors

Author 1: Kaylie Terauds

Author 2: Kevin Perry DPM FACFAS

Author 3: Karim Manji DPM FACFAS

Author 4: John Toole DPM FACFAS

Author 5: Alisha Poonja DPM FACFAS

Author 6:

Author 7:

Author 8:

Purpose

We present a rare case of cutaneous keratinizing squamous cell carcinoma of the foot, requiring multidisciplinary care.

Methodology

Procedures

A 77-year-old male with diabetes and a history of lung cancer (s/p lobectomy in 2021 with curative intent and unremarkable serial monitoring imaging) presented with a painful soft tissue mass under the right foot fifth metatarsal head. Ultrasound showed a 2 cm solid mass, initially suspected to be a fibroma or chronic bursitis. Despite conservative treatment, the mass persisted and was not amenable to aspiration. Surgical resection was performed with pathologic analysis of a squamous cell carcinoma, with no prior ulceration or epidermal findings.

Results

The patient was promptly referred to oncology where a PET scan showed no further metastasis, and MRI revealed progression of the forefoot mass. Plastic surgery performed a wide local excision with fasciocutaneous pedicle flap reconstruction and split thickness skin graft. Pathology indicated morphologic consistency between thoracic and cutaneous specimen, with residual positive margins. The patient completed radiotherapy without recurrence and remains ambulatory/

Discussions

This case highlights the complexity of care involving numerous surgical and medical specialties. Notably, the lesion was a deep soft tissue mass with no epidermal involvement, raising questions about whether it represented metastasis from his original lung cancer or a new primary foot cancer. Cutaneous metastasis to the foot with the diagnosis of lung cancer is a very rare presentation and physicians should be prudent to perform a biopsy of any suspicious soft tissue masses.

Format

Case Study

Case Rpt Followup

13

Student Club

Soft Tissue/Tumor

Classification

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kaylie Terauds	kaylie.terauds@uqtr.ca	I/We have nothing to disclose	
Kevin Perry DPM FACFAS	kevin.perry@albertahealthservices.ca	I/We have nothing to disclose	
Karim Manji DPM FACFAS	karim.manji@albertahealthservices.ca	I/We have nothing to disclose	
John Toole DPM FACFAS	john.toole@albertahealthservices.ca	I/We have nothing to disclose	
Alisha Poonja DPM FACFAS	alisha.poonja@albertahealthservices.ca	I/We have nothing to disclose	

Title

P3-ANCA Vasculitis and Vasculitic Ulcers: Comprehensive Care Through Surgical and Medical Interventions

Submit Date

10/14/2024

Correspondent

Last Name:Chin

Full Name:Dy

Practice/Company/Residency Program:

Email:dy.chin@bswhealth.org

Baylor Scott & White Temple

Authors

Author 1:Christopher G. Browning, DPM, FACFAS, FACFAOM, FAENS, CWSP

Author 2:Dy Chin, DPM, MS

Author 3:Anjali Chandra, DPM

Author 4:Inez A. Puente, DPM

Author 5:Sujit E. Johnston, DPM

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this case report is to illustrate the complexities of managing vasculitic ulcerations in a patient with P3-ANCA positive vasculitis. This case emphasizes the need for a multidisciplinary approach that integrates both surgical wound care and medical management, specifically rheumatologic treatment, to control the underlying systemic disease and promote effective wound healing.

Methodology

Procedures

This case involves a 66-year-old female with a history of P3-ANCA-positive vasculitis, who presented with vasculitic ulcerations on both lower extremities. Vasculitic ulcers are a recognized complication of systemic vasculitis. The patient received multiple therapeutic interventions, including wound debridement, skin substitute allograft placement, and negative pressure wound therapy. Simultaneously, her underlying vasculitis was managed with immunosuppressive therapy, guided by rheumatology, to control flare-ups and facilitate ulcer healing.

Results

The patient underwent a total of four surgical procedures, including wound debridements and the application of a skin substitute allograft. Despite these efforts, the healing process was prolonged, taking approximately one year to achieve full closure of the ulcerations. During this period, her vasculitis was effectively controlled through immunosuppressive therapy, preventing further disease flare-ups and supporting the wound healing process.

Discussions

This case highlights the challenges of managing vasculitic ulcerations in the context of P3-ANCA positive vasculitis and underscores the importance of a multidisciplinary approach. The collaboration between podiatry and rheumatologists was essential to achieving a successful outcome. Effective management of both the local wound and the systemic disease is critical for long-term healing in patients with vasculitic ulcers.

Format

Case Study

Case Rpt Followup

17

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Christopher G. Browning, DPM, FACFAS, FACFAOM, FAENS, CWSP	christopher.browning@bswhealth.org	I/We have nothing to disclose	
Dy Chin, DPM, MS	dy.chin@bswhealth.org	I/We have nothing to disclose	
Anjali Chandra, DPM	anjali.chandra@bswhealth.org	I/We have nothing to disclose	
Inez A. Puente, DPM	inez.puente@bswhealth.org	I/We have nothing to disclose	
Sujit E. Johnston, DPM	sujit.johnston@bswhealth.org	I/We have nothing to disclose	

Title

A Rare Case of Soft Tissue Mass in the Foot: Angioleiomyoma

Submit Date

10/15/2024

Correspondent

Last Name: Rivera Aviles

Full Name: Frances

Practice/Company/Residency Program:

Email: friveraa@bidmc.harvard.edu

Beth Israel Deaconess Medical Center

Authors

Author 1: Frances Rivera Aviles, DPM

Author 2: John T Marcoux, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Present a rare case of soft tissue mass in the foot and emphasize the importance of angioleiomyoma in the differential diagnosis of patients with slow growing soft tissue mass in the lower extremity.

Methodology

Procedures

A 66-year-old male with a history of Lyme disease presented with a 4-year history of a slowly enlarging lump on the plantar aspect of his left heel. Physical examination revealed a 1.5cm mobile, firm mass on the plantar medial aspect, non-tender to palpation. MRI showed a well-circumscribed 1.5 x 1.0 x 1.0 cm lesion in the subcutaneous tissues of the medial plantar hindfoot, characterized by T1 hypointensity, T2 hyperintensity, and enhancement. Histopathological analysis confirmed angioleiomyoma upon surgical resection. Angioleiomyoma, or vascular leiomyoma, is a rare, benign tumor arising from subcutaneous blood vessel tunica media. It predominantly affects females (2:1 ratio) aged 30-60 years, constituting about 4.5% of benign soft tissue tumors and 0.2% of foot and ankle tumors, with a 1% association with malignancy. Typically presenting as firm, circumscribed nodules under 2cm, these tumors are effectively treated with simple excision due to low recurrence rates.

Results

Histopathological analysis confirmed angioleiomyoma upon surgical resection.

Discussions

This case underscores the importance of considering angioleiomyoma in the differential diagnosis of slow-growing soft tissue tumors of the lower extremity. Clinician awareness and accurate diagnosis are crucial for timely treatment and improved outcomes.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Frances Rivera Aviles, DPM	friveraa@bidmc.harvard.edu	I/We have nothing to disclose	
John T Marcoux, DPM, FACFAS	jmarcou2@bidmc.harvard.edu	I/We have nothing to disclose	

Title

Medial Plantar Artery Flap and Tibiototalcalcaneal Fusion in the Treatment of Lateral Column Charcot: A Retrospective Case Series

Submit Date

10/14/2024

Correspondent

Last Name: Westerveld

Full Name: Jonathan, A, Westerveld DPM

Practice/Company/Residency Program:

Email: jwesterveld54@gmail.com

Old Dominion University

Authors

Author 1: Jonathan A. Westerveld DPM

Author 2: Ashish Biju DPM

Author 3: Bradley Levitt DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Soft tissue coverage of the plantar foot in the presence of osseous deformity poses a unique challenge to the reconstructive surgeon. In the present study, we share our clinical experience with the use of the medial plantar artery-based flap for coverage of soft tissue defects caused by charcot neuroarthropathy. A retrospective case series is presented on 7 patients who underwent medial plantar artery flaps and subsequent tibiototalcalcaneal fusion.

Methodology

Procedures

Medial plantar artery flap, application of external fixator, tibiototalcalcaneal fusion. All the flaps were raised as sensate fasciocutaneous pedicled flaps based on the medial plantar artery. All the procedures were performed by a single surgeon.

Results

Of the 7 patients, 5 were male and 2 were female. 6 of 7 medial plantar artery flaps healed uneventfully. 1 flap failed due to venous congestion and was debrided. The donor site was covered with a split-thickness skin graft. Partial graft loss was observed in 1 patient. 3 of the patients had to undergo explantation of nail and placement of antibiotic nail. At 1 year, there were no major amputations in our cohort.

Discussions

From our results, the medial plantar artery flap in combination with TTC nailing is an important to treat soft tissue loss and deformity caused by charcot. The technique is more accessible, has reduced donor site morbidity and offers a plantigrade and ulcer-free foot to patients.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jonathan A. Westerveld DPM	jwesterveld54@gmail.com	I/We have nothing to disclose	
Ashish Biju DPM	abiju@kent.edu	I/We have nothing to disclose	
Bradley Levitt DPM	bradley.a.levitt@gmail.com	I/We have nothing to disclose	

Title

Prophylactic Posterior Tibial Tendon Release for Equinovarus Deformity in LisFranc Amputation: A Novel Case Series

Submit Date

10/14/2024

Correspondent

Last Name: Andrews

Full Name: Linsey, M, Andrews, DPM

Email: linsey.andrews@medstar.net

Practice/Company/Residency Program: MedStar Health

Authors

Author 1: Linsey, M, Andrews, DPM

Author 2: Sarah, A, Mansager, DPM

Author 3: Jayson, Atves, DPM, FAFAS

Author 4: Christopher, Attinger, MD

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Equinovarus contractures are commonly seen after LisFranc level amputations due to muscular imbalances. Current literature recommends correction of this biomechanical deformity via achilles tendon lengthening and tibialis anterior or posterior tendon transfers. This case series details use of a posterior tibial (PT) tendon release, performed at time of midfoot amputation, for deformity prevention. This approach can help avoid re-ulceration during the postoperative period and reduce risk of infection by eliminating use of suture or implant materials utilized in tendon transfers.

Methodology

Procedures

Three patients underwent LisFranc amputations with achilles tendon lengthening and PT tendon release. The PT release was performed by making an approximately 2 cm incision just proximal and posterior to the medial malleolus. Soft tissue dissection at this level allowed for direct tendon visualization. PT isolation was confirmed by manual testing of the adjacent flexor tendons. The PT was then incised utilizing a #15 blade.

Results

Patients were monitored during routine clinical follow up. At 12 months, there was no notable equinovarus deformity present. Amputation sites healed, without need for re-operation related to biomechanical complications or deformities.

Discussions

LisFranc amputation can predispose patients to development of equinovarus contracture postoperatively. However, with appropriate understanding of the biomechanical implications of midfoot amputation, prevention of this deformity be addressed prophylactically. Loss of the mechanical pull from the peroneus brevis can be balanced with release of the posterior tibial tendon. This approach may be utilized in high risk limb salvage patients to reduce postoperative infection rates associated with implant materials used for traditional tendon transfers.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Biomechanics and Anatomy

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Linsey, M, Andrews, DPM	linsey.andrews@medstar.net	I/We have nothing to disclose	
Sarah, A, Mansager, DPM	sarahannmansager@gmail.com	I/We have nothing to disclose	
Jayson, Atves, DPM, FAFAS	jayson.atves@medstar.net	I/We have nothing to disclose	
Christopher, Attinger, MD	christopher.attinger@medstar.net	I/We have nothing to disclose	

Title

Hyaluronidase Enzymatic Injections for Treatment of Ledderhose’s Disease: A Novel Technique with Review of Etiology, Case Series and Current Literature

Submit Date

10/14/2024

Correspondent

Last Name: Boudreau

Full Name: Alyson, R, Boudreau, DPM

Email: alyson.boudreau@medstar.net

Practice/Company/Residency Program: Medstar Health Podiatric Surgery Residency Program

Authors

Author 1: Alyson, R, Boudreau, DPM

Author 2: Haoning, Hu, DPM

Author 3: Paul, J, Carroll, DPM, FACFAS

Author 4: Ed, Davis, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case series highlights the use of hyaluronidase injections in treating Ledderhose’s Disease, offering a less invasive alternative to surgery. The focus is on the enzyme’s ability to reduce fibrotic tissue and alleviate symptoms.

Methodology

Procedures

Three patients with plantar fibromatosis were treated with hyaluronidase injections: series of 3-4 hyaluronidase injections, spaced three weeks apart, and were advised to use topical verapamil cream to prevent recurrence after symptom resolution. Case 1 involved a 49-year-old female with a painful nodule (0.8 cm) on the left plantar fascia. After four injections, the nodule reduced to 0.2 cm, and the patient remained pain-free at the one-year follow-up. Case 2 presented a 59-year-old male with painful masses on both feet. After three injections, fibroma size decreased significantly, and pain resolved. Recurrence occurred at six and eleven months but was successfully managed with conservative treatment. Case 3 presented a 65-year-old female with bilateral plantar fibromatosis who demonstrated similar results with sustained symptom relief for two years after initial injections, with re-occurrence to left foot that is currently being treated per protocol.

Results

All patients experienced notable pain relief and fibroma reduction following the injection series. Recurrence was minimal and managed effectively with follow-up treatments.

Discussions

Hyaluronidase injections offer a promising non-surgical option for treating Ledderhose’s Disease, providing significant symptom relief and reducing recurrence when used with adjunctive therapies like verapamil cream. This approach demonstrates potential for long-term management with minimal interventions.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Alyson, R, Boudreau, DPM	alyson.raynor@gmail.com	I/We have nothing to disclose	
Haoning, Hu, DPM	haoning.hu@medstar.net	I/We have nothing to disclose	
Paul, J, Carroll, DPM, FACFAS	paul.j.carroll@medstar.net	Consultant/Advisor/Speaker (List all affiliations)	Altrazeal Life Sciences Inc.
Ed, Davis, DPM, FACFAS	eddavis317@outlook.com	Consultant/Advisor/Speaker (List all affiliations)	Endo Pharmaceuticals

Title

Pediatric Tibial Nerve Schwannoma: A Rare Case of Nerve Tumor in the Lower Extremity and the Role of Advanced Nerve Surgery in Podiatric Practice

Submit Date

10/15/2024

Correspondent

Last Name:Robinson

Full Name:Patrick M. Robinson, DPM, MSEmail:patrick.robinson1@bswhealth.org

Practice/Company/Residency Program:Baylor Scott and White Memorial Hospital / Baylor University School of Medicine

Authors

Author 1:Patrick M. Robinson, DPM, MS

Author 2:Mario C. Reyes, DPM, MS

Author 3:Douglas P. Murdoch, DPM FACFAS

Author 4:Richard N. Goad, DPM, MA, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The primary purpose of this single case report is to present a rare case of a tibial nerve schwannoma in a pediatric patient. Our case study involving a 13-year-old patient with a tibial nerve schwannoma represents a rare intersection of pediatrics and nerve pathology in the field of foot and ankle surgery.

Methodology

Procedures

A 13-year-old Hispanic male was referred for evaluation of a mass on his left ankle. Physical exam and MRI revealed an ovoid soft tissue mass that was tender to palpation with a positive Tinel's sign, consistent with a peripheral nerve sheath tumor yet synovial sarcoma could not be excluded. This case demonstrates the importance of early diagnosis and surgical intervention to prevent long-term complications associated with nerve tumors and nerve compression. Schwannomas, despite being benign, are uncommon in the lower extremities. A literature review by Angelini et al. (2017) identified only 51 cases of schwannomas in the foot reported between 1996 and 2017, underlining their rarity.

Results

The patient underwent surgical excision of the mass which was sent to pathology revealing the diagnosis of Schwannoma. The patient had an uneventful recovery and at 36-month follow-up, there was no evidence of recurrence.

Discussions

This case demonstrates the application of advanced nerve surgery techniques in foot and ankle surgery while also contributing to the limited literature on lower extremity schwannomas. It highlights the role foot and ankle surgeons play in managing these rare tumors. Further research is needed to refine treatment protocols, particularly in pediatric patients, to ensure optimal outcomes.

Format

Case Study

Case Rpt Followup

36

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Patrick M. Robinson, DPM, MS	patrick.robinson1@bswhealth.org	I/We have nothing to disclose	
Mario C. Reyes, DPM, MS	mreyesdpm@gmail.com	I/We have nothing to disclose	
Douglas P. Murdoch, DPM FACFAS	Douglas.Murdoch@bswhealth.org	I/We have nothing to disclose	
Richard N. Goad, DPM, MA, FACFAS	Richard.Goad@bswhealth.org	I/We have nothing to disclose	

Title

Treatment of Iatrogenic Foot Drop with Tibial to Peroneal Nerve Transfer: A Case Report

Submit Date

10/14/2024

Correspondent

Last Name: Ozturk

Full Name: Aysegul Ozturk, DPM

Practice/Company/Residency Program:

Email: aozturk28@outlook.com

New York Presbyterian Hospital Brooklyn Methodist Hospital

Authors

Author 1: Aysegul Ozturk, DPM

Author 2: Fathima Nashra Naushad, DPM

Author 3: Wolfgang Kienzle, DPM

Author 4: Lisa Gfrerer, MD, PhD

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Foot drop can be a debilitating deformity characterized by inability to dorsiflex the foot. Nerve transfer can be a treatment option for foot drop in early stages. In this case, we will discuss tibial to peroneal nerve transfer for drop foot and re-establishment of foot dorsiflexion.

Methodology

Procedures

A 70 year old female with a notable history of atrial fibrillation, hypothyroidism, ulcerative colitis, and hip pain, underwent left total hip replacement on 6/22/22. Patient reported severe pain and loss of function to left foot on 3/17/23. Emergent removal of a suture from the sciatic nerve was performed. Patient had chronic pain, numbness, and weakness postoperatively. Patient underwent left tibial deep peroneal nerve transfer on 07/14/2023. In the postoperative period, the patient had regained M4 muscle strength and was able to walk without her ankle-foot orthosis. On electromyography, she demonstrated significant motor unit potential and improved function.

Results

The checkpoint stimulator was used intraoperatively to determine motor function. The superficial peroneal nerve branch did lead to mild function in the lateral compartment muscles and the tibial nerve was stimulated with good motor function post neurolysis. The Anterior Tibialis muscle was noted to have M1 muscle function at initial follow up and M4 with visible ankle dorsiflexion by final follow up.

Discussions

Nerve transfer can be a viable and successful treatment option for iatrogenic foot drop patients. This case study provides a detailed account of the surgical technique, including preoperative assessments and considerations, surgical procedure, and postoperative rehabilitation.

Format

Case Study

Case Rpt Followup

13

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Aysegul Ozturk, DPM	aozturk28@outlook.com	I/We have nothing to disclose	
Fathima Nashra Naushad, DPM	Nashn95@hotmail.com	I/We have nothing to disclose	
Wolfgang Kienzle, DPM	wolfkienzle1@gmail.com	I/We have nothing to disclose	
Lisa Gfrerer, MD, PhD	lig4013@med.cornell.edu	I/We have nothing to disclose	

Title

Prophylactic Achilles Tenectomy for Equinus Prevention in Chopart Amputations: A Novel Case Series

Submit Date

10/14/2024

Correspondent

Last Name: Andrews

Full Name: Linsey, M, Andrews, DPM

Email: Linsey.andrews@medstar.net

Practice/Company/Residency Program: MedStar Health

Authors

Author 1: Linsey, M, Andrews, DPM

Author 2: Tiffanie, Liu, DPM

Author 3: Yona, Mizrahi, DPM

Author 4: Jayson, Atves, DPM, FACFAS

Author 5: Christopher, Attinger, MD

Author 6:

Author 7:

Author 8:

Purpose

Diabetic patients with equinus contracture are at a 4-fold risk of ulceration due to increased forefoot plantar pressure. For this reason, current literature advocates for Achilles tendon lengthening in conjunction with amputation to prevent wound recurrence due to muscular imbalance. This case series documents a novel approach in which an Achilles tenectomy was performed, leading to successful limb salvage in 5 patients with a minimum of one year follow up.

Methodology

Procedures

Five patients underwent Chopart amputation with prophylactic achilles tenectomy. The tenectomy was performed through a longitudinal incision lateral to the tendon at the watershed zone. The achilles was clamped, cuts were made distal and proximal to the clamp, removing 1-3cm of tendon. An immediate increase in ankle dorsiflexion was noted in all patients.

Results

Five patients were monitored during routine clinical follow up. Each patient was followed for a minimum of one year with the longest follow up of 36 months. All five patients were noted to have healed amputation sites with no documented equinus contracture or need for further surgery.

Discussions

Achilles tendon lengthening has become a common adjunct procedure for patients with midfoot amputations to address equinus and ultimately prevent wound recurrence. Despite immediate equinus correction, some studies have found re-lengthening procedures may be required within 12 months. Five patients underwent Chopart's amputation with achilles tenectomy; all are wound free at minimum 12 months with no need for further surgical intervention.This approach may be utilized for patients with decreased baseline functional status as an attempt for limb salvage.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Biomechanics and Anatomy

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Linsey, M, Andrews, DPM	linsey.andrews@medstar.net	I/We have nothing to disclose	
Tiffanie, Liu, DPM	tiffanie.liu@medstar.net	I/We have nothing to disclose	
Yona, Mizrahi, DPM	yona.mizrahi@medstar.net	I/We have nothing to disclose	
Jayson, Atves, DPM, FACFAS	Jayson.atves@medstar.net	I/We have nothing to disclose	
Christopher, Attinger, MD	christopher.atinger@medstar.net	I/We have nothing to disclose	

Title

Operative Management of a Severe Charcot Marie Tooth Deformity in a 15-Year-Old; A Case Report

Submit Date

10/14/2024

Correspondent

Last Name:Olson

Full Name:Lyn

Practice/Company/Residency Program:

Email:olsonlyn@gmail.com

Hennepin County Medical Center

Authors

Author 1:Lyn Olson, DPM

Author 2:Kimberly Bobbitt, DPM FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case report describes the surgical management of a severe cavovarus foot deformity in a 15-year-old patient with Charcot-Marie-Tooth (CMT) disease. The purpose of this case study is to expand the current literature for symptomatic, pediatric pes cavus and focus on the surgical techniques, postoperative care, and one-year outcomes.

Methodology

Procedures

A 15-year-old female with severe semiflexible bilateral cavovarus deformity from CMT. Preoperative imaging demonstrated severe pes cavus deformity. Procedural selection included triplanar calcaneal osteotomy, Cole closing wedge osteotomy, navicular cuneiform fusion, cuboid osteotomy, and Steindler stripping of the more symptomatic left foot.

Results

Patient underwent surgery in August 2023. They underwent multiple osteotomies and fusions of the mid and rearfoot. Radiographs confirmed healed bone cuts, good alignment, and no hardware failure. Their postoperative course was uneventful, and they had returned to regular shoe gear 3 months after the procedure. An AFO with dorsiflexory aid was fabricated to assist with some mild reduction in dorsiflexory strength which has since improved. At their final follow-up, the patient reported no activity restrictions and expressed satisfaction with the surgical outcome.

Discussions

The combination of procedures successfully addressed the cavovarus deformity, significantly improving the patient's foot structure and function. The combined use of osteotomies and soft tissue release effectively corrected the foot deformity. Our case demonstrates the use of this multi-step cavus reconstruction in an adolescent to correct the deformity and create a functional, rectus limb. The positive outcomes suggest this approach could benefit more adolescent CMT patients with severe cavovarus deformities.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lyn Olson, DPM	olsonlyn@gmail.com	I/We have nothing to disclose	
Kimberly Bobbitt, DPM FACFAS	kimberly.bobbitt@hcmcd.org	I/We have nothing to disclose	

Title

Management of Failed MIS Bunion Surgery in a Neuropathic Patient: A Closer Look

Submit Date

10/14/2024

Correspondent

Last Name: Mizrahi

Full Name: Yona

Practice/Company/Residency Program:

Email: yona.mizrahi@medstar.net

Medstar Health

Authors

Author 1: Yona Mizrahi, DPM

Author 2: Sarah Mansager, DPM

Author 3: Linsey Andrews, DPM

Author 4: Caitlin Zarick, DPM, FAFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Minimally invasive surgery (MIS) for bunion correction has become increasingly favored for potentials of reduced recovery times and postoperative discomfort. However, surgeons must be mindful of patient specific factors and comorbidities that may lead to complications. When considering MIS bunion correction in patients with peripheral nerve conditions, it is crucial to consider risk of an acute Charcot event. This study aims to present a surgical treatment algorithm for managing failed MIS bunion surgery complicated by peripheral neuropathy.

Methodology

Procedures

61-year-old female with a history of lumbar radiculopathy and diminished lower extremity sensation was referred for postoperative complications following MIS bunion surgery 8 weeks prior. Upon presentation, persistent redness and swelling was noted despite antibiotic therapy. Gross osteotomy instability was appreciated. Radiographs revealed screw subsidence, severe fragmentation, and shortening of the first metatarsal.

Results

Initial treatment was performed with surgical debridement, hardware removal, and bone culture. External fixation was applied to aid in reduction of fracture fragments, correct deformity, and restore metatarsal length. Patient maintained a strict non-weight bearing protocol postoperatively. Definitive internal fixation was performed four weeks later with a plate and screw construct. At final follow up, radiographs indicated complete osseous consolidation.

Discussions

There is limited research on risk factors related to MIS bunion complications. Relative contraindications must be considered to help formulate individualized treatment plans. It is imperative to complete a thorough medical evaluation to determine appropriate surgical intervention. While this case illustrates a successful outcome in complication management, further studies to evaluate MIS risks in this patient population is needed.

Format

Case Study

Case Rpt Followup

19

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Yona Mizrahi, DPM	yona.mizrahi@medstar.net	I/We have nothing to disclose	
Sarah Mansager, DPM	sarahannmansager@gmail.com	I/We have nothing to disclose	
Linsey Andrews, DPM	linsey.andrews@medstar.net	I/We have nothing to disclose	
Caitlin Zarick, DPM, FAFAS	caitlin.s.zarick@medstar.net	I/We have nothing to disclose	

Title

Myopericytoma A Rare Soft Tissue Mass Encountered in the Foot

Submit Date

10/14/2024

Correspondent

Last Name: Poonja

Full Name: Alisha J Poonja DPM FACFAS

Practice/Company/Residency Program:

Email: alisha.poonja@albertahealthservices.ca

Rose Zivot Fellowship in Limb Salvage and Foot Reconstruction

Authors

Author 1: Kaylie Terauds

Author 2: Kevin Perry DPM FACFAS

Author 3: Karim Manji DPM FACFAS

Author 4: John Toole DPM FACFAS

Author 5: Alisha Poonja DPM FACFAS

Author 6:

Author 7:

Author 8:

Purpose

Myopericytomas are rare soft tissue tumors found in the subcutaneous and superficial soft tissues in the extremities. The present study reports a unique case of a myopericytoma located in the forefoot under the third metatarsal head.

Methodology

Procedures

A 55 year old male was referred for a “callus” to his left forefoot, though this was found in the interspace rather than directly below the metatarsal head.

Results

An US was performed revealing a soft tissue mass in subcutaneous tissues at the ball of the foot, with a hemangioma / slow flow venous malformation has a differential. A subsequent MRI was performed favouring an epidermal inclusion cyst or ganglion cyst arising from the flexor tendons. He tried conservative treatment with persistent symptoms for which surgical resection was recommended. Pathologic analysis of the mass revealed a myopericytoma. The patient healed uneventfully.

Discussions

Myopericytomas are benign soft tissue tumours, with features of both glomus tumors and hemangiopericytoma, explaining the preoperative imaging findings. These lesions are usually surgically excised, particularly when a definitive diagnosis is needed as pathologic and immunohistochemical analysis are essential for accurate diagnosis. This case highlights a unique differential for soft tissue masses.

Format

Case Study

Case Rpt Followup

13

Student Club Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kaylie Terauds	Kaylie.Terauds@uqtr.ca	I/We have nothing to disclose	
Kevin Perry DPM FACFAS	kevin.perry@albertahealthservices.ca	I/We have nothing to disclose	
Karim Manji DPM FACFAS	karim.manji@albertahealthservices.ca	I/We have nothing to disclose	
John Toole DPM FACFAS	john.toole@albertahealthservices.ca	I/We have nothing to disclose	
Alisha Poonja DPM FACFAS	alisha.poonja@albertahealthservices.ca	I/We have nothing to disclose	

Title

Unique Surgical Correction of Brachymetatarsia - Use of 3D Printed Custom Implant

Submit Date

10/14/2024

Correspondent

Last Name: Kalambet

Full Name: David Kalambet, DPM, PGY-2

Practice/Company/Residency Program:

Email: david.kalambet@corewellhealth.org

Corewell Health East - Wayne Hospital

Authors

Author 1: David Kalambet, DPM, PGY-2

Author 2: Lawrence M. Fallat, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Brachymetatarsia is a condition involving congenital shortening of the metatarsal. Surgical intervention traditionally consists of lengthening procedures such as distraction osteogenesis and bone allograft/autograft implantation. These procedures can lead to complications such as graft resorption and stress fracture through the graft site. Intervention consisting of a custom 3-D printed implant maintains a restored metatarsal length and avoids the above complications. We are presenting the first known case of using a 3-D printed custom implant used to maintain a surgically lengthened metatarsal.

Methodology

Procedures

The patient is a 55-year-old female with painful brachymetatarsia involving the fourth metatarsal of her left and complaining of 8/10 pain. The patient underwent fourth metatarsal osteotomy with distraction and insertion of 3-D printed custom implant. The patient's fourth metatarsal was successfully lengthened with insertion of the implant and stabilization with a plate and screws. A follow-up procedure to lengthen and straighten the fourth digit was performed at 12 months post-operatively to avoid vascular compromise associated with over-lengthening soft tissue. Complications were not observed at 18 months post-operatively, and the patient is fully weight bearing without pain.

Results

The length of the fourth metatarsal and fourth digit was restored and maintained with no post-operative complications, and the patient is ambulating without pain at 18 months post-operatively.

Discussions

This case highlights a unique surgical procedure for brachymetatarsia with the use of a custom 3-D printed implant. This procedure avoids pitfalls of traditional surgical intervention which have complication rates ranging from 21.1% to 36.5% depending on which procedure is utilized.

Format

Case Study

Case Rpt Followup

18

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
David Kalambet, DPM, PGY-2	david.kalambet@corewellhealth.org	I/We have nothing to disclose	
Lawrence M. Fallat, DPM, FACFAS	lawrence.fallat@corewellhealth.org	I/We have nothing to disclose	

Title

Dysplasia Epiphysealis Hemimelica in the Lower Extremity - Trevor’s Disease in Pediatric Population: A Case Report

Submit Date

10/14/2024

Correspondent

Last Name:Naushad

Full Name:Fathima Nashra Naushad, DPM

Practice/Company/Residency Program:

Email:NashN95@hotmail.com

New York Presbyterian Brooklyn Methodist Hospital

Authors

Author 1:Fathima Nashra Naushad, DPM

Author 2:Aysegul Ozturk, DPM

Author 3:Christen M. Russo, MD

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Trevor’s disease, also known as Dysplasia Epiphyseal Hemimelica (DEH), is a rare congenital bone dysplasia that causes asymmetric limb deformity. It is associated with osteocartilaginous overgrowth in the epiphysis affecting the pediatric population. The purpose of this case study is to demonstrate the importance of identifying and diagnosing Trevor’s disease in the pediatric population given its aggressive course in the lower extremity.

Methodology

Procedures

A 2 year old female patient presents with parent for evaluation of worsening left ankle pain and deformity. There was a non tender, non mobile bony prominence noted at the medial malleolus causing the ankle to be in valgus alignment. Findings from the Magnetic resonance imaging (MRI) and Computed Tomography (CT) scan were consistent with Trevor’s disease at the distal tibial epiphysis. Patient had recurrence of the osteochondroma lesions that required repeated surgical excision to prevent premature physeal fusions.

Results

The surgically excised specimen measuring 5.7 x 4.6 x 1.3 cm of aggregate was diagnosed as osteocartilaginous exostosis compatible with DEH. The pathology report described it as multiple irregular disrupted fragments of tan-gray cartilaginous tissue with scant fragments of pink-tan fibrous tissue and pink-red bony tissue.

Discussions

Dysplasia Epiphysealis Hemimelica (DEH) is an extremely rare disease with an occurrence of 1:1,000,000 and more common in male. This case was reported in a female pediatric patient with no genetic predisposition. It is important to recognize and diagnose the pediatric population as early as possible with Trevor’s disease to prevent limb deformity and instability, by promptly developing surgical treatment plans.

Format

Case Study

Case Rpt Followup

18

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Fathima Nashra Naushad, DPM	Nashn95@hotmail.com	I/We have nothing to disclose	
Aysegul Ozturk, DPM	Aozturk28@outlook.com	I/We have nothing to disclose	
Christen M. Russo, MD	cr2787@cumc.columbia.edu	I/We have nothing to disclose	

Title

Intermetatarsal Coalition in a Young Athlete: A Case Study

Submit Date

10/14/2024

Correspondent

Last Name: Wachala

Full Name: Kyle L. Wachala, DPM

Practice/Company/Residency Program:

Email: kyle.wachala@christianacare.org

Christiana Care Health Services

Authors

Author 1: Kyle L. Wachala, DPM

Author 2: Katherine M. Perscky, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The this case presentation was written to discuss and educate the reader on a rare intermetatarsal coalition and how a young female athlete was successfully treated for it.

Methodology

Procedures

A 16 year old female athlete initially presented for evaluation of chronic left foot pain, isolated over the base of the first and second metatarsals. MRI revealed a stress fracture at the intermediate cuneiform and patient was treated conservatively. Patient presented six months later at the beginning of the spring sports season, with similar left foot pain. Repeat MRI redemonstrated stress fracture of the intermediate cuneiform, and patient was again treated conservatively. Patient presented one year later, again with similar pain in the left foot. A third MRI was performed, which now showed a nonosseous coalition at the first and second metatarsal bases. Patient initially opted for conservative treatment, but ultimately failed and the decision was made for surgery.

Results

The intermetatarsal coalition was surgically resected, with the Lisfranc ligament found to be intact. Post-operatively, patient began protected weightbearing in a boot at 2 weeks, transitioned to supportive shoes and PT at 6 weeks, with full return to sport at 14 weeks, and no residual pain at 8 months postop.

Discussions

Intermetatarsal coalitions are rare in the literature and are more common in the hindfoot, making diagnosis difficult. We believe this case to be congenital, exacerbated through increased stress from high level athletic activity. Once properly diagnosed, we believe that a symptomatic intermetatarsal coalition should be treated with surgical resection, to restore anatomic function, and full return to sport.

Format

Case Study

Case Rpt Followup

34

Student Club

Forefoot Reconstruction

Classification

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kyle L. Wachala, DPM	kyle.wachala@christianacare.org	I/We have nothing to disclose	
Katherine M. Perscky, DPM, FACFAS	kperscky@delortho.com	I/We have nothing to disclose	

Title

5th metatarsal supination: Triplane Tailor’s bunion correction

Submit Date

10/14/2024

Correspondent

Last Name: Krueger

Full Name: Seth W Krueger, DPM

Practice/Company/Residency Program:

Email: seth.krueger@osumc.edu

The Ohio State University Wexner Medical Center

Authors

Author 1: Seth W Krueger, DPM

Author 2: Said Atway, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Frontal plane deformity of the fifth metatarsal bone is not well established and supporting contribution of this deformity and how this may lead to pathology of the fifth metatarsal is not well described in current literature. This study aims to provide a comprehensive analysis of the prevalence of frontal plane rotation on tailor’s bunion deformities and a standardized way to measure such deformity with surgical treatment options.

Methodology

Procedures

Current standard measurements of the fifth metatarsal involve intermetatarsal angle and lateral deviation angle which only account for the transverse deformity. Metatarsal pronation has been described with regards to the first metatarsal and with a traditional bunion deformity but hasn’t been described well to assess lesser metatarsals. The amount of metatarsal pronation will be compared to that of the transverse deformity as performed by Eustace which lends itself to possible rotational procedures. Shape of the metatarsal head will be evaluated on AP radiograph as outlined for the first by Yamaguchi.

Results

Frontal plane deformities were displayed on axial radiographs while assessing the medial border of the fifth metatarsal head for complete contour of the cartilage indicating less rotation in the frontal plane. With these deformities, A distal oblique surgical cut was found to have adequate frontal plane deformity correction.

Discussions

Frontal plane deformities of the fifth metatarsal are significant and while not as prevalent as that of hallux valgus still contribute to a significant amount of pain in the podiatric population. This study outlines detailed workup and improved surgical understanding to correct this deformity.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Seth W Krueger, DPM	seth.krueger@osumc.edu	I/We have nothing to disclose	
Said Atway, DPM	said.atway@osumc.edu	I/We have nothing to disclose	

Title

Spastic Equinovarus foot deformities: A Case Series of Surgical Management

Submit Date

10/14/2024

Correspondent

Last Name: dubois

Full Name: jordyn T dubois

Practice/Company/Residency Program:

Email: jordyn.dubois@dhha.org

Denver Health

Authors

Author 1: Jordyn T Dubois

Author 2: Matthew Gorski

Author 3: Kristine Hoffman

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Surgical management of progressive deformity, spastic equinovarus secondary to traumatic injuries

Methodology

Procedures

three cases with injuries resulting in equinovarus deformity. Fist case had TTC with IM nail, second case had plate and screw fixation and third case had first MTPJ fusion with tendon lengthening. Literature included from articles regarding different techniques of IM nail/Lateral plate and comparing both

Results

Results of patient outcome included iin patients whom presented with pain and loss of hope at a normal lifestyle. Now, they are working with physical therapy and walking with plantigrade foot

Discussions

Goal of treating spastic equinovarus deformity is to maintain a plantigrade, stable weightbearing foot for daily living. This is a progressive deformity and given severity, arthrodesis is a reliable surgical intervention. Literature shows reliable modality results in fusion. Fusion procedures are rewarding cases as these patients return from a nonweightbearing unstable foot to ambulatory plantigrade stable foot and satisfaction/ gratitude to our team

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jordyn T Dubois	jordyn.dubois@dhha.org	I/We have nothing to disclose	
Matthew Gorski	matthew.gorski@dhha.org	I/We have nothing to disclose	
Kristine Hoffman	Kristine.hoffman@dhha.org	I/We have nothing to disclose	

Title

Reconstruction of Collapsing Foot and Ankle Deformity in a Patient with Rheumatoid Arthritis and Non-Diabetic Charcot Neuroarthropathy: A Case Report

Submit Date

10/15/2024

Correspondent

Last Name: Bhalala

Full Name: Yashkumar Bhalala DPM

Practice/Company/Residency Program:

Email: ybhalala@kent.edu

Corewell Health Hospital -Wayne Michigan

Authors

Author 1: Yashkumar Anilkumar Bhalala

Author 2: Alaa Mansour DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Non-diabetic Charcot neuroarthropathy in patients with rheumatoid arthritis (RA) is rare, presenting unique challenges in surgical management due to severe joint instability, deformity, and peripheral neuropathy. This case highlights the complex reconstruction required to restore function and correct deformity in a patient with this condition.

Methodology

Procedures

A 50-year-old female with rheumatoid arthritis and no history of diabetes, metabolic disorder, or infection presented with significant subluxation of the ankle, talonavicular, and subtalar joints in the right foot. The patient underwent staged surgical reconstruction, starting with right ankle fusion and stabilization using external fixation with stereotactic computer-assisted adjustment, along with Achilles tendon lengthening. Four months later, the external fixation was removed, and fusion of the ankle, subtalar, and talonavicular joints was achieved using intramedullary beaming. However, following a fall the patient sustained a distal tibial fracture which was managed conservatively, leading to malunion and equinus deformity. She subsequently underwent hardware removal, correction of the malunion and equinus deformity via tibial and fibular osteotomies, and reapplication of external fixation with computerized program to reduced deformity. Six months post operation external fixation was removed.

Results

At 24 months post-operation, the patient is ambulating in regular shoe gear and has returned to normal activity.

Discussions

Ankle and hindfoot fusion procedures are commonly used to stabilize severe Charcot deformity in patients with RA, often reinforced with intramedullary nailing and beaming to improve load transfer. These surgeries significantly improve alignment and function, though non-union risks are elevated due to poor bone quality in rheumatoid arthritis patients.

Format

Case Study

Case Rpt Followup

24

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Yashkumar Anilkumar Bhalala	ybhalala@kent.edu	I/We have nothing to disclose	
Alaa Mansour DPM	alaa.mansour3@gmail.com	I/We have nothing to disclose	

Title

Rare Complication of Posterior Tibial Artery Pseudoaneurysm following Minimally Invasive Zadek osteotomy

Submit Date

10/14/2024

Correspondent

Last Name: Brikho

Full Name: Marcell, DPM

Practice/Company/Residency Program:

Email: mbrikho1@hfhs.org

Henry Ford Wyandotte

Authors

Author 1: Marcell R. Brikho, DPM

Author 2: Mikayla A. Green, DPM

Author 3: Anthony R. Giordano, DPM, FACFAS

Author 4: Paolo E. Di Liddo, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Recent literature shows infra-popliteal artery pseudoaneurysms are extremely rare. This report presents a case of postoperative posterior tibial artery (PTA) pseudoaneurysm following Minimally Invasive (MIS) Zadek Osteotomy. The current literature does not cite incidence of PTA pseudoaneurysms following MIS Calcaneal Osteotomies. This study aims to highlight a unique postoperative complication following MIS calcaneal osteotomy.

Methodology

Procedures

This case follows a 64-year-old female patient who underwent a MIS Zadek Calcaneal Osteotomy for treatment of a harvest site calcaneal autograft nonunion. Post-operatively, the patient had osseous union across the osteotomy site, however, she presented with worsening pain and discomfort following MIS Zadek Osteotomy. She underwent Physical Therapy, but the pain continued to progress and worsen with ambulation. Magnetic resonance imaging was concerning for a PTA. Computed Tomography Angiography revealed large pseudoaneurysm arising from the PTA located medial to the calcaneus and measured 2.2 cm x 1.7 cm. Patient was referred to vascular surgery and underwent repair of posterior tibial artery aneurysm.

Results

Patient underwent repair of the posterior tibial artery aneurysm which provided relief in symptoms.

Discussions

In current literature, the presence of posterior tibial artery pseudoaneurysm following foot and ankle surgery is rare. No cases of arterial injury following MIS calcaneal osteotomies have been reported. This provides a new concern with the rise of MIS foot and ankle surgery and clinicians should be suspicious of this complication in patients with medial ankle pain following MIS calcaneal osteotomies.

Format

Case Study

Case Rpt Followup

20

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Marcell R. Brikho, DPM	mbrikho1@hfhs.org	I/We have nothing to disclose	
Mikayla A. Green, DPM	mgreen21@hfhs.org	I/We have nothing to disclose	
Anthony R. Giordano, DPM, FACFAS	agiorda2@hfhs.org	I/We have nothing to disclose	
Paolo E. Di Liddo, DPM, FACFAS	pdilidd1@hfhs.org	I/We have nothing to disclose	

Title

Rare Vascular Anomaly Leading to Chronic Wound in Ballerina: A Novel Case Report

Submit Date

10/14/2024

Correspondent

Last Name:Andrews

Full Name:Linsey, M, Andrews, DPM

Practice/Company/Residency Program:MedStar Health

Email:linsey.andrews@medstar.net

Authors

Author 1:Linsey, M, Andrews, DPM

Author 2:Richard, Youn, MD

Author 3:Christopher, Attinger, MD

Author 4:Cameron, Akbari, MD

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Vascular anomalies are rare and often under-reported in podiatric literature. It is critical for podiatrists to be able to recognize these, as there is a well described connection between a patient’s vascular status and wound healing. This case report documents a 21 year old ballerina with a chronic, non-healing surgical wound secondary to a rare congenital vascular anomaly, peronea arteria magna.

Methodology

Procedures

21 year-old healthy female referred for non-healing foot wound with exposed intrinsic muscles following neuroma resection four months prior. Soft tissue defect was substantial, requiring flap coverage. Physical examination revealed a non-palpable dorsalis pedis pulse, which prompted further workup prior to flap planning. Arteriogram results depicted no flow within the distal AT or DP artery, as well as a hypoplastic PT. The peroneal artery was noted as the dominant blood supply to the foot. These findings were consistent with a diagnosis of peronea arteria magna.

Results

Single patient with vascular anomaly, peronea arteria magna, requiring serial surgical debridements and HBO therapy to heal chronic wound secondary to neuroma excision.

Discussions

In this case report, an otherwise healthy 21 year old female underwent a routine neuroma resection. Unfortunately she developed a non-healing wound requiring repeat surgical debridements, IV antibiotics, and HBO therapy due to a congenital vascular anomaly in which the peroneal artery was the main blood supply to her foot. This case highlights the importance of a thorough preoperative examination as patients may have underlying anomalies which may require further preoperative workup or different surgical plans.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Linsey, M, Andrews, DPM	linsey.andrews@medstar.net	I/We have nothing to disclose	
Richard, Youn, MD	richard.youn@medstar.net	I/We have nothing to disclose	
Christopher, Attinger, MD	christopher.attinger@medstar.net	I/We have nothing to disclose	
Cameron, Akbari, MD	cameron.akbari@medstar.net	I/We have nothing to disclose	

Title

Surgical Management of Functional Hallux Limitus Using Cotton Osteotomy and Posterior Muscle Group Lengthening

Submit Date

10/15/2024

Correspondent

Last Name: Reczek

Full Name: Julia

Practice/Company/Residency Program:

Email: Jnreczek@gmail.com

NYCPM

Authors

Author 1: William Stallings, DPM

Author 2: Léthicia K. Paul, DPM MPH MS

Author 3: Julia Reczek, BS

Author 4: Holly Zuccherro, DPM MS

Author 5: Samuel Adegboyega, DPM

Author 6:

Author 7:

Author 8:

Purpose

This study aims to introduce a novel approach to effectively treating functional hallux limitus (FnHL). To the authors' knowledge, this is the first study to investigate the use of a first metatarsal distal shaft osteotomy, Cotton osteotomy, and gastrocnemius recession to improve function at the 1st MPJ and the stability of the medial column during gait.

Methodology

Procedures

A Cotton osteotomy was performed to improve medial arch stability using the cuneiform articular angle (CAA) to guide graft size selection as advised by Kunas et al, 2018. An Austin osteotomy and proximal Akin were done to correct HAV deformity. A gastrocnemius recession was utilized to neutralize rearfoot influence on the medial column, which was recommended by Maceira and Monteagudo, 2014. Integrity of the medial column was assessed by comparing preoperative and one-year postoperative radiographs using medial arch sag angle (MASA), CAA, medial cuneiform height (MCH), and Meary's angle.

Results

At the 12-month follow-up, the patient reported a full return to sport pain-free. Significant radiographic improvements in CAA, Meary's angle, and MCH were measured. There was no significant change in MASA. The patient demonstrated enhanced function at the 1st MPJ with a preoperative metatarsophalangeal-interphalangeal (MTP-IP) score of 62 and a postoperative MTP-IP score of 90.

Discussions

A Cotton osteotomy performed in conjunction with a gastrocnemius recession and distal metatarsal osteotomy can improve the function of patients suffering from FnHL. We also propose a novel classification system to guide graft size selection for treating medial column instability without overcorrection.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
William Stallings, DPM	William.stallings@yale.edu	I/We have nothing to disclose	
Léthicia K. Paul, DPM MPH MS	lethiciakp@gmail.com	I/We have nothing to disclose	
Julia Reczek, BS	jreczek2025@nycpm.edu	I/We have nothing to disclose	
Holly Zuccherro, DPM MS	Zuccheroholly9@gmail.com	I/We have nothing to disclose	
Samuel Adegboyega, DPM	sadegboyega@nycpm.edu	I/We have nothing to disclose	

TitleNot All Masses Are Cancer: A Surprising Diagnosis of Fungal Infection in the Ankle

Submit Date10/15/2024

Correspondent

Last Name: FlorentinoFull Name: Gabriela A. Florentino, DPMEmail: gabflorentino16@gmail.comPractice/Company/Residency Program: Memorial Healthcare Systems

Authors

Author 1: Gabriela FlorentinoAuthor 2: Jana P. Hutchinson, DPMAuthor 3: Michael A. Rivera, DPM, FAFASAuthor 4: Author 5: Author 6: Author 7: Author 8:

PurposeSoft tissue masses, especially those with a long-standing and progressively enlarging nature, often raise concern for neoplastic conditions. In this case, a 60-year-old male with a prior history of prostate cancer presented with a slowly enlarging mass in the ankle over the course of 10 years, initially suspected to be a benign tumor on imaging. However, histopathological findings revealed an unexpected infectious etiology, highlighting the need for a broad differential diagnosis.

Methodology

ProceduresThe patient presented with a soft tissue mass measuring 11.2 x 9 cm located on the medial aspect of his ankle, causing discomfort but no significant pain. There was no history of trauma or overt signs of infection. MRI of the ankle suggested synovial chondromatosis, leading to the decision to proceed with surgical excision for both diagnostic and therapeutic purposes.

ResultsDespite MRI findings, histopathological analysis following surgical excision revealed that the mass was composed of fungal hyphae, indicating a chronic fungal infection. No malignancy was detected.

DiscussionsThis case underscores the diagnostic challenges posed by soft tissue masses, particularly in patients with a history of malignancy, where a neoplastic process is often suspected. This case highlights the importance of tissue biopsy and culture in obtaining a definitive diagnosis, particularly in cases where imaging results may be misleading and in the absence of typical signs of infection. Accurate diagnosis through biopsy can prevent misdiagnosis and lead to appropriate treatment, ultimately improving patient outcomes.

FormatCase StudyCase Rpt Followup12Student ClubClassificationSoft Tissue/TumorLevel of EvidenceLevel IV

Authors/Financial Disclosures			
Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Gabriela Florentino	gabflorentino16@gmail.com	I/We have nothing to disclose	
Jana P. Hutchinson, DPM	janaphutchinson@gmail.com	I/We have nothing to disclose	
Michael A. Rivera, DPM, FAFAS	drrivera@flafootandankle.com	I/We have nothing to disclose	

Title

Malakoplakia of the Calcaneus: Case Report and Review of Treatment Protocols

Submit Date

10/14/2024

Correspondent

Last Name: Telwala

Full Name: Amit D Telwala

Practice/Company/Residency Program:

Email: upv9002@nyp.org

New York Presbyterian Queens

Authors

Author 1: Robert Karman DPM

Author 2: Juniper Yue DPM

Author 3: Hengqing Wu DPM

Author 4: Justin Erfanian-Taheri DPM

Author 5: Robert Fridman DPM

Author 6:

Author 7:

Author 8:

Purpose

Malakoplakia is a rare chronic inflammatory disorder characterized by the presence of distinctive histiocytic lesions known as Michaelis-Gutmann bodies. It is often associated with infection and immunosuppression commonly occurring in transplant patients. Although malakoplakia typically affects the genitourinary system, it can occur in various anatomical locations, including the foot and ankle. When malakoplakia coincides with osteomyelitis in the foot and ankle in transplant recipients, the diagnostic and management approach becomes even more complex. 1 case is described in the literature in the foot/ankle with 0 described in the calcaneus. The aim of this study is to provide insight into the management of malakoplakia in the foot and ankle as we present the first case described in the calcaneus in the literature.

Methodology

Procedures

We performed a comprehensive literature search of PubMed, MEDLINE, Embase, and Google Scholar for foot/ankle malakoplakia. Our search revealed the following studies of malakoplakia and their various treatment methodologies. A total of 1 study of malakoplakia in the foot was identified. Whittington (2023) reports on cutaneous malakoplakia of the ankle identified by biopsy which was treated by tapering steroids and 8 weeks of TMP/SMX with resolution of symptoms and lesion.

Results

Treatment documented in literature varies between curettage and fusion to just antibiotic treatment. The exact pathogenesis of malakoplakia is poorly understood.

Discussions

This case study provides evidence that while rare, malakoplakia of the calcaneus can occur. While surgical treatment has been documented in literature, it may not lead to improved outcomes. Further research is required.

Format

Case Study

Case Rpt Followup

19

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Robert Karman DPM	rkarman39@gmail.com	I/We have nothing to disclose	
Juniper Yue DPM	juniper.yue@gmail.com	I/We have nothing to disclose	
Hengqing Wu DPM	hqanna.wu@gmail.com	I/We have nothing to disclose	
Justin Erfanian-Taheri DPM	Justinerfanian@gmail.com	I/We have nothing to disclose	
Robert Fridman DPM	rt2256@cumc.columbia.edu	I/We have nothing to disclose	

Title

A Rare Case of Functional Popliteal Artery Entrapment Syndrome- A Potential Misdiagnosis of Chronic Exertional Compartment Syndrome

Submit Date

10/14/2024

Correspondent

Last Name:Judickas

Full Name: Sara, J, Judickas, DPM

Practice/Company/Residency Program:

Email:sara.judickas@ohiohealth.com

Grant Medical Center OhioHealth

Authors

Author 1:Alexa, T, Bykowski, DPM

Author 2:Nevin, C, Joseph, DPM

Author 3:Meghan, C, Roby, DPM

Author 4:David, Epstein, MD, FACS, FICA, RVPI

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Functional popliteal artery entrapment syndrome (FPAES) is a rare disorder most commonly affecting the young, athletic population. The disorder results in functional compression of the popliteal artery during exertion and presents with similar symptoms to those who suffer from chronic exertional compartment syndrome (CECS). The purpose of this case report is to shed light on this rare diagnosis and discuss diagnostic features which should be recognized to prevent misdiagnosis and unnecessary invasive intervention.

Methodology

Procedures

A 21-year-old female presented with pain and paresthesias to her bilateral lower extremities (BLE) that resolved with rest. Compartmental pressure tests were elevated and she was treated for CECS with BLE fasciotomies. The patient presented with recurrent symptoms two years later. Bilateral knee magnetic resonance imaging revealed normal anatomic contents of the popliteal fossa. Arterial duplex demonstrated elevated popliteal artery velocities. Dynamic computed tomographic angiography revealed near occlusion of bilateral popliteal arteries with active plantarflexion. Findings confirmed diagnosis of FPAES. The patient was treated with bilateral medial gastrocnemius head myomectomies.

Results

Patient healed incisions, completed physical therapy and advanced back to sport activities. There were no complications or recurrence of symptoms.

Discussions

Foot and ankle surgeons should be familiar with a diagnosis of functional popliteal artery entrapment syndrome, as it is often misdiagnosed. Based on clinical suspicion, providers should be comfortable knowing when to make an appropriate vascular referral for this condition. This study highlights the rarity of this disorder and provides a review of the diagnostic workup and management.

Format

Case Study

Case Rpt Followup

38

Student Club

Soft Tissue/Tumor

Classification

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Alexa, T, Bykowski, DPM	alexa.bykowski@ohiohealth.com	I/We have nothing to disclose	
Nevin, C, Joseph, DPM	nevin.joseph@ohiohealth.com	I/We have nothing to disclose	
Meghan, C, Roby, DPM	meghan.robby@ohiohealth.com	I/We have nothing to disclose	
David, Epstein, MD, FACS, FICA, RVPI	david.epstein@ohiohealth.com	I/We have nothing to disclose	

Title

Vascularized Fibular Bone Grafting for Calcaneocuboid Joint Arthrodesis: A Case Report

Submit Date

10/14/2024

Correspondent

Last Name:Maroshek

Full Name:Alexander

Email:admaroshek@gmail.com

Practice/Company/Residency Program:Hackensack Meridian Health - Jersey Shore University Medical Center

Authors

Author 1:Alexander Maroshek, DPM

Author 2:Tyler Verdoni, DPM

Author 3:Chrisovalantis Lakhiani, MD

Author 4:Joseph A. Sussman, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

We present a case study using harvested vascularized fibular autograft to span a calcaneocuboid joint deficit for arthrodesis

Methodology

Procedures

Osseous deficits in the foot and ankle pose challenges to foot and ankle surgeons. Several techniques attempt bridging these deficits. We present a 47-year-old male who underwent open reduction internal fixation of left ankle fracture 10 years ago. Postoperatively requiring several revisions, having multiple infections requiring incision and drainages, long-term antibiotics, and advanced wound care modalities; resulting in chronic osteomyelitis of the anterior calcaneus with chronic wound. We eradicated residual infection by performing an anterior subtotal calcanectomy placing an antibiotic spacer with monorail external fixator. Once culture negative, and cooperatively with the plastic surgeon, a vascularized fibular free flap was harvested and inset to the calcaneocuboid joint, secured with plate and screws. He remained non-weight bearing 2 months with successful arthrodesis and return to sneakers at 3 months. He continues to ambulate pain free in sneakers at 12 month followup

Results

We present successful vascularized fibular autograft to span a calcaneocuboid joint deficit with successful arthrodesis at 2 months followup

Discussions

We presented successful utilization of vascularized fibular bone graft with confirmed arthrodesis at 2 months followup. Multiple techniques available to help bridge osseous defects. To maintain lateral column length and reduce pain, we opted for a vascularized fibular free flap spanning the calcaneocuboid joint deficit and providing soft tissue coverage for chronic scar tissue. We hope our case report adds to the body of evidence for utilization of vascularized bone grafting in the foot and ankle

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Alexander Maroshek, DPM	admaroshek@gmail.com	I/We have nothing to disclose	
Tyler Verdoni, DPM	admaroshek@gmail.com	I/We have nothing to disclose	
Chrisovalantis Lakhiani, MD	admaroshek@gmail.com	I/We have nothing to disclose	
Joseph A. Sussman, DPM	admaroshek@gmail.com	I/We have nothing to disclose	

Title

Bilateral ankle replacement with total talus implant: a case study

Submit Date

10/14/2024

Correspondent

Last Name: Booth

Full Name: Mitchell B. Booth, DPM

Practice/Company/Residency Program:

Email: mitchellbbooth@gmail.com

Presbyterian / St. Luke's Medical Center Podiatry Residency

Authors

Author 1: Keith Jacobson, DPM, FACFAS

Author 2: Mitchell Booth, DPM

Author 3: Kira Cramer, DPM

Author 4: Brett Sachs, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this case study is to report on the outcomes of a single patient who underwent separately performed bilateral total talus implantation with tibia hemiarthroplasty ankle replacement. This study aims to add to the growing body of literature on total talus implants.

Methodology

Procedures

The case of a single patient who underwent bilateral total ankle arthroplasty with total talus implants is described. Preoperative X-rays and CT scan images are evaluated.

Results

Right side performed on 5/4/2023. Left side performed on 1/25/2024. Both Kinoss total ankle system. He began partial protected weight bearing and physical therapy at 6 weeks. He began full weight bearing at 9 weeks. At 3-month follow-up, the patient is transitioned to a regular shoe and expresses interest in scheduling left-sided procedure. Patient experienced some temporary dorsal foot numbness which was resolved by 5-month follow-up. He reports some stiffness with initial ambulation but is satisfied with outcome. Left side is performed 9 months later. Same post-operative course is followed on left side. At 4-month follow-up on left, patient reports that left feels exactly like the right side.

Discussions

This study is unique in that it reports the outcome of total talus implant use in bilateral ankle and subtalar joint arthritis secondary to congenital clubfoot deformity. While there is little research published on long-term results of total talus procedures, the current study suggests that bilateral total talus implants with ankle hemiarthroplasty appears to be a viable option for patients with concomitant ankle and subtalar joint arthritis.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Keith Jacobson, DPM, FACFAS	kjacobsontx@comcast.net	I/We have nothing to disclose	
Mitchell Booth, DPM	mitchellbbooth@gmail.com	I/We have nothing to disclose	
Kira Cramer, DPM	kirakirac@gmail.com	I/We have nothing to disclose	
Brett Sachs, DPM, FACFAS	bdsachs@hotmail.com	I/We have nothing to disclose	

Title

Underlying Diagnosis of Ehlers-Danlos Syndrome in a Patient following Complications of Low Energy Mechanism Open Ankle Dislocation

Submit Date

10/14/2024

Correspondent

Last Name:Cardinoi

Full Name:Justine

Practice/Company/Residency Program:

Email:jcardino1996@gmail.com

Phoenixville Hospital

Authors

Author 1:Jason Miller, DPM, FACFAS

Author 2:Justine Cardino DPM PGY2

Author 3:Khoa Nguyen DPM, PGY2

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This is a case study to present on a patient who sustained an open ankle dislocation due to a low-energy mechanism injury in the setting of an undiagnosed underlying Ehlers-Danlos Syndrome (EDS).

Methodology

Procedures

The patient presented for continued ankle pain following an ankle injury while hiking. She twisted her ankle walking over a log. Patient underwent closed reduction with irrigation and debridement and primary closure. MRI showed talar head bone marrow edema with syndesmosis disruption. She underwent an ankle arthroscopy with debridement and syndesmosis fixation with 2 screws and fibula plate. Pain continued and the syndesmosis hardware was eventually removed. Her symptoms showed no improvement after treatment including physical therapy, bracing, offloading, and three surgeries.

Results

Despite this treatment, she had no improvement in her symptoms for many months. Further analysis of the initial injury and complications following surgery increased the suspicion of an underlying disorder which led to her eventual referral to Rheumatology. She was diagnosed with EDS which contributed to her initial injury and long post-operative healing.

Discussions

A diagnosis of EDS typically is not high on the list of differentials in a young healthy patient. For this patient, the correct referral led to her undergoing treatment for EDS which could help prevent future similar injuries. Many studies published in the past have shown higher rates of complications and treatment failure in orthopedic surgery in EDS patients. There is also unfamiliarity among physicians regarding the clinical history, physical exam, diagnostic testing, treatment, or long-term implications of joint instability.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jason Miller, DPM, FACFAS	jrmiller1371@gmail.com	I/We have nothing to disclose	
Justine Cardino DPM PGY2	jcardino1996@gmail.com	I/We have nothing to disclose	
Khoa Nguyen DPM, PGY2	khoapete@gmail.com	I/We have nothing to disclose	

Title

Clinical application of pan-metatarsal vertical wire fixation with dynamic external fixation apparatus for severe forefoot deformity

Submit Date

10/14/2024

Correspondent

Last Name: Ng

Full Name: Jeffrey K. Ng, DPM

Practice/Company/Residency Program:

Email: jeffreying03@gmail.com

Metropolitan Hospital Center/New York College of Podiatric Medicine

Authors

Author 1: Jeffrey K. Ng, DPM

Author 2: Johanna G. Godoy, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Congenital metatarsus adductus often requires early intervention, while mature deformities may necessitate osteotomies, external fixation, and soft tissue release due to significant contracture. Traditional cross-wire fixation lacks sufficient control over individual metatarsals. In 2019, Rasor et al. introduced a vertical wire technique on foot model for improved forefoot control and multiplanar deformity correction, although it remains unstudied in clinical practice. This study assesses the technique's benefits, limitations, and risks, including infection and neurovascular injury

Methodology

Procedures

A 13yo patient with severe metatarsus adductus deformity who previously failed serial casting. Preoperative X-rays indicated metatarsus adductus angle 25+ degrees, with medial forefoot soft tissue contracture, tarsometatarsal joint dislocation, and midfoot plantarflexion. Procedures were minimally invasive proximal pan-metatarsal corticotomy with callus distraction, 4-flap Z-plasty, vertical wire fixation (x5), and dynamic external fixation. On NWB status with gradual correction following a 2-week latency with Ilizarov technique. After 6 months, the method switched to longitudinal wire fixation with cross-wire external fixation; hardware was removed at 7 months

Results

No signs of infection/neurovascular injury; foot in plantigrade position with normal gait, able to withstand sport activities; pain intolerance upon soft tissue manipulation, relieved when switched to longitudinal pin fixation

Discussions

Postoperative radiographs showed corrected metatarsal adductus angles, maintained length and parabola. While the technique allows precise correction and avoids metatarsal shortening, significant pain at pin sites likely attributed to digital plantar nerve irritation and impingement. Caution is advised when using this technique in sensate patients, though it may be better suited for deformity correction in neuropathic patients

Format

Case Study

Case Rpt Followup

30

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name: Jeffrey K. Ng, DPM

Email: jeffreying03@gmail.com

Disclosure(s) selected: I/We have nothing to disclose

Disclosed Organisation(s):

Johanna G. Godoy, DPM, FACFAS

johannagodoyjones@gmail.com

I/We have nothing to disclose

Title

Management of Recalcitrant Pin Site Wounds with Proximally-based Hemisoleus Muscle Flap

Submit Date

10/14/2024

Correspondent

Last Name: Redzematovic

Full Name: Kenan Redzematovic, DPM

Practice/Company/Residency Program:

Email: kenanrezematovic@gmail.com

St. Mary's General Hospital

Authors

Author 1: Kenan Redzematovic, DPM

Author 2: Henna Akbarzai, DPM

Author 3: Ambreen Sharif, DPM, AACFAS

Author 4: Michael Subik, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

External fixation is an option for patients with joint collapse and destruction. Although providing multiple benefits, complications can arise including pin-site infections. We present a case of a pin-site wound that failed attempts at local wound care, operative debridements, vacuum-assisted wound therapy, local skin flaps, and antibiotic courses. This case highlights the use of a proximally based hemisoleus muscle flap for the treatment of a pin-site wound.

Methodology

Procedures

60 year-old patient with PMH of CAD, DM, HTN underwent tibiototalcaneal arthrodesis with external fixation. Post-operatively, patient presented with a half-pin site wound that probed to tibia. Patients did not improve with wound care, antibiotics, OR debridements, local skin flaps. Patient was taken for a proximally-based hemisoleus muscle flap.

Results

Patient underwent proximally based hemisoleus muscle flap for the treatment of proximal tibial half pin site wound with draining sinus with healing noted at 4 weeks.

Discussions

Several complications can arise with use of external fixation. Pin-site infections are often well managed with conservative care, however knowledge of orthoplastic soft tissue options is key for wounds that have exhausted other options. Muscle flaps offer soft tissue coverage, increased vascularity and protect against infection. The proximally based hemisoleus muscle flap is a viable option for wounds to the proximal and anterior lower extremity. Our case highlights a successful outcome of this procedure to promote the use of this option in foot and ankle surgery.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kenan Redzematovic, DPM	kenanredzematovic@gmail.com	I/We have nothing to disclose	
Henna Akbarzai, DPM	hakbarzai@gmail.com	I/We have nothing to disclose	
Ambreen Sharif, DPM, AACFAS	asharif0215@gmail.com	I/We have nothing to disclose	
Michael Subik, DPM, FACFAS	drsubik@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Orthofix, Stryker, Trice, BD

Title

Train Foot: History of the Migrant Worker

Submit Date

10/14/2024

Correspondent

Last Name: CAMPBELL

Full Name: STEPHANIE

Practice/Company/Residency Program:

Email: dr.stephaniecampbell@gmail.com

UT Health

Authors

Author 1: DR STEPHANIE CAMPBELL

Author 2: Nikita Gambhir, DPM, PGY3

Author 3: Heather V. Tran, DPM, PGY4

Author 4: Luis Caporusso, DPM, PGY3

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case study reviews traumatic injury of the lower extremity experienced by train car hopping.

Methodology

Procedures

Immigrant labor has a long history in the United States, comprised of millions of workers from various ethnic and cultural backgrounds supporting multiple industries from farm work to steel. As of 2019, 25.6% of total migrant workers employed in the Americas [1,2]. Crush injuries or “pinch points” are events when a body part is entangled within machinery or under or between an object [3]. After a series of crush related injuries of young (20s), male Latino patients across Texas to a level 1 trauma center, case review was performed for 2 patients for which follow up could be evaluated. The patients report similar events of hopping train cars with falls crushing the lower limb between cart couplers.

Results

Both cases involved significant soft tissue injury and minor digital amputation. Management of compartment syndrome despite large open injuries, serial debridement and grafting, NPWT and HBOT, and split thickness skin grafting was needed. The second case additionally required open treatment of multiple metatarsal fractures. Hospitalization time was greater than 3.5 weeks for both due to significant injury and socioeconomic status. Ambulation and return to similar work was observed.

Discussions

Mangled extremity severity score (MESS), known as unreliable in predicting limb amputation is consistent in this case [4]. The mechanism of train crush injury requires patient survey for soft tissue compromise, blood loss, concomitant fracture care. Anticipate prolonged hospitalization and alternative follow up care (phone) due to patient migration and/or remote distance from the trauma hospital.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
DR STEPHANIE CAMPBELL	dr.stephaniecampbell@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	ETS
Nikita Gambhir, DPM, PGY3	gambhi@uthscsa.edu	I/We have nothing to disclose	
Heather V. Tran, DPM, PGY4	heathervtran@gmail.com	I/We have nothing to disclose	
Luis Caporusso, DPM, PGY3	caporussol@uthscsa.edu	I/We have nothing to disclose	

Title

Minimally Invasive Approach to Hemifibular Autograft Harvest

Submit Date

10/14/2024

Correspondent

Last Name: Redzematovic

Full Name: Kenan Redzematovic, DPM

Practice/Company/Residency Program:

Email: kenanredzematovic@gmail.com

St. Mary's General Hospital

Authors

Author 1: Kenan Redzematovic, DPM

Author 2: Henna Akbarzai, DPM

Author 3: Ambreen Sharif, DPM, AACFAS

Author 4: Michael Subik, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Charcot patients suffer from loss of talar bone stock. Complicated by poor soft tissue, these patients would benefit from a minimally invasive approach to rearfoot fusions. Tibiotolocalcaneal (TTC) arthrodesis via arthroscopic joint prep offers this. We propose a minimally invasive approach to fibular autograft harvests while maintaining the fibula as a lateral stabilizing structure. This case series describes several TTC arthrodeses augmented with hemi-fibular autograft harvest and application via minimally invasive approach.

Methodology

Procedures

Series of 4 patients who underwent tibiotolocalcaneal arthrodesis with minimally invasive hemi-fibular autograft harvest and application for the treatment of talar bone loss and to aid in fusion.

Results

Four patients underwent TTC arthrodesis with retrograde nail. Each TTC arthrodesis was augmented by harvest and application of hemi-fibular autograft. Time to ankle joint union was 2 months. Time to weight bearing was 3 months. No complications were noted.

Discussions

Talar collapse is a common obstacle observed in patients with Charcot neuroarthropathy; this can lead to long term complications including limb length discrepancy, adjacent joint arthritis and biomechanical instability. Options to augment bone loss include autograft, femoral head allografts, implants and lengthening procedures; each with pros and cons. Harvesting of the fibula allows for use of autograft but comes with inherent instability long term and uses a large surgical footprint. We present our technique of a minimally invasive harvest of a hemifibular graft while conserving the remaining portion as a stabilizing structure. This allows for a smaller surgical footprint, addresses the issue of bone loss and decreases time to joint fusion.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kenan Redzematovic, DPM	kenanredzematovic@gmail.com	I/We have nothing to disclose	
Henna Akbarzai, DPM	hakbarzai@gmail.com	I/We have nothing to disclose	
Ambreen Sharif, DPM, AACFAS	asharif0215@gmail.com	I/We have nothing to disclose	
Michael Subik, DPM, FACFAS	drsubik@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Orthofix, Stryker, Trice, BD

Title

A Rare Case Study of Angiosarcoma in the Foot

Submit Date

10/14/2024

Correspondent

Last Name: Nguyen

Full Name: Theresa, H, Nguyen, B.S.

Practice/Company/Residency Program:

Email: theresa.nguyen1@samuelmerritt.edu

Samuel Merritt University and UCI Health — Lakewood

Authors

Author 1: Theresa, H, Nguyen, B.S.

Author 2: Kanika, S, Grewal, B.S.

Author 3: Sravani Alla, D.P.M.

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Recognizing angiosarcoma in the foot is crucial due to its rarity and aggressive nature, which can lead to delayed diagnosis and treatment if not promptly identified. While angiosarcoma is uncommon overall, its presentation in the foot poses unique challenges that underscore the importance of awareness among physicians for timely intervention.

Methodology

Procedures

77 year old male with a past medical history of diabetes and hypertension presents to UCI Lakewood for evaluation of a soft tissue for mass on the second digit. Patient states that the mass has been present for about 7 months, but has been progressing in size. Given the multilobulated soft tissue mass overlying the 2nd digit, podiatry was consulted and suggested a digit amputation after obtaining advanced imaging.

Results

Advanced imaging, including X-ray and MRI, was performed to rule out bone involvement. The excised specimen from the second digit was sent for pathological analysis, which revealed lobules of a vascular neoplasm with acute and chronic inflammation upon microscopic examination. The tumor showed no evidence of bone invasion, and the staining pattern was consistent with angiosarcoma.

Discussions

Angiosarcoma is a rare type of cancer, accounting for approximately 1-2% of all soft tissue sarcomas. There have been limited cases of angiosarcoma presenting to the distal lower extremity, making proper timely diagnosis a challenge. Early diagnosis of angiosarcoma in the foot facilitates timely referral for radiation therapy, potentially improving treatment outcomes and survival rates. Additionally, it enhances clinicians' understanding of various soft tissue pathologies in the foot, promoting more effective management strategies for rare tumors.

Format

Case Rpt Followup

Student Club

Classification

Level of Evidence

Case Study

12

Wound Care/Infectious Diseases

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Theresa, H, Nguyen, B.S.	theresa.nguyen1@samuelmerritt.edu	I/We have nothing to disclose	
Kanika, S, Grewal, B.S.	kanika.sethi@samuelmerritt.edu	I/We have nothing to disclose	
Sravani Alla, D.P.M.	sravanialla.dpm@gmail.com	I/We have nothing to disclose	

Title

Treatment of Complications Associated with Midfoot Columnar Fusion in Charcot Reconstruction

Submit Date

10/14/2024

Correspondent

Last Name: Redzematovic

Full Name: Kenan Redzematovic, DPM

Email: kenanredzematovic@gmail.com

Practice/Company/Residency Program: St. Mary's General Hospital

Authors

Author 1: Kenan Redzematovic, DPM

Author 2: Melody John, DPM

Author 3: Ambreen Sharif, DPM, AACFAS

Author 4: Michael Subik, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The most commonly affected region in Charcot neuroarthropathy (CN) of the foot and ankle is the midfoot. CN of the midfoot can lead to midfoot collapse resulting in a rocker bottom deformity, high degree of debilitation, and increased risk of developing wounds and infections. This deformity can be treated conservatively or surgically. One commonly utilized surgical intervention for midfoot CN is midfoot columnar fusion. We present the outcome and treatments of 5 patients who failed midfoot columnar fusion.

Methodology

Procedures

Our study identified 5 total patients who experienced complications after receiving midfoot columnar fusion for surgical treatment of Charcot neuroarthropathy. All patients subsequently underwent treatment. Treatment includes offloading through below knee casting and surgical staged approach with application of external fixator, insertion of antibiotic coated rod with partial or complete talectomy, and tibiototalcaneal fusion.

Results

Average age of patients was 62 years (49-78 years). One patient was treated with conservative care and 4 patients had staged surgical approach. Average time between MCF and the first radiographic evidence of failure was 264.2 days (6-532). Average time between first radiographic evidence of failure and stage one was 79.25 days (2-240) and average of 110.25 days (91-133) between stage one and two.

Discussions

MCF is a commonly utilized surgical treatment of CN. Our study showcases 5 patients who experienced complications after MCF. All patients underwent either conservative or surgical treatment. One patient was conservatively treated with a below knee cast. The other 4 patients with construct failure underwent a staged surgical approach. At final follow-up, all patients achieved a stable and plantigrade, free of ulceration and amenable to bracing.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kenan Redzematovic, DPM	kenanredzematovic@gmail.com	I/We have nothing to disclose	
Melody John, DPM	melodyyau1@gmail.com	I/We have nothing to disclose	
Ambreen Sharif, DPM, AACFAS	asharif0215@gmail.com	I/We have nothing to disclose	
Michael Subik, DPM, FACFAS	drsublik@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Orthofix, Stryker, Trice, BD

Title

Novel Treatment for Tibialis Anterior Infectious Tenosynovitis Status Post Transmetatarsal Amputation – A Case Study

Submit Date

10/15/2024

Correspondent

Last Name:Sharma

Full Name:Anish

Practice/Company/Residency Program:

Email:anishsharmacontact@gmail.com

VA New Mexico

Authors

Author 1:Shaleen Duhra, DPM

Author 2:Haywan Chiu, DPM

Author 3:Sarah Mele, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Gas gangrene is a life-threatening condition often requiring surgical intervention, typically via transmetatarsal amputation (TMA) in the foot and ankle. This procedure enables patients to maintain a functional weight-bearing distal limb while eradicating active infection. However, functionality can be compromised if the tibialis anterior tendon becomes infected and desiccated, necessitating its removal. This case study follows a patient over one year after consenting to a TMA, complicated by progressive infection traveling up 1/3 of the distal leg resulting in fasciotomy and transection of the infected tibialis anterior tendon. It also addresses associated biomechanical imbalances which may lead to drop foot and plantar pressure wounds

Methodology

Procedures

One of few published cases highlighting management of tibialis anterior infectious tenosynovitis . A 67 year old patient underwent a TMA, fasciotomy and transection of the tibialis anterior tendon. Preoperative Xrays revealed soft tissue emphysema to the level of the dorsal midfoot. Clinical presentation revealed desiccation of the tibialis anterior tendon and infection extending up 1/3 of the distal leg.

Results

The patient underwent TMA , fasciotomy, debridement of tibialis anterior tendon and extensive wound care to eventually be wound free and independent with ambulation with the help of shoe fillers and a brace which is worn as needed.

Discussions

The surgical management of septic tenosynovitis routinely is irrigation and debridement. This case illustrates the complexities of managing septic tenosynovitis following a TMA highlighting the significant wound care and biomechanical challenges posed by tendon transection and subsequent functional deficits.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Shaleen Duhra, DPM	Shaleen.duhra@va.gov	I/We have nothing to disclose	
Haywan Chiu, DPM	haywanchiu@gmail.com	I/We have nothing to disclose	
Sarah Mele, DPM	Sarah.mele@va.gov	I/We have nothing to disclose	

Title

Peroneus Brevis Transfer to the Calcaneus for Achilles Tendon Weakness in a Post-Polio Athlete: A Case Study

Submit Date

10/14/2024

Correspondent

Last Name:Hu

Full Name:Haoning

Practice/Company/Residency Program:

Email:haoning.hu01@gmail.com

Medstar Georgetown University Hospital

Authors

Author 1:Haoning

Author 2:Liliya Parkman, DPM

Author 3:Alyson Boudreau, DPM

Author 4:Daniel Perez, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Achilles tendon weakness secondary to Polio presents a difficult challenge, particularly in active patients seeking to maintain a high level of physical activity. This case study explores the use of a peroneus brevis transfer to the calcaneus to restore plantarflexion strength and resolve chronic Achilles tendonitis.

Methodology

Procedures

An athletic male patient with a history of poliomyelitis presented with persistent Achilles tendonitis and marked plantarflexion weakness. Despite conservative management, his symptoms persisted, significantly impacting his ability to engage in sports. Electromyography (EMG) confirmed the absence of left tibial nerve responses, with chronic denervation changes noted in the gastrocnemius and posterior compartment muscles. The surgical intervention selected was peroneus brevis transfer, with its distal end anastomosed to the peroneus longus. The proximal segment was anchored into the calcaneus and anastomosed with the Achilles tendon. Posterior compartment muscle transfer was excluded due to abnormal EMG.

Results

At the 12-month follow-up, the patient reported full return to activities without restrictions. Clinical examination demonstrated improvement in plantarflexion strength, and the patient remained asymptomatic.

Discussions

This case demonstrates the utility of peroneus brevis transfer in managing Achilles tendonitis in post-polio patients with chronic neuromuscular deficits. The absence of tibial nerve function and the denervation of the gastrocnemius presented a significant challenge, yet the surgical intervention provided a robust solution, allowing the patient to return to his previous level of activity.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Biomechanics and Anatomy

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Haoning	haoning.hu01@gmail.com	I/We have nothing to disclose	
Liliya Parkman, DPM	Liliya.Parkman@medstar.net	I/We have nothing to disclose	
Alyson Boudreau, DPM	Alyson.Boudreau@medstar.net	I/We have nothing to disclose	
Daniel Perez, DPM, FACFAS	dperez8@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	DJO

Title

Talonavicular Arthrodesis Following Displacement of Arthroereisis Implant Leading to Severe Osteoarthritis: A Case Study

Submit Date

10/14/2024

Correspondent

Last Name:Hu

Full Name:Haoning

Practice/Company/Residency Program:

Email:haoning.hu01@gmail.com

Medstar Georgetown University Hospital

Authors

Author 1:Haoning Hu, DPM

Author 2:Liliya Parkman, DPM

Author 3:Alex Dang, DPM

Author 4:Daniel Perez, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Displacement of an arthroereisis implant can have serious consequences, including the development of talonavicular arthritis, which may require surgical intervention. This case study highlights a rare instance of metallosis of sinus tarsi and severe talonavicular osteoarthritis caused by a displaced arthroereisis implant and presents the management of this condition through talonavicular arthrodesis.

Methodology

Procedures

A 20-year-old female presented with significant left foot pain, which began after beginning high impact sports. Conservative treatments failed to provide relief. The patient had undergone an arthroereisis procedure as a child. Imaging studies, including X-rays and MRI, revealed severe osteoarthritis of the talonavicular joint and dorsal displacement of the arthroereisis implant. Procedures Include: Arthroereisis implant removal, debridement of metallosis of sinus tarsi and Talonavicular joint arthrodesis.

Results

At the one-year follow-up, the patient had fully returned to sports without any pain or limitations. Imaging confirmed successful fusion of the talonavicular joint, and the patient reported complete symptom resolution.

Discussions

This case emphasizes the potential long-term risks of arthroereisis implants, particularly the possibility of displacement leading to arthritis. While arthroereisis is a commonly used procedure in pediatric flatfoot correction, this complication discloses the need for periodic monitoring over time, particularly when symptoms emerge. In this case, talonavicular arthrodesis was an effective treatment, allowing the patient to return to high levels of activity. Recognizing and addressing implant-related complications early is crucial to prevent further joint deterioration.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Haoning Hu, DPM	haoning.hu01@gmail.com	I/We have nothing to disclose	
Liliya Parkman, DPM	Liliya.Parkman@medstar.net	I/We have nothing to disclose	
Alex Dang, DPM	Alex.Dang@medstar.net	I/We have nothing to disclose	
Daniel Perez, DPM, FACFAS	dperez8@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	DJO

Title

Calcium sulfate antibiotic delivery system and its role in the prevention of recurrent diabetic foot infections/osteomyelitis and reducing hospital readmission rate: A case series

Submit Date

10/14/2024

Correspondent

Last Name: Franklin

Full Name: Jordan W.

Practice/Company/Residency Program:

Email: jorfrank11@gmail.com

Denver Health & Hospital Authority

Authors

Author 1: Jordan W. Franklin, DPM

Author 2: Nicole-Gabrielle S. Delino, DPM

Author 3: Kristine Hoffman, DPM, FACFAS

Author 4: Morgan Jerabek, DPM, FACFAS

Author 5: Matthew Gorski, DPM, FACFAS

Author 6:

Author 7:

Author 8:

Purpose

In patients with conditions such as DM2 and PAD, there is a concern if antibiotics are effective in delivering antibiotics to the site of infection. In this case series, we examine the efficacy of adding localized calcium sulfate antibiotic delivery systems in treating complex foot infections.

Methodology

Procedures

A 39-year-old male patient with PMH of uncontrolled DM2 and PAD who presents with wounds to the right fifth metatarsal head. Patient then underwent partial fifth ray amputation whereby vancomycin-impregnated beads and cement were introduced. A 52-year-old male patient with PMH of DM2 and PAD presents with recurrent diabetic foot infection after undergoing a left hallux amputation. A partial first ray amputation was performed whereby tobramycin-impregnated beads and cement were introduced. A 56-year-old male patient with PMH of HIV presents with concerns of postoperative infection s/p MIS bunionectomy. An I&D was performed. Purulent drainage was noted surrounding the hardware and instability was noted at the osteotomy sites. Patient underwent application of mini-rail external fixator and the infected hardware was removed. Vancomycin-impregnated beads were introduced.

Results

Each patient demonstrated favorable outcomes from combination therapy of systemic antibiotics, introduction of an antibiotic-eluting system at the local site of infection following surgical debridement. No readmission was noted within a year of the writing of this study.

Discussions

The patient's wounds showed remarkable signs of healing progression after incorporating the antibiotic-eluting system that may not have shown similar outcomes relying on surgical debridement and systemic antibiotics alone.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Diabetic Foot

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jordan W. Franklin, DPM	jorfrank@gmail.com	I/We have nothing to disclose	
Nicole-Gabrielle S. Delino, DPM	ndelino@gmail.com	I/We have nothing to disclose	
Kristine Hoffman, DPM, FACFAS	kristine.hoffman@dhha.org	I/We have nothing to disclose	
Morgan Jerabek, DPM, FACFAS	morgan.jerabek@dhha.org	I/We have nothing to disclose	
Matthew Gorski, DPM, FACFAS	matthew.gorski@dhha.org	I/We have nothing to disclose	

Title

A No-Brainer Way to Repair the Plantar Plate; A Premier Case Series

Submit Date

10/14/2024

Correspondent

Last Name: Cohen

Full Name: Steven D. Cohen, DPM

Practice/Company/Residency Program:

Email: cohensteven882@gmail.com

Morristown Medical Center Atlantic Health System

Authors

Author 1: Steven D. Cohen, DPM

Author 2: Maryellen P. Brucato, DPM, FACFAS

Author 3: Keval G. Parikh, DPM, FACFAS

Author 4: Quinn P. Kelly, BS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The plantar plate serves the function of stabilizing the lesser metatarsophalangeal joint. When there is instability at this joint it is a common cause of metatarsalgia and pain especially at the second toe. In the literature there have been various publications on reconstructing the plantar plate from both dorsal and plantar approaches. Our case series aims to discuss the successful treatment of plantar plate tears in patients utilizing a simple and effective technique.

Methodology

Procedures

We present four patients suffering with pain associated with plantar plate tears that can be appreciated both clinically and radiologically. In our novel technique we describe a way to repair the plantar plate utilizing one dorsal to plantar tenodesis screw. The patient's postoperative courses went smoothly and their pain levels significantly improved on the VAS scale.

Results

After surgical intervention utilizing this technique each patient had significant improvement of pain symptoms measured on the visual analog score. By the end of each patient's post-operative course, their quality of lives have improved and they were able to ambulate pain free after undergoing the procedure presented in the study.

Discussions

A plantar plate tear can be a debilitating injury for a patient as this structure is critical in stabilizing the lesser metatarsophalangeal joint. This type of injury can lead to structural deformities so it is crucial to intervene when necessary. A simple technique in reconstruction of the plantar plate can have a significant impact on a patient's quality of life which has been demonstrated in our case series.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Steven D. Cohen, DPM	cohensteven882@gmail.com	I/We have nothing to disclose	
Maryellen P. Brucato, DPM, FACFAS	marebeary1@gmail.com	I/We have nothing to disclose	
Keval G. Parikh, DPM, FACFAS	keval.parikh@atlantichhealth.org	I/We have nothing to disclose	
Quinn P. Kelly, BS	Quinnpkelly12@gmail.com	I/We have nothing to disclose	

Title

Ankle Myopericytoma: A Case Report

Submit Date

10/14/2024

Correspondent

Last Name: Xoubi

Full Name: Eyad

Practice/Company/Residency Program:

Email: eyad.xoubi@aah.org

Advocate Christ Medical Center

Authors

Author 1: Eyad Xoubi, DPM

Author 2: Kelly Fahey, DPM

Author 3: Andrew Silman, DPM

Author 4: David Garras, MD

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Myopericytoma is a rare, circumscribed mass that commonly forms within the superficial subcutaneous layer of the 4 extremities, more commonly in the lower extremity. A small number of cases have been reported regarding myopericytomas to the lower extremity. The exact etiology remains unclear. This report will outline the pathogenesis, clinical presentation and treatment course of myopericytoma to the ankle.

Methodology

Procedures

Myopericytoma is a benign, slow growing soft tissue tumor that exhibits differentiation within the perivascular myoid cells that consists of spindle shaped cells. This case reports a myopericytoma in an 85-year-old male who presents with a painless, well-circumscribed soft tissue mass to the posterior lateral aspect of the right ankle. Upon surgical excision, the soft tissue mass was sent to surgical pathology, at Advocate Christ Medical Center, for further analysis. The case was then reviewed by a bone and soft tissue pathologist at Cleveland Clinic.

Results

The specimen consisted of a 6.3 g rubber like mass. The immunohistochemical staining of the mass revealed smooth muscle actin and focal areas of desmin, a rare characteristic. Post-operative complications including re-occurrence were not reported in this case.

Discussions

This report highlights the importance in differentiating this mass from similar-like soft tissue masses. Although there is a low incidence for malignant myopericytomas, it is important to ensure the benignity of the lesion. With appropriate diagnosis, surgical excision is an appropriate first line of treatment. Further studies are needed to evaluate the pathogenesis, treatment and complications related to myopericytomas to the ankle.

Format

Case Study

Case Rpt Followup

12

Student Club

Soft Tissue/Tumor

Classification

Level IV

Level of Evidence

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Eyad Xoubi, DPM	eyad.xoubi@aah.org	I/We have nothing to disclose	
Kelly Fahey, DPM	kelly.fahey@aah.org	I/We have nothing to disclose	
Andrew Silman, DPM	andrew.silman@aah.org	I/We have nothing to disclose	
David Garras, MD	david.garras@aah.org	I/We have nothing to disclose	

Title

Chronic non-bacterial osteomyelitis of the foot: An advanced case report and literature review

Submit Date

10/14/2024

Correspondent

Last Name: Ion

Full Name: Elena Ion, DPM

Practice/Company/Residency Program:

Email: elena.x.ion@kp.org

Kaiser San Francisco Bay Area Foot & Ankle Residency Program

Authors

Author 1: Elena Ion, DPM

Author 2: Christy M. King, DPM, FACFAS

Author 3: Elizabeth A. Shaw, DO

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case report aims to enhance understanding of chronic non-bacterial osteomyelitis and raise awareness of this condition.

Methodology

Procedures

Chronic non-bacterial osteomyelitis (CNO) is a rare autoinflammatory bone disorder of unknown origin, primarily affecting children and young adults. It typically involves the metaphysis and epiphyses of long bones but can also impact the bones of the foot. Clinical manifestations of CNO can vary from isolated monofocal inflammation to chronic, active inflammation, often presenting as recurrent severe bone pain at the affected site. Imaging may suggest features of osteomyelitis or malignancy, while biopsy typically shows no bacterial growth, revealing only inflammatory cells. CNO is diagnosed by exclusion, using various diagnostic criteria. This report describes a 12-year-old patient with no family history of CNO who presented with recurrent pain in the left lower extremity.

Results

Bone marrow aspirate and biopsy of the left tibia revealed elevated inflammatory markers, with negative QuantiFERON Gold and acid-fast bacillus smear results. A whole-body MRI showed lesions in the pelvis, femur, tibia, and radius. Based on these findings, the patient was diagnosed with active CNO and started on methotrexate and adalimumab. A year later, the patient began experiencing right foot pain, and an MRI revealed new focal marrow abnormalities in the cuboid and calcaneus.

Discussions

Although CNO has been recognized as a distinct disease entity for nearly 50 years, it remains underreported due to frequent misdiagnosis and treatment delays. These delays can lead to unnecessary radiation exposure, multiple biopsy procedures, and prolonged antibiotic treatment.

Format

Case Study

Case Rpt Followup

36

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Elena Ion, DPM	elenaion89@gmail.com	I/We have nothing to disclose	
Christy M. King, DPM, FACFAS	Christy.M.King@kp.org	I/We have nothing to disclose	
Elizabeth A. Shaw, DO	Elizabeth.X.Shaw@kp.org	I/We have nothing to disclose	

Title

Oblique Osteotomy for Crossover Toe Correction

Submit Date

10/14/2024

Correspondent

Last Name: Ng

Full Name: Terry

Practice/Company/Residency Program:

Email: tng@mercy.com

Mercy Health - St. Rita's residency program

Authors

Author 1: Terry Ng, DPM

Author 2: Andrew Aldstadt, DPM

Author 3: Shawn C Ward, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study is to retrospectively evaluate the radiographic outcomes of an oblique distal lesser metatarsal osteotomy for the realignment of crossover toe.

Methodology

Procedures

A retrospective case series was conducted on all patients presenting with 2nd digit hammertoe deformities that were treated surgically with an oblique distal metatarsal osteotomy performed by a single surgeon between 2021 and 2023. Radiographic analysis of pre-operative and post-operative imaging was done for each patient, comparing factors such as 2nd digit transverse and sagittal plane deviation as well as 2nd metatarsal protrusion distance as measured through the Hardy and Clapham method. AOFAS forefoot and VAS scores were obtained pre- and post-operatively.

Results

Transverse and sagittal plane deviation were measured at an average of 14.64 and 27.10 degrees respectively pre-operative and 8.91 and 20.00 degrees post-operative. Average AOFAS scores were 42.4 pre-op and 75 post-op. Average VAS pain scores were 6.6 pre-op and 2.2 post-op. Differences in AOFAS and VAS scores were statistically significant at p=0.046 and 0.011 respectively.

Discussions

We propose a modification of the Weil that involves both proximal and medial or lateral translocation of the capital fragment. This allows for greater transverse plane correction without losing sagittal plane correction, especially in the case of crossover toes. This has shown statistically significant improvement in AOFAS and VAS scores from pre- to post-op as well as improved transverse plane alignment on radiographic evaluation.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Terry Ng, DPM	tng@mercy.com	I/We have nothing to disclose	
Andrew Aldstadt, DPM	aaldstadt@mercy.com	I/We have nothing to disclose	
Shawn C Ward, DPM, FACFAS	sward0125@gmail.com	I/We have nothing to disclose	

Title

Osteochondral Allograft in Treatment of First Metatarsophalangeal Joint Arthritis: A Retrospective Case Series

Submit Date

10/14/2024

Correspondent

Last Name:Boettger

Full Name:Ryan, J, Boettger, DPM

Practice/Company/Residency Program:

Email:boettgerryan@gmail.com

Scripps Mercy Hospital San Diego Podiatry Residency

Authors

Author 1:Ernetso, S, Hernandez, DPM, FACFAS

Author 2:Ryan, J, Boettger, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study is to retrospectively evaluate patient-reported outcomes measures (PROMs) of a series of cases in which an osteochondral allograft was used in the surgical treatment of first metatarsophalangeal joint arthritis. There is a paucity of data in the literature regarding this novel surgical treatment and therefore the data from this study can add to the growing body of literature.

Methodology

Procedures

There are multiple prior reports of small case series evaluating the use of osteochondral allograft in treatment of first metatarsophalangeal joint arthritis. The authors of this study present to their knowledge the largest case series to date regarding this technique. A retrospective chart review ranging from December 2019 to March 2023 was completed for all patients which underwent this treatment by the prior author. After receiving institutional review board approval, the patients were contacted and were asked to complete multiple PROM questionnaires.

Results

38 patients were included in the study with an average time since surgery of 20.9 months. Average verbal analog pain scale was 8.4. Average Manchester Oxford Foot Questionnaire Index score was 15.9. Greater than 90% of patients would repeat the surgery and would recommend it to someone else.

Discussions

The patient reported outcomes obtained in this study demonstrate that the described treatment may be a viable surgical option in the short- and mid-term time frame. The reported data is similar to that regarding first metatarsophalangeal joint arthrodesis. Though limited by its retrospective nature, the present study does demonstrate that this surgical treatment is well tolerated with comparable PROMs to standard treatment.

Format

Case Study

Case Rpt Followup

20

Student Club

Forefoot Reconstruction

Classification

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Ernetso, S, Hernandez, DPM, FACFAS	ernestoshernandez@gmail.com	I/We have nothing to disclose	
Ryan, J, Boettger, DPM	boettgerryan@gmail.com	I/We have nothing to disclose	

Title

Tibial Plafondplasty, an Alternate Approach for Treatment of Osteochondral Lesions of the Talus (OLT)

Submit Date

10/15/2024

Correspondent

Last Name: Branham

Full Name: Whitney E Branham, DPM

Email: whitneybranham3@gmail.com

Practice/Company/Residency Program: Virgina Mason Franciscan Health

Authors

Author 1: Whitney E. Branham, DPM

Author 2: Oliver A. Kanuer, DPM

Author 3: Todd M. Chappell, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this case series is to present cases in which a tibial plafondplasty was used to access osteochondral lesions of the Talus (OLT) and investigate potential complications and results of the osteotomy. We also describe the technique for making the osteotomy and present this as an alternative to traditional malleolar takedown for access of OLT.

Methodology

Procedures

We present two cases of patients with OLT who underwent tibial plafondplasty to access the lesion for treatment. We also investigated postoperative outcomes including return to activity, reoperation rates, and postoperative complications including nonunion of the osteotomy and postoperative pain.

Results

Patient demographics were reviewed and the age of the patients was 33 and 57 years old. The average size of the defects was 1.8 x 1.55 cm. The patients who underwent treatment for OLT also had concurrent procedures to address other concomitant pathologies. No restriction in return to daily activities was reported by patients at final follow up. Patients reported typical post-operative pain and swelling but otherwise no postoperative complications were noted. All plafondplasties healed without incident in average of 9 weeks with radiographic assessment. No patients required additional operations.

Discussions

When indicated, the tibial plafondplasty can improve visualization to the hard to access talar lesions. We believe this approach is a sufficient alternative for the more invasive malleolar takedown. Use of the plafondplasty for difficult to access OLT provides a technique that not only has the ability to improve outcomes but also provides a low complication profile

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Whitney E. Branham, DPM	whitneybranham3@gmail.com	I/We have nothing to disclose	
Oliver A. Kanuer, DPM	oliverknauer100@gmail.com	I/We have nothing to disclose	
Todd M. Chappell, DPM, FACFAS	todd.chapps@gmail.com	I/We have nothing to disclose	

Title

Ulcerative Nodular Melanoma Management in a Diabetic Patient

Submit Date

10/15/2024

Correspondent

Last Name: Seydi

Full Name: Fatoumata Seydi, DPM

Practice/Company/Residency Program:

Email: sjhfatoumata.seydi@gmail.com

Saint Joseph Hospital-Chicago

Authors

Author 1: Fatoumata Seydi, DPM

Author 2: Empryss Tolliver, DPM

Author 3: Remmy S Owor, DPM

Author 4: Alexander M Mckanna, DPM, APWH

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To present an unusual case of primary Ulcerative Nodular Melanoma (NM) of the foot as well as detail reliable means of identification and successful treatment of this rare pathology.

Methodology

Procedures

A 67-year-old diabetic female presented with right foot pain and a rapidly growing mass on the dorsal foot for five months. MRI showed a large mass without bony involvement. Treatment included oncology consult, tumor and lymph node biopsy, wide excision, surgical staging, and long-term management of exposed anatomy. Procedure: The procedures were performed in stages. A mass (4.9cmx3.7cmx1.4cm) at the level of skin was removed using a scalpel, dissected to the stalk, and excised entirely. The mass was fibrous, necrotic, and vascular at the stalk. It was sent to pathology. In the second stage, a scalpel provided 2.5-3 cm clearance around abnormal tissue down to the fascial layer, with a final excised area of 7.5cmx6.7cmx1.2cm. Hemigard and nylon sutures reduced the wound size by 50%. Lastly, a pinch graft from the left ankle was placed in the post-melanoma excision defect

Results

48-month follow-up showed complete resolution with no recurrence clinically, and clearance on imaging. Wounds on the right and left foot were 100% healed.

Discussions

Nodular melanoma, the most aggressive melanoma form, is characterized by rapid growth, early metastasis, and thicker lesions. Successful treatment involves prompt identification, MRI mapping, wide excision with staged surgery, biopsies of surrounding tissues and lymph nodes, and soft tissue management. In this case, complete resolution was achieved without recurrence, immunotherapy, or radiation.

Format

Case Study

Case Rpt Followup

48

Student Club

Soft Tissue/Tumor

Classification

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Fatoumata Seydi, DPM	sjhfatoumata.seydi@gmail.com	I/We have nothing to disclose	
Empryss Tolliver, DPM	sjhempryss.tolliver@gmail.com	I/We have nothing to disclose	
Remmy S Owor, DPM	sjhremmy.owor@gmail.com	I/We have nothing to disclose	
Alexander M Mckanna, DPM, APWH	drmmckanna209@gmail.com	I/We have nothing to disclose	

Title

O-to-Z Flap Closure with Use of Antibiotic-impregnated Cement Spacer for Treatment of Circular Neuropathic Diabetic Plantar Foot Ulceration with Underlying Osteomyelitis

Submit Date

10/15/2024

Correspondent

Last Name: Munk

Full Name: Devin Munk

Practice/Company/Residency Program:

Email: dmunk1@hfhs.org

Henry Ford Wyandotte

Authors

Author 1: Devin Munk, DPM

Author 2: Andrew Mastay, DPM FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

A variety of reconstructive techniques can be employed when treating diabetic ulcerations, yet the plantar foot provides unique challenges. Understanding viable reconstructive techniques is important to successful treatment and limb salvage.

Methodology

Procedures

O-to-Z flaps have primarily been used to close circular deficits after Moh's surgery for basal cell carcinoma on the scalp and face. Antibiotic-impregnated cement spacer (ACS) has been demonstrated to effectively treat forefoot infections while avoiding digital amputations. This case presents a new application of the O-to-Z flap technique to a neuropathic diabetic plantar foot ulceration. Due to underlying osteomyelitis, an ACS was used in conjunction with bony resection of the fifth metatarsal head and flap closure, avoiding amputation of the fifth digit.

Results

Combining the O-to-Z flap and ACS allowed for the immediate closure of the ulceration and provided source control for infection, while also facilitating preservation of the digit. Time to heal was 42 days post-operative without complication. At one-year post-operative the patient remains wound free, with no re-ulceration, infection or other complications.

Discussions

O-to-Z flaps are well-suited for the circular nature of many diabetic ulcerations and should be considered for closure of diabetic foot wounds. The technique can be used with other reconstructive techniques, such as ACS and can improve limb salvage, time to heal and functional outcomes.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Devin Munk, DPM	dmunk1@hfhs.org	I/We have nothing to disclose	
Andrew Mastay, DPM FACFAS	amastay1@hfhs.org	I/We have nothing to disclose	

Title

Limb Salvage After Failed Beaming of Midfoot Charcot Deformity Utilizing Tibiototalcaneal Arthrodesis: A Case Report

Submit Date

10/15/2024

Correspondent

Last Name: Welsh
Full Name: Rachel N. Welsh, DPM
Practice/Company/Residency Program: Mount Auburn Hospital
Email: rachel.welsh@mah.harvard.edu

Authors

Author 1: Rachel N. Welsh, DPM
Author 2: Suzanne A. Currey, DPM
Author 3: Spencer H. Wolverton, DPM
Author 4: Keith A. Crenshaw, DPM, MS
Author 5: Philip Basile, DPM, FACFAS
Author 6:
Author 7:
Author 8:

Purpose

Tibiototalcaneal (TTC) arthrodesis has traditionally been reserved for severe hindfoot or ankle Charcot deformities. This procedure is now promoted for single stage limb salvage in patients with Charcot neuroarthropathy (CN) of the midfoot. This case report illustrates an example of failed medial and lateral column beaming in a non-diabetic patient who underwent multiple limb salvage surgeries which ultimately led to tibiototalcaneal arthrodesis.

Methodology

Procedures

A 54-year-old male with Charcot deformity underwent midfoot beaming utilizing specifically designed 7.0 mm cannulated and solid core screws. Postoperative radiographs revealed nonunion accompanied by hardware failure and recurrent ulceration. The patient underwent hardware removal, midfoot exostectomy and placement of antibiotic bone cement followed by application of an Ilizarov frame. Ultimately, at 35 months from the initial midfoot beaming a TTC arthrodesis was performed. Radiographic measurements were taken peri-operatively to assess the patient's postoperative progression.

Results

Radiographic Analysis: Meary's angle, preop -9.2°, immediate postop, 0°. However, by two months postoperatively, Meary's angle deteriorated to -12.1°. At 20 months post TTC arthrodesis the patient was clinically stable and imaging confirmed approximately 75% osseous bridging. Radiographic analysis of the hindfoot revealed parallel mid-diaphyseal lines of the tibia and calcaneus, with maintained hindfoot alignment. Protective midfoot motion enabled the patient to walk in extra-depth shoes without the need for an AFO brace.

Discussions

With follow up of 20 months after tibiototalcaneal arthrodesis, this case validates our paradigm shift away from midfoot reconstruction when the patient has a non-plantigrade, ulcerated or non-braceable Charcot deformity, regardless of the anatomical location.

Format

Case Study

Case Rpt Followup

20

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Rachel N. Welsh, DPM	rachel.welsh@mah.harvard.edu	I/We have nothing to disclose	
Suzanne A. Currey, DPM	Suzanne.currey@mah.harvard.edu	I/We have nothing to disclose	
Spencer H. Wolverton, DPM	Spencer.wolverton@mah.harvard.edu	I/We have nothing to disclose	
Keith A. Crenshaw, DPM, MS	Keith.crenshaw@mah.harvard.edu	I/We have nothing to disclose	
Philip Basile, DPM, FACFAS	pbasile@mah.harvard.edu	I/We have nothing to disclose	

Title

A Rare Case of Pediatric Syringofibroadenoma

Submit Date

10/15/2024

Correspondent

Last Name: Tippett

Full Name: Caroline

Practice/Company/Residency Program:

Email: carolinetippett1@gmail.com

University of Virginia Health

Authors

Author 1: Caroline Tippett, DPM, AACFAS

Author 2: Nate Almario, BS, MS4

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Syringofibroadenoma is a rare benign tumor that is typically found on the lower or upper extremities. Typically, they effect the elderly and have uncommonly been reported in the pediatric population. We present a case of a syringofibroadenoma in a fifteen year old female that was ultimately treated with partial amputation of the great toe. Our purpose is to raise awareness about this rare dermatologic condition in hopes of increasing diagnostic accuracy and exploring alternative conservative therapy.

Methodology

Procedures

A 15-year-old female patient with no significant medical history presented with a painful, bleeding lesion on her great toe, present since birth. She had been evaluated by multiple dermatologists without successful diagnosis or treatment including topical steroids and antifungals. Laser therapy was unavailable in her region for pediatrics. She was referred to podiatric surgery and ultimately underwent partial great toe amputation due to her degree of suffering.

Results

At 18 months, she is ambulating without pain and participating in gym class. She is able to wear close toed shoes and is pleased with her outcome as it has improved her quality of life.

Discussions

Due to the rarity and complex classification of cutaneous sweat gland neoplasms such as a syringofibroadenoma, routine diagnosis is difficult. There remains a lack of definitive molecular markers available to confirm the identity of these tumors. Misdiagnosis of these tumors can result in unnecessary treatments, prolonged suffering, or malignant transformation. Ultimately, this patient was pleased with her outcome, but we advocate for further studies into accurate diagnosis and alternative treatment options.

Format

Case Study

Case Rpt Followup

18

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Caroline Tippett, DPM, AACFAS	carolinetippett1@gmail.com	I/We have nothing to disclose	
Nate Almario, BS, MS4	nvf3xc@virginia.edu	I/We have nothing to disclose	

Title

Midfoot Custom 3D Printed Cage: A Case Study in the Setting of Charcot Arthropathy

Submit Date

10/15/2024

Correspondent

Last Name:Shulmister

Full Name:Jake, W, Shulmister, DPM R3

Practice/Company/Residency Program:

Email:shulmijw757@gmail.com

Presbyterian Saint Luke's

Authors

Author 1:Jake, W, Shulmister, DPM PGY3

Author 2:Alan, Ng, DPM FACFAS

Author 3:Brett, Sachs DPM FASFAS

Author 4:Morgan, Shano, DPM PGY2

Author 5:Pollard, Ronnie, DPM FACFAS

Author 6:

Author 7:

Author 8:

Purpose

Charcot arthropathy often results in midfoot bone loss. This presents a problem in the setting of midfoot collapse, when definitive treatment necessitates reconstruction. Three dimensional printed trabecular metal may present a solution to this problem. We present a case of 3D printed midfoot cage, utilized to address significant segmental bone loss, in the setting of Charcot neuropathy.

Methodology

Procedures

A 56 year old male with Charcot presented after failing multiple cuboid planings. Physical exam showed an unstable medial column, and subcuboid ulcer. Imaging indicated significant mid foot segmental bone loss. A 3D printed cage was designed and used to replace all 3 cuneiforms, and was fixated with first ray and second ray beaming into the hindfoot, which engaged the plate per designer protocol. Trabecular Metal is an established treatment in hip and knee literature, and is becoming more commonly utilized in the foot and ankle.

Results

After a 10 week period of nonweight bearing, the patient was transitioned into a boot, and now braces only with an orthopedic shoe. At 4 years post operative follow up, the patient maintains a stable plantigrade foot that has been resistant to reulceration.

Discussions

This case study will contribute to the sparse amount of evidence on midfoot cages, allowing surgeons to consider it for an alternative to autograft and allograft, when performing a fusion in the setting of bone loss. Furthermore our implants survival in the setting of Charcot, is a promising result in a patient population especially susceptible to hardware failure and recurrent collapse.

Format

Case Study

Case Rpt Followup

48

Student Club

Rearfoot and Ankle Reconstruction

Classification

Level IV

Level of Evidence

Authors/Financial Disclosures			
Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jake, W, Shulmister, DPM PGY3	shulmijw757@gmai.com	I/We have nothing to disclose	
Alan, Ng, DPM FACFAS	alan.ng@occ-ortho.com	Consultant/Advisor/Speaker (List all affiliations)	Restore 3D, Stryker Foot and Ankle, Paragon 28
Brett, Sachs DPM FASFAS	brettsachs1@gmail.com	I/We have nothing to disclose	
Morgan, Shano, DPM PGY2	morganshano216@gmail.com	I/We have nothing to disclose	
Pollard, Ronnie, DPM FACFAS	rweber2@gmail.com	I/We have nothing to disclose	

TitleEvaluating the Impact of Antibiotic Beads on Reducing Amputation Risk: A Case Series Analysis of Contributing Factors

Submit Date10/15/2024

CorrespondentLast Name: Onyenma
Full Name: David C Onyenma, DPMEmail: dconyenma@gmail.com
Practice/Company/Residency Program:Rochester General Hospital

AuthorsAuthor 1: David C Onyenma, DPMAuthor 2: Juan Castillo, DPM
Author 3: Claire Herrera, DPMAuthor 4: Jennifer Wool-Cottone, DPM, ABFAS
Author 5: Andrew Merkel, DPMAuthor 6: Paul Merkel, DPM
Author 7:Author 8:

PurposeDiabetic foot ulcers account for over two-thirds of non-traumatic lower-limb amputations. Antibiotic beads deliver high doses directly to infection sites, potentially improving healing and preventing infection spread. This study evaluates the effectiveness of absorbable antibiotic beads in reducing proximal amputations in patients with pedal osteomyelitis.

Methodology

ProceduresWe analyzed 28 patients (30 feet) who had amputations proximal to the metatarsophalangeal joints. Surgical procedure was based on clinical, lab, and imaging findings. Data on amputation type, absorbable antibiotic bead use, smoking history, and hemoglobin A1C were collected.

Results27 feet were assigned to the control group and 3 to the beads group. In the control group, 78% (n=21) required a second surgery, with an average interval of 201 days. In the beads group, 67% (n=2) needed a second surgery, averaging 333 days. The average Hemoglobin A1C was 10.12% (range 9.3%). The odds ratio for those with antibiotic beads was 1.00, while for those without beads it was 1.86 (95% CI: 0.15 to 23.00), indicating a 1.86 times higher likelihood of needing a second procedure without beads.

DiscussionsPatients treated with absorbable antibiotic beads had fewer proximal amputations and longer intervals before secondary interventions, but the wide confidence interval suggests uncertainty and no statistical significance. Hemoglobin A1C and smoking history were also not significant. A larger sample size may be needed to draw more definitive conclusions.

FormatCase Study

Case Rpt Followup12

Student Club

ClassificationDiabetic Foot

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
David C Onyenma, DPM	dconyenma@gmail.com	I/We have nothing to disclose	
Juan Castillo, DPM	juan.castillo@rochesterregional.org	I/We have nothing to disclose	
Claire Herrera, DPM	claire.herrera@rochesterregional.org	I/We have nothing to disclose	
Jennifer Wool-Cottone, DPM, ABFAS	jennifer.cottone@gmail.com	I/We have nothing to disclose	
Andrew Merkel, DPM	andrew.p.merkel@gmail.com	I/We have nothing to disclose	
Paul Merkel, DPM	paul.merkel@rochesterregional.org	I/We have nothing to disclose	

Title

Total Navicular Implant With Medial Column Intramedullary Nailing And Subtalar Joint Arthrodesis, A Case Series

Submit Date

10/15/2024

Correspondent

Last Name: Adams

Full Name: Lucas S Adams

Practice/Company/Residency Program:

Email: adamsls1809@gmail.com

Mercy Health St. Vincents Medical Center

Authors

Author 1: Lucas S Adams, DPM

Author 2: Kyle McKray Smith, DPM AACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study was to provide a small case series with two patients that underwent custom 3D navicular implants with medial column arthrodesis, and hindfoot arthrodesis as a means for limb salvage after navicular avascular necrosis. Furthermore, there is very little mentioned in literature in regards to custom implants for navicular injuries.

Methodology

Procedures

3D custom metal implantation is a new innovative field in foot and ankle surgery. Literature has shown use of total talus replacement as a means for advanced arthritis. Custom implant technology allows for scaffold structural implant devices that provide robust graft options that can serve multiple functions. Case Study: 2 patients underwent total navicular implant with concomitant midfoot arthrodesis and subtalar joint arthrodesis by means of intramedullary beaming and screw fixation. One patient was treated for a navicular fracture likely secondary to Charcot arthropathy. One patient was a revision surgery of an existing 3D custom implant with subsidence. Both were 57 years old.

Results

Mean follow up was 12 months. Both patients went on to successfully coalesce arthrodesis sites within 3 months. Both can ambulate without assistive devices. Radiographic alignment improved compared to baseline at 6 months.

Discussions

Custom 3D navicular implant replacement provide robust structural support for treatment of avascular necrosis and midfoot collapse with bone deficits and voids within the hindfoot and ankle. These implants serve a role in mitigating subsidence as seen in other grafting options and provide stability and function where needed.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lucas S Adams, DPM	adamsls1809@gmail.com	I/We have nothing to disclose	
Kyle McKray Smith, DPM AACFAS	kmckraysmith@toledoclinic.com	Consultant/Advisor/Speaker (List all affiliations)	Orthofix, Integra

Title

Use of the Brunner Zig-Zag Incision for Elective Foot and Ankle Surgery Procedures: A Case Series

Submit Date

10/15/2024

Correspondent

Last Name: Husic

Full Name: Ridvan

Practice/Company/Residency Program:

Email: ridvanhusic423@gmail.com

St. Mary's General Hospital

Authors

Author 1: Ridvan Husic, DPM, BS

Author 2: Melody John, DPM, BS

Author 3: Ambreen Sharif, DPM, AACFAS

Author 4: Michael Subik, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Incisions along the resting skin tension lines minimizes potential wound complications. Following skin tension lines for procedures in the foot and ankle is challenged by anatomical considerations and need for greater exposure. We propose the Brunner Zig-Zag incision as an alternative to standard linear incisions for elective procedures as it provides the benefit of increased exposure while limiting potential wound complications associated with approaches perpendicular to resting skin tension lines.

Methodology

Procedures

We present a series of 6 patients who underwent elective foot and ankle reconstructive procedures where the Brunner zig-zag incision was used. Time to closure of wound and dehiscence rate were studied. We also compared the amount of operative field exposure (cm2) of the zig-zag incision as compared to traditional linear approaches.

Results

All patients who underwent use of the zig-zag incision for their reconstructive foot and ankle procedure underwent complete skin healing. One patient (16.67%) experienced a delay of skin closure. No significant complications were noted.

Discussions

It's common for incisional approaches to be perpendicular to the resting skin tension lines which can lead to increased wound complications. We propose the use of a zig-zag incisional approach that permits greater operative exposure and mitigates the risk of wound complication. This incisional approach is routinely used in the palmar surface of the hand, however its use in the foot and ankle is poorly described. Our long-term clinical outcomes support the use of the Brunner zig-zag incision as an alternative to standard linear incisions in podiatric surgery.

Format

Case Study

Case Rpt Followup

24

Student Club

Soft Tissue/Tumor

Classification

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Ridvan Husic, DPM, BS	ridvanhusic423@gmail.com	I/We have nothing to disclose	
Melody John, DPM, BS	melodyyau1@gmail.com	I/We have nothing to disclose	
Ambreen Sharif, DPM, AACFAS	asharif0215@gmail.com	I/We have nothing to disclose	
Michael Subik, DPM, FACFAS	drsubik@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Stryker, Orthofix, BD, Trice

Title

Management of Pathological Calcaneal Fracture Due to Osteomyelitis in a Diabetic Patient with a Chronic Heel Wound. A Case Report.

Submit Date

10/15/2024

Correspondent

Last Name:Woo

Full Name:Rachel

Practice/Company/Residency Program:

Email:rachelwoo804@gmail.com

McLaren Macomb Hospital

Authors

Author 1:Rachel A Woo DPM

Author 2:Rania A Sulieman DPM

Author 3:Dhara R Patel DPM

Author 4:Wyatt S Thielman DPM

Author 5:Marwa Hmady DPM

Author 6:Matthew D Andrews DPM FACFAS

Author 7:

Author 8:

Purpose

This case report describes the treatment of a patient with uncontrolled diabetes who presented with a pathological fracture of the calcaneus, secondary to osteomyelitis and a chronic heel wound. It focuses on managing the infection, fracture management, and wound healing.

Methodology

Procedures

A 58-year-old female with uncontrolled type 2 diabetes developed a non- healing heel wound, complicated by a pathological fracture of the calcaneus. Imaging confirmed osteomyelitis as the cause. The treatment involved staged surgical debridement, application of an external fixator and antibiotic beads, and broad-spectrum antibiotics. Later, open reduction and internal fixation of the calcaneus were performed, along with local wound care and offloading. The patient was followed for 36 months.

Results

The infection was controlled, and the fracture healed without complications. The wound showed significant improvement, allowing the patient to transition to offloaded weight-bearing after several months.

Discussions

This case highlights the complexity of treating pathological calcaneal fractures in diabetic patients with osteomyelitis. Early surgical intervention and infection control were key to preventing further complications. In more severe cases, a calcanectomy or below-knee amputation may be necessary, though both procedures pose significant risks. Calcanectomy can affect gait and increase the risk of soft tissue breakdown, while below-knee amputation significantly impacts mobility, requiring prosthetic rehabilitation. This case underscores the importance of a multidisciplinary approach, considering both infection and vascular health to achieve positive outcomes. These findings support current literature, which emphasizes the importance of timely surgical debridement and the role of antibiotic therapy in managing diabetic foot infections.

Format

Case Study

Case Rpt Followup

36

Student Club

Classification

Diabetic Foot

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Rachel A Woo DPM	rachelwoo804@gmail.com	I/We have nothing to disclose	
Rania A Sulieman DPM	rania.sulieman@mcclaren.org	I/We have nothing to disclose	
Dhara R Patel DPM	dhara.patel@mcclaren.org	I/We have nothing to disclose	
Wyatt S Thielman DPM	wyatt.thielman@mcclaren.org	I/We have nothing to disclose	
Marwa Hmady DPM	hmadymarwa@gmail.com	I/We have nothing to disclose	
Matthew D Andrews DPM FACFAS	matthew.andrews@mcclaren.org	Consultant/Advisor/Speaker (List all affiliations)	Zimmer, Lifenet health, Stryker

Title

Anterior Tibial Tendon Entrapment in Irreducible Ankle Fracture

Submit Date

10/15/2024

Correspondent

Last Name:Minetola

Full Name:TJ, Minetola, DPM

Practice/Company/Residency Program:

Email:Minetolat@mlhs.org

Main Line Health Residency

Authors

Author 1:TJ, Minetola, DPM

Author 2:Justin, Garvin, DPM

Author 3:Julius, Hatcher, DPM

Author 4:Aleksander, Emerel, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case report aims to highlight the importance of recognizing anterior tibial tendon entrapment in irreducible ankle fractures to enhance clinical awareness and improve surgical outcomes in similar cases.

Methodology

Procedures

Irreducible ankle fractures are complex injuries often resulting from high-energy trauma. While posterior tibial tendon entrapment is well-documented, anterior tibial tendon entrapment is less commonly reported. This occurs when displaced bone fragments obstruct the tendon path, complicating closed reduction efforts. Patients typically present with severe pain and deformity, necessitating advanced imaging like X-rays and CT scans for evaluation. Surgical intervention, often open reduction and internal fixation (ORIF), is usually required. Postoperative rehabilitation is essential, and long-term follow-up is critical to monitor complications such as infection and nonunion, emphasizing the need for awareness of anterior tibial tendon entrapment.

Results

This report details a 20-year-old male with a SER IV right ankle fracture from a 75 mph motorcycle collision. He presented with a displaced distal fibula fracture and lateral ankle dislocation. After failed closed reductions, intraoperatively, the anterior tibial tendon was found entrapped. Open reduction and internal fixation (ORIF) were successfully performed, and the patient was discharged with outpatient follow-up arrangements.

Discussions

Irreducible ankle fractures in the emergency department should raise suspicion of soft tissue entrapment. Identifying incarcerated tissue during surgery is crucial for effective reduction and minimizing complications. This case highlights anterior tibial tendon entrapment as a potential factor, emphasizing the need for awareness and refined surgical strategies in managing these complex injuries.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
TJ, Minetola, DPM	Minetolat@mlhs.org	I/We have nothing to disclose	
Justin, Garvin, DPM	garvinj@mlhs.org	I/We have nothing to disclose	
Julius, Hatcher, DPM	hatcherj@mlhs.org	I/We have nothing to disclose	
Aleksander, Emerel, DPM	EmerelA@mlhs.org	I/We have nothing to disclose	

Title

Extrapulmonary Tuberculosis Manifesting in the Foot & Ankle: A Case Study

Submit Date

10/15/2024

Correspondent

Last Name: Namasivayam

Full Name: Sanjna

Practice/Company/Residency Program:

Email: sanjna.namasivayam@gmail.com

St. Mary's General Hospital

Authors

Author 1: Sanjna Namasivayam, DPM

Author 2: Melody John, DPM

Author 3: HyunJi Boo, DPM, AACFAS

Author 4: Michael Subik, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Extrapulmonary tuberculosis (EPTB) occurs in 15-20% of infections, with foot and ankle tuberculosis accounting for 0.3%. EPTB is often misdiagnosed because of its non-ubiquitous presentation. We present a case to increase awareness amongst clinicians about the importance of early diagnosis of EPTB and treatment for preservation of life, limb and function.

Methodology

Procedures

A 58 year old Polish male undergoing conservative treatment of left foot Charcot arthropathy developed a painful abscess to the left medial ankle. Imaging and intraoperative findings revealed a well-encapsulated, caseating granulomatous mass medial to the talus. Pathology findings revealed gray-tan soft tissue with extensive necrosis.

Results

Anaerobic, aerobic, and fungal cultures had no growth. Acid-fast bacilli culture positive for Mycobacterium tuberculosis

Discussions

Diagnosis of EPTB requires a high index of suspicion because symptoms may overlap with coexisting pathologies. Physicians should take a thorough history and inquire about the risk factors of TB. Preoperative workup includes foot/ankle x-rays and chest x-ray given the primary focus of TB is in the lungs. Microbiologic proof is the key to diagnosis. It is important for physicians to make a prompt diagnosis and initiate antituberculosis therapy to minimize the disability of EPTB.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Sanjna Namasivayam, DPM	sanjna.namasivayam@gmail.com	I/We have nothing to disclose	
Melody John, DPM	melodyyaul@gmail.com	I/We have nothing to disclose	
HyunJi Boo, DPM, AACFAS	hyunjiboo@gmail.com	I/We have nothing to disclose	
Michael Subik, DPM, FACFAS	drsubik@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Styker, Orthofix, Treace, BD

Title

Diagnosis and Management of Subungual Squamous Cell Carcinoma: A Case Review of Onycholemmal Carcinoma

Submit Date

10/15/2024

Correspondent

Last Name:Stevens

Full Name:Lauren, A, Stevens, MPH

Practice/Company/Residency Program:Barry University School of Podiatric Medicine and Surgery

Email:lauren.stevens@mymail.barry.edu

Authors

Author 1:Lauren, A, Stevens, MPH

Author 2:Valentina Bocanegra, BA

Author 3:Andrea Delgado, BA

Author 4:Patricia Alvarez, BA

Author 5:Justin Martinez, MBS

Author 6:Calimar Rodriguez, BS

Author 7:Justin Lewis, DPM, FACFAS

Author 8:

Purpose

This case involved a stepwise diagnostic and treatment approach for a cancerous lesion in the nail bed of an 83-year-old patient. The aim of this study is to enhance early detection and improve treatment protocols of Onycholemmal Carcinoma while bringing awareness to this diagnosis.

Methodology

Procedures

Onycholemmal Carcinoma (OC) is a rare form of squamous cell carcinoma originating in the nail bed, matrix, or adjacent tissues, with fewer than 10 cases reported in the literature. The patient had previously been evaluated and treated by three healthcare providers, initially presenting with drainage from the right great toenail, which was misdiagnosed as onychomycosis. Seeking a third opinion, the patient presented with nail dystrophy and a nodular lesion on the right great toe. A biopsy of the lesion revealed SCC of the nail bed, later identified as OC. The patient subsequently underwent a wide excisional biopsy, where the lateral nail plate and margins were removed elliptically.

Results

Pathology confirmed aggressive SCC. The patient was referred to orthopedic and dermatologic oncologists. Toe amputation was determined to be the optimal treatment plan.

Discussions

This case emphasizes the need for accurate diagnosis of rare cancers like onycholemmal carcinoma, often misdiagnosed as nail disorders. Since onycholemmal carcinoma occurs subungually at the nail bed and nail matrix, the provider may initially misdiagnose the condition as a nail disorder. Currently, there is no standard treatment protocol for onycholemmal carcinoma. Moh's surgery and radiation therapy are treatment options, but most patients undergo toe amputations.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lauren, A, Stevens, MPH	lauren.stevens@mymail.barry.edu	I/We have nothing to disclose	
Valentina Bocanegra, BA	valentina.bocanegra@mymail.barry.edu	I/We have nothing to disclose	
Andrea Delgado, BA	andrea.delgado@mymail.barry.edu	I/We have nothing to disclose	
Patricia Alvarez, BA	patricia.alvarez1@mymail.barry.edu	I/We have nothing to disclose	
Justin Martinez, MBS	justin.martinez@mymail.barry.edu	I/We have nothing to disclose	
Calimar Rodriguez, BS	calimar.rodriguez@mymail.barry.edu	I/We have nothing to disclose	
Justin Lewis, DPM, FACFAS	drjustinlewis@gmail.com	I/We have nothing to disclose	

Title

Treatment of Talar Body Fractures with Posteromedial Approach – A Case Study and Review of Outcomes

Submit Date

10/15/2024

Correspondent

Last Name: Singh

Full Name: Tushar, I, Singh, DPM

Practice/Company/Residency Program:

Email: emailtusharsingh@gmail.com

Detroit Medical Center

Authors

Author 1: Tushar, I, Singh, DPM

Author 2: Rebecca, L, Cena, DPM

Author 3: Yara, I, Karam, DPM, M.Ed

Author 4: Raed, Al-Gharib, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Talar fractures are daunting pathologies in all facets: initial presentation and management, treatment, and postoperative outcomes. Talar fractures are generally high energy injuries often with some degree of comminution and the approach often necessitates access from the medial aspect of the rearfoot and ankle. Approaches that have been posited for the management of talar fractures include medial malleolar osteotomy and posteromedial approaches each with unique advantages. In our study, we utilize the posteromedial approach in two similar fracture patterns and follow patients’ postoperative course and evaluate for complications, reoperation, and symptomatology.

Methodology

Procedures

This case series two patients with similar comorbidities at a single institution underwent open reduction internal fixation (ORIF) of talar body fractures with large fragmentary components central and posterior to the articular component of the talar dome with a posterior medial approach. Both patients sustained the injuries in high energy mechanisms and did not have any concomitant polytrauma.

Results

In this series of patients, one underwent subsequent ankle arthroscopy and hardware removal and the other patient had unremarkable healing with no subsequent irritation and limited symptomology.

Discussions

Treatment of talar body fractures with posterior facet involvement are amenable to treatment with a posterior medial approach without compromising the vascular integrity of the osseous structures. Additionally, with appropriate dissection technique neurovascular compromise can be unequivocally prevented. The posteromedial approach confers ready visualization of the pathologic region and allows for the surgeon to have confirmation of adequate reduction of the articular surface which is paramount in the prevention of post traumatic arthritis.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Tushar, I, Singh, DPM	emailtusharsingh@gmail.com	I/We have nothing to disclose	
Rebecca, L, Cena, DPM	rebeccalcena@gmail.com	I/We have nothing to disclose	
Yara, I, Karam, DPM, M.Ed	yaraikaram@gmail.com	I/We have nothing to disclose	
Raed, Al-Gharib, DPM	ralghari@kent.edu	I/We have nothing to disclose	

Title

A Rare Case of Metallosis After Total Ankle Total Talus Replacement (TATTR)

Submit Date

10/15/2024

Correspondent

Last Name:Milisits

Full Name:Thomas F Milisits, DPM, MPH, AACFAS

Practice/Company/Residency Program:

Email:tmfellowshipyear@gmail.com

Pennsylvania Intensive Lower Extremity Fellowship - Premier Orthopaedics

Authors

Author 1:Thomas Milisits

Author 2:John E Marshall IV, DPM, AACFAS

Author 3:Jason R Miller, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Total ankle total talus replacement (TATTR) is gaining popularity by foot and ankle surgeons in patients with end-stage ankle arthritis with concomitant pathology to the talus. What we typically do not consider is metal hypersensitivity in these complex reconstructive procedures with substantial amounts of hardware.

Methodology

Procedures

62-year-old healthy female who underwent TAR (Total Ankle Replacement) with numerous complications and revisions ultimately leading to TATTR and subsequently a metallosis hypersensitivity reaction necessitating removal of all hardware and salvage hindfoot fusion.

Results

After removal of hardware including tibial stem and total talus, an antibiotic spacer was placed between the tibia and calcaneus and the salvage surgery was a custom 3D printed talus spacer with a tibiotalarcalcaneal hindfoot nail. She is currently weight bearing without any complications or assistive devices.

Discussions

To our knowledge, metallosis and osteolysis with TATTR has not been described in the literature. Our case involved a total ankle system constructed with chromium cobalt and titanium with a total talus constructed with titanium and a titanium nitride (TiN) coating. Micromotion within the joint can cause shearing of the total talus and subsequently interact with the tibial component and lead to metallosis. Similarly in hip and knee arthroplasty, metallosis in the foot and ankle can occur even in the presence of a polyethylene insert when there is no metal-on-metal contact.

Format

Case Study

Case Rpt Followup

13

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Thomas Milisits	tmfellowshipyear@gmail.com	I/We have nothing to disclose	
John E Marshall IV, DPM, AACFAS	dr.john.marshalliv@gmail.com	I/We have nothing to disclose	
Jason R Miller, DPM, FACFAS	jrmiller1371@gmail.com	I/We have nothing to disclose	

Title

Solution to 4th interdigital acral melanoma utilizing a 5th digit filet skin flap

Submit Date

10/15/2024

Correspondent

Last Name: Minginas

Full Name: Vasilios

Practice/Company/Residency Program:

Email: vminginas@gmail.com

Baptist health Bethesda hospital East

Authors

Author 1: Vasilios Minginas, DPM PGY1

Author 2: Kayla Vanden Hoek, DPM PGY-3

Author 3: Julio Ortiz, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This study showcases the efficacy and outcomes of using a fifth digit filet skin flap for reconstruction following the excision of interdigital acral melanoma. We explore the surgical technique, post-operative recovery, and long-term functional and aesthetic results of this approach in treating this rare but aggressive form of melanoma.

Methodology

Procedures

88-year-old female presented with a biopsy-proven acral lentiginous melanoma in the fourth interdigital web space of the right foot. Histopathological examination revealed intraepidermal proliferation consistent with Breslow stage 0 according to the AJCC system.

Results

Post-operative recovery was uneventful, with the flap demonstrating 100% survival. At 12-month follow-up, the patient showed good functional outcomes with no evidence of recurrence. Aesthetic results were satisfactory.

Discussions

The 5th digit filet flap proved to be an effective reconstructive option for this interdigital defect. Key advantages include excellent tissue match and minimal donor site morbidity, preservation of sensation due to intact neurovascular structures, and adequate soft tissue coverage, allowing for primary closure. The digital filet flap offers a viable alternative to skin grafting or more extensive flap procedures, which may be associated with greater donor site morbidity. The technique aligns with current guidelines for surgical margins based on Breslow depth while providing a functional and aesthetically pleasing result.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Vasilios Minginas, DPM PGY1	vminginas@gmail.com	I/We have nothing to disclose	
Kayla Vanden Hoek, DPM PGY-3	Kayla.VandenHoek@baptisthealth.net	I/We have nothing to disclose	
Julio Ortiz, DPM, FACFAS	jcoortzdp@gmail.com	I/We have nothing to disclose	

Title

Under Pressure: A Rare Presentation of Crude Oil Injection Injury to the Foot
Secondary to Pressure Washer Injury

Submit Date

10/15/2024

Correspondent

Last Name: Campbell

Full Name: Stephanie

Practice/Company/Residency Program:

Email: dr.stephaniecampbell@gmail.com

University Hospital, University Health

Authors

Author 1: Stephanie N. Campbell, DPM, AACFAS

Author 2: Heather V. Tran, DPM, AACFAS

Author 3: Nikita Gambhir, DPM, PGY3

Author 4: Connor Krolikowski, DPM, PGY3

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Fluid injection injuries, or high-pressure injection injuries (HPIIs), occur when pressurized liquids are accidentally injected into soft tissues, usually through industrial equipment. Although rare, these injuries pose significant risks due to potential tissue damage, infection, and long-term complications. Foot injuries can be especially problematic because of susceptibility to complications like compartment syndrome, tissue necrosis, severe infection, and potential amputation. This case study explores literature on fluid injection injuries to the foot, focusing on mechanisms, complications, management strategies, and outcomes.

Methodology

Procedures

We present a case study of a 36-year-old male who sustained a pressure-washer injury to the foot while working in an oil field. After clinical evaluation and radiographic assessment, prompt operative debridement was recommended.

Results

The patient underwent serial debridement with multiple rounds of irrigation using non-polar agents to effectively remove crude oil contaminants, adhering to the principle of "like dissolves like". The patient then received negative pressure wound therapy and split-thickness skin grafting to achieve epithelialization.

Discussions

Fluid injection injuries to the foot, though rare, are serious and can result in significant morbidity if not treated promptly. The foot's anatomy, combined with the potential for high-pressure fluid to track through multiple tissue planes, makes these injuries particularly challenging. Early surgical intervention, along with aggressive wound care and infection control, is essential in reducing the risk of long- term complications. Clinicians should maintain a high index of suspicion for compartment syndrome and infection in any patient presenting with a high-pressure injection injury.

Format

Case Study

Case Rpt Followup

13

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Stephanie N. Campbell, DPM, AACFAS	dr.stephaniecampbell@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	ETS
Heather V. Tran, DPM, AACFAS	HEATHERVTRAN@GMAIL.COM	I/We have nothing to disclose	
Nikita Gambhir, DPM, PGY3	GAMBHIR@UTHSCSA.EDU	I/We have nothing to disclose	
Connor Krolikowski, DPM, PGY3	KROLIKOWSKI@UTHSCSA.EDU	I/We have nothing to disclose	

Title

Minimally Invasive Achilles Detach/Reattach Tendon Repair Complicated by Postoperative Rupture: A Case Report

Submit Date

10/15/2024

Correspondent

Last Name: LOUZATI

Full Name: BILAL

Practice/Company/Residency Program:

Email: Bilal.louzati52@gmail.com

LECOM-Health Podiatric Medicine & Surgery Residency (PMSR/RRA) Program

Authors

Author 1: Bilal Louzati, DPM

Author 2: Amir P. Alikhani, DPM

Author 3: Morgan M. Gallo, DPM, MHSA, DABPM, AACFAS

Author 4: Anthony D. Colonna, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case report investigates the complexities and potential consequences of minimally invasive surgical approaches in treating Achilles tendinopathy and Haglund's deformity. By analyzing the case of a 52-year-old woman who initially underwent minimally invasive surgery and later required open surgical intervention, the study aims to display the critical considerations in procedure selection for optimal patient outcomes. The report will emphasize the importance of patient selection for MIS approach to Haglund's resection with Achilles detach/reattach and highlight the subsequent repair of the serious complication suffered in this specific case.

Methodology

Procedures

A 52-year-old woman with insertional Achilles tendinitis, Haglund's deformity, and gastrocnemius equinus, who underwent minimally invasive surgery using the MIS SpeedBridge system, initially showed promising results. Despite months of standard post-operative rehabilitation, the patient developed a complete Achilles tendon rupture, requiring a revisional open surgical repair with V-Y lengthening and Flexor Hallucis Longus tendon transfer.

Results

At 12 weeks post-op, MRI revealed a complete achilles tendon tear with a 6 cm gap. Open revisional intervention successfully repaired the rupture, with patient weight bearing in a boot at 4 weeks and in shoes at 7 weeks. She was without restrictions or complaints at 32-week s/p initial intervention.

Discussions

The initial minimally invasive approach seemed promising but ultimately failed, leading to a complete Achilles tendon rupture. Transitioning to an open approach achieved successful outcomes. This case underscores the importance of carefully selecting surgical techniques and adapting treatment plans to individual patient needs, highlighting the potential pitfalls of new surgical methods.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Bilal Louzati, DPM	Bilal.louzati52@gmail.com	I/We have nothing to disclose	
Amir P. Alikhani, DPM	Amir.alikhani.dpm@gmail.com	I/We have nothing to disclose	
Morgan M. Gallo, DPM, MHSA, DABPM, AACFAS	gallomm2@upmc.edu	I/We have nothing to disclose	
Anthony D. Colonna, DPM, FACFAS	acolonna@lecomslc.org	Consultant/Advisor/Speaker (List all affiliations)	Arthrex Consultant

Title

Post-Procedural Management After Deep Venous Arterialization

Submit Date

10/15/2024

Correspondent

Last Name: Vavra

Full Name: Allysa M Vavra, DPM MS

Practice/Company/Residency Program:

Email: allysa.vavra@pennmedicine.upenn.edu

Hospital of the University of Pennsylvania

Authors

Author 1: Allysa M Vavra MS DPM

Author 2: Brett C Chatman DPM FACFAS

Author 3: William "Jake" Brownell DPM FACFAS

Author 4: Elizabeth Genovese MD MS FACS RPVI

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This study aims to explore the post-procedural management after deep venous arterialization, specifically examining the effects of amputation timing, surgical techniques and wound care strategies on patient recovery and long-term outcomes in individuals with chronic limb ischemia. By contributing to the understanding of post-procedural care in DVA, our research seeks to provide evidence-based recommendations that optimize recovery and improve quality of life for patients suffering from chronic limb ischemia.

Methodology

Procedures

We analyzed the outcomes of 5 patients who underwent a DVA, focusing on the impact of guided recommendations on surgical timing and post-procedural care. Studies were included if they detailed management for DVA, specifically examining various surgical timing and wound care approaches. Analysis of our patients was performed to identify trends and gaps in current practice

Results

Implementing guided recommendations on surgical timing & procedure along with close follow up with planned wound care practices, patient outcomes were optimized. Patients exhibited improved healing rates and reduced complications, demonstrating the effectiveness of adhering to established protocols in managing post-DVA care. Key factors influencing recovery included the specific surgical method employed, timing of interventions, and chosen wound care protocols.

Discussions

The findings indicate a critical need for standardized protocols in surgical and wound care management to enhance outcomes following DVA. While tailored strategies show promise, further research is essential to establish evidence-based best practices. This study emphasizes the importance of continuous clinical evaluation and the formulation of comprehensive guidelines to optimize patient care in this evolving area of vascular treatment.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Diabetic Foot

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Allysa M Vavra MS DPM	allysa.vavra@pennmedicine.upenn.edu	I/We have nothing to disclose	
Brett C Chatman DPM FACFAS	brett.chatman@pennmedicine.upenn.edu	I/We have nothing to disclose	
William "Jake" Brownell DPM FACFAS	brett.chatman@pennmedicine.upenn.edu	I/We have nothing to disclose	
Elizabeth Genovese MD MS FACS RPVI	brett.chatman@pennmedicine.upenn.edu	I/We have nothing to disclose	

Title

The “Slow-Burning” Soft Tissue Infection: A Rare Case of Disseminated Coccidioidomycosis of the Lower Extremity.

Submit Date

10/15/2024

Correspondent

Last Name: Jones

Full Name: Miriam, K. Jones, DPM PGY-2

Practice/Company/Residency Program:

Email: miriam.x.jones@kp.org

Kaiser Permanente San Francisco Bay Area/Oakland

Authors

Author 1: Miriam K. Jones, DPM, PGY-2

Author 2: Meilee L. Chen, DPM

Author 3: Daisy L. Sundstrom, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Primary: Present a case of an atypical, "slow burning" pedal STI caused by a rare, but increasingly prevalent fungal pathogen - Coccidioides Immitus. Secondary: highlight thorough work-up, early aggressive sx intervention, raise awareness of disseminated fungal infxn manifestations in the lower extremity

Methodology

Procedures

Coccidioidomycosis aka "valley fever" typically presents w/ pulmonary manifestations. Endemic to SW USA w/ increasing incidence in CA of ~800% from 2000-2018 (CDC). Symptomatic extrapulmonary manifestations (<1% of cases) typically affect meninges, skin/soft tissue, & bone in immunocompromised pts. 50-80% of MSK reports in spine & hand. <10 cases in F/A lit, most w/ OM. - 40yoM pt p/t ED w/ purulent PD cath site infxn, +MSSA; pod c/s HD#5 - worsening medial midfoot/ankle cellulitis s/s despite broad spectrum IV abx & w/o pedal wound. HD#6 MRI w/ large abscess along flexors & ? 1st MT OM -> OR I&D w/ 100ccs purulent fluid. Fungal infxn w/u was not considered until HD#12 d/t worsening, atypical infxn of unknown etiology. Cocci panel + -> itracon started. Infxn improved, wound closed. 2mos later, significant recurrent foot/ankle infxn w/ mx pustules requiring readmit & 2 more I&Ds.

Results

Pt was treated w/ ~8mos itraconazole w/ complete resolution of pedal infection w/in 5mos of index I&D; however, w/in 3-4wks off antifungal, significant pulmonary manifestation flare, now on long term suppression w/ fluconazole.

Discussions

<10 cases in F/A lit, most w/ OM. STI's can by more puzzling. Case is a reminder to consider all pathogens w/ STIs. Tx early, aggressive I&D, long f/u

Format

Case Study

Case Rpt Followup

20

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Miriam K. Jones, DPM, PGY-2	miriam.x.jones@kp.org	I/We have nothing to disclose	
Meilee L. Chen, DPM	meilee.l.chen@kp.org	I/We have nothing to disclose	
Daisy L. Sundstrom, DPM	daisy.sundstrom@kp.org	I/We have nothing to disclose	

Title

Treatment of Recalcitrant Insertional Achilles Tendonitis and Retrocalcaneal Exostosis with Modified Maffulli Technique

Submit Date

10/15/2024

Correspondent

Last Name:Wilhalme

Full Name:Kenneth R. Wilhalme Jr. DPM

Practice/Company/Residency Program:

Email:krwilhalme@gmail.com

St. Mary's General Hospital

Authors

Author 1:Kenneth R. Wilhalme Jr. DPM

Author 2:Henna S. Akbarzai DPM

Author 3:Ambreen N. Sharif DPM, AACFAS

Author 4:Michael Subik, DPM. FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Insertional achilles tendinopathy accounts for one-third of all Achilles pathology due to compressive and tensile forces leading to degenerative changes in the tendon and posterior calcaneus. Many surgical modalities are described in the literature to treat insertional Achilles tendinopathy with a degenerative retrocalcaneal exostosis, including open and minimally invasive approaches. We present a surgical technique to treat degenerative retrocalcaneal exostosis via ultrasound to restore the function of the Achilles tendon utilizing a minimally invasive approach.

Methodology

Procedures

6 patients who underwent MIS retrocalcaneal resection with concurrent percutaneous Achilles tendon repair using ultrasonic debridement were included in this study.

Results

6 retrocalcaneal resections with concurrent Achilles tendon debridements via Ultrasound are described along with their results. The average patient age was 57 years old (52-80 years old). One patient was treated with conservative care and 4 patients had staged surgical approaches. The average time to full weight bearing was 6 weeks post-operatively. 1 of 6 experienced a complication necessitating bone anchor removal and tendon reinforcement.

Discussions

We describe a method of minimally invasive retrocalcaneal exostosis resection with percutaneous Achilles tendon repair that is reproducible, cost-effective, and provides excellent results with low risk of complication. This approach removes the painful posterior calcaneal exostosis through ultrasonic debridement and a modified Maffulli technique is used to strengthen the recalcitrant insertional Achilles tendinopathy, preventing future pathology. This preserves most of the Achilles insertion site and allows a more rapid return to weight bearing versus other surgical approaches.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kenneth R. Wilhalme Jr. DPM	krwilhalme@gmail.com	I/We have nothing to disclose	
Henna S. Akbarzai DPM	hakbarzai@gmail.com	I/We have nothing to disclose	
Ambreen N. Sharif DPM, AACFAS	asharif0215@gmail.com	I/We have nothing to disclose	
Michael Subik, DPM. FACFAS	drsubik@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Orthofix, Stryker, BD, Trice

Title

Pinch Grafts: A Cost-Effective Full-Thickness Alternative to Skin Substitutes for Small Wounds

Submit Date

10/15/2024

Correspondent

Last Name: Alikhani-Koopaei

Full Name: Amir, Pouria, Alikhani-Koopaei

Practice/Company/Residency Program:

Email: alikhanikoop@uthscsa.edu

UT Health San Antonio

Authors

Author 1: Alikhani-Koopaei

Author 2: ; Collin Pehde, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Diabetic ulcers can lead to infections that may result in amputations, regardless of their size. When managing small wounds, options are limited, including the use of skin substitutes. However, skin substitutes can be a costly option for small wounds. Additionally, small defects post-surgical intervention and source control of diabetic foot infections may require coverage to prevent further hospitalization and reduce the risk of below-knee and other foot amputations. Pinch grafts can be a cost-effective way to mitigate this risk.

Methodology

Procedures

Two patients had open wound defects. One resulted from an infection following the amputation of the fourth digit, while the other was due to a non-resolving, non-infected diabetic ulcer. Both patients were uninsured and self-paying, making them unsuitable candidates for skin substitutes due to the additional cost. Instead, a pinch graft was applied to manage their wounds.

Results

Both patients’ wounds healed successfully within 3 months of pinch graft procedure.

Discussions

In conclusion, our service effectively utilizes full-thickness pinch grafts over the sinus tarsi for small wounds, particularly benefiting diabetic patients. This cost-effective method is ideal for diabetic foot ulcers and other small, well-vascularized wounds, offering a reliable alternative for limb preservation.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Diabetic Foot

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Alikhani-Koopaei	alikhnikoop@uthscsa.edu	I/We have nothing to disclose	
; Collin Pehde, DPM, FACFAS	pehde@uthscsa.edu	I/We have nothing to disclose	

Title

Total Talus Survivorship: A Case Series

Submit Date

10/15/2024

Correspondent

Last Name: Kennedy

Full Name: Matthew D Kennedy, DPM

Practice/Company/Residency Program:

Email: kennedy.x.matthew@kp.org

San Francisco Bay Area Foot and Ankle Residency Program

Authors

Author 1: Joseph Dickinson, DPM

Author 2: Jason Pollard, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this case series is to provide survivorship data for total talus implants performed at Kaiser Oakland and Kaiser San Francisco medical centers between 2018-2023

Methodology

Procedures

The purpose of this case series is retrospective review of patients undergoing total talus replacement while at a Kaiser Permanente facilities between 2018-2023. Primary outcome measure will be survivorship of implant.

Results

A total of 15 patients were collected from the period. Two implants were lost due to limb amputation, two patients required revisions of their implants. At time of writing, all other implants were stable, and patients had returned to activities of daily living.

Discussions

Avascular necrosis of the talus is a devastating lower extremity injury. Treatment for these injuries has historically ranged from talectomy, tibiocalcaneal fusion, modified Blair fusion, or amputation. Recently total talus implants are becoming more widely used for treatment of these injuries, whoever survivorship data is limited. Literature on survivorship and outcomes follow total talus implants is limited. What literature is available ranges in follow ups from 12 months – 36 months. Our goal is to provide short to medium term outcomes on survivorship data for total talus implants, with the goal of following these patients for long term outcomes.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Joseph Dickinson, DPM	joseph.d.dickinson@kp.org	I/We have nothing to disclose	
Jason Pollard, DPM	jason.pollard@kp.org	I/We have nothing to disclose	

TitleRate of Avascular Necrosis Following Talar Neck Fractures: A Case Series

Submit Date10/15/2024

Correspondent

Last Name: Lancaster

Full Name: Thomas, O, Lancaster, DPMEmail: Thomas.o.lancaster@gmail.com

Practice/Company/Residency Program: Virginia Mason Franciscan Health

Authors

Author 1: Thomas O. Lancaster, DPMAuthor 2: Joshua T. Smith, DPM

Author 3: Todd M. Chappell, DPM, FACFASAuthor 4:

Author 5:Author 6:

Author 7:Author 8:

PurposeIn the original report on talar neck fractures with associated peri-talar dislocations, Hawkins et al. reported a 91% incidence of avascular necrosis in Type III fracture dislocations. The high rate was attributed to a disruption in blood supply from the initial trauma. This case series documents several cases of talar fracture/dislocations, and the rate of avascular necrosis in comparison to Hawkin’s original reported rate.

Methodology

ProceduresWe performed a retrospective review of patients at least 18 years-old, with minimum follow-up of 12 months, definitively treated by a single surgeon for talar neck fractures between 2019 and 2023.

ResultsFifteen patients with 15 fractures were identified. Of these patients, 5 met the inclusion criteria, with an average age of 42.2 (range, 21-63) and mean follow-up of 19.2 months (range, 12-28 months). According to the Hawkins classification, we identified 3 Type IV talar fracture dislocations, 1 Type III, and 1 Type II. Only one of 5 (20%) developed avascular necrosis, originally a Hawkins III injury. Notably, none of the Hawkins IV patients have developed avascular necrosis.

DiscussionsWe present a significantly lower incidence of avascular necrosis following talar neck fracture dislocations than predicted by Hawkins et al. Additional research is warranted to investigate contributing factors for avascular necrosis.

FormatCase Study

Case Rpt Followup12

Student Club

ClassificationTrauma

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Thomas O. Lancaster, DPM	Thomas.o.lancaster@gmail.com	I/We have nothing to disclose	
Joshua T. Smith, DPM	Jsmith3912@gmail.com	I/We have nothing to disclose	
Todd M. Chappell, DPM, FACFAS	todd.chapps@gmail.com	I/We have nothing to disclose	

Title

Use of MIS Calcaneal Slide and Tendon Balancing Procedures for Diabetic Equinovarus and Balanced Foot

Submit Date

10/15/2024

Correspondent

Last Name: Reddy

Full Name: Malika N Reddy, DPM PGY-3

Email: reddymalika@gmail.com

Practice/Company/Residency Program: University Hospital

Authors

Author 1: Malika N Reddy, DPM PGY-3

Author 2: Ellie McNeal, DPM PGY-1

Author 3: Adam Bernatsky, DPM FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this case study is to highlight the utility of a minimally invasive calcaneal slide with tendon balancing procedures in a high risk diabetic patient with equinovarus.

Methodology

Procedures

Patient is a 41 year old male with a past medical history of type 2 diabetes mellitus with polyneuropathy. Over a year and a half, he had a series of debridements which included a left foot partial fifth ray resection and hallux amputation. This led to chronic wounds on the lateral plantar foot and contracture of the lesser digits causing ulceration of the second digit at the proximal phalangeal joint. Extensive discussion was had with the patient about pursuing surgical versus conservative care. Patient decided to pursue surgical care to prevent further ulceration in the future.

Results

The goals of surgical intervention were to correct the equinovarus in order to decrease load on the lateral column, remove the non-functioning contracted digits, and debride the remaining ulcer. For the non-functioning contracted digits, amputation of digits two through four was performed. To correct the non-reducible equinovarus assessed via coleman block test, a split tibialis anterior, laterally displaced minimally invasive calcaneal slide, and tendo-achilles lengthening was performed. The ulcer was debrided and allograft dermal matrix as well as wound vacuum were applied.

Discussions

Following this high risk, high reward procedure, the lateral plantar foot ulcer was healed at seven weeks postoperatively. At the most current follow up (over one year since procedure), the patient has had no reulceration or amputation of the left foot.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Diabetic Foot

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Malika N Reddy, DPM PGY-3	reddymalika@gmail.com	I/We have nothing to disclose	
Ellie McNeal, DPM PGY-1	ellie.mcneal711@gmail.com	I/We have nothing to disclose	
Adam Bernatsky, DPM FACFAS	bernata1@uhnj.org	I/We have nothing to disclose	

Title

Elevating Outcomes: Minimally Invasive Management of Chronic Heel Ulceration using Parachute Technique

Submit Date

10/15/2024

Correspondent

Last Name:Wilmot

Full Name:Isaac, M, Wilmot, DPM, PGY-3

Practice/Company/Residency Program:

Email:isaacmwilmot@gmail.com

University of Florida Health Jacksonville

Authors

Author 1:Isaac M. Wilmot, DPM, PGY-3

Author 2:Firas Katmeh DPM, MSH, PGY-3

Author 3:John S. Anderson, DPM, FACFAS

Author 4:Jason A. Piraino, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Chronic heel ulcerations, despite the etiology, are complex and often life-altering conditions. Treatment is multi-modal and must account for biologic as well as biomechanical factors. This case focuses on the treatment of soft tissue defects, notably of the plantar fat pad. The purpose of this study was to evaluate efficacy and describe the method of the "parachute technique" as a minimally invasive treatment modality in healing full thickness ulcerations of the plantar foot.

Methodology

Procedures

A single-case study was conducted on a 46-year-old patient presenting with chronic heel ulceration of two years following complications of an Achilles tendon repair surgery. The parachute technique, described by Rocchio in 2008, was performed using human dermal allograft, implanted sub-dermally within the plantar heel to augment fat pad atrophy from prior surgical debridement and infection. The patient was followed post-operatively for three years, with ongoing clinical evaluations.

Results

Results indicated a 100% closure of soft tissue defect and return to weight-bearing at four weeks post-operatively. Patient has continued to present ulcer-free without recurrence or complications of the surgical site. Patient documentation includes cultures, pathologic results, radiographic and photographic evidence throughout the treatment course.

Discussions

These findings suggest that the parachute technique, when combined with HDA, can be an effective intervention for managing chronic heel ulcers, promoting faster healing and augmentation of soft tissue defects. Although previously described in literature, this technique's application in this specific case highlights its unique benefits, warranting further research into this technique and augmentation constituents.

Format

Case Study

Case Rpt Followup

36

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Isaac M. Wilmot, DPM, PGY-3	isaac.wilmot@jax.ufl.edu	I/We have nothing to disclose	
Firas Katmeh DPM, MSH, PGY-3	firas.katmeh@jax.ufl.edu	I/We have nothing to disclose	
John S. Anderson, DPM, FACFAS	john.anderson@jax.ufl.edu	I/We have nothing to disclose	
Jason A. Piraino, DPM, FACFAS	jason.piraino@jax.ufl.edu	I/We have nothing to disclose	

Title

Wide Excision of Locally Invasive Basal Cell Carcinoma with Ankle Arthrodesis

Submit Date

10/15/2024

Correspondent

Last Name: Vanden Hoek

Full Name: Kayla N. Vanden Hoek, DPM

Practice/Company/Residency Program:

Email: kayla.vandenhoeck@baptisthealth.net

Bethesda Hospital East, Baptist Health South Florida

Authors

Author 1: Kayla N. Vanden Hoek, DPM

Author 2: Julio C. Ortiz, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The goal of this case study is to illuminate the rare yet possible invasion of basal cell carcinoma (BCC) into osseous structures of the lower extremity and to illustrate progressive deformities that arise due to resultant radical resection of the fibula and disruption of the common peroneal nerve.

Methodology

Procedures

Patient is an 84-year-old female with an extensive past surgical history for the treatment of BCC of the right lower extremity. Patient underwent soft tissue neoplasm resection, allograft application, negative pressure therapy application, application of split thickness skin graft, and eventual radical proximal fibula resection. A postoperative PET scan revealed remaining malignancy of the distal fibula, leading to fibular remnant resection and ankle arthrodesis

Results

Patient achieved successful union of the tibiotalar joint within 8 weeks of arthrodesis. Pathology report of fibula was remarkable for BCC postoperatively. Patient complains of pain, most notably to the plantar heel extending into the medial arch region described as a constant tightness as well as the inability to dorsiflex her toes. She currently presents with mild cavovarus deformity of the right lower extremity.

Discussions

BCC is a locally invasive skin cancer with a paucity of literature surrounding its invasion into osseous structures. Radical resection of the distal fibula destabilizes the tibiotalar joint, necessitating ankle arthrodesis. Progressive cavovarus deformity is an expected sequela following disruption to the common peroneal nerve. Planned procedures to address this presentation will likely include Flexor Tendon Lengthening, Digital Flexor Tenotomies, Tarsal Tunnel Release with Steindler Stripping.

Format

Case Study

Case Rpt Followup

13

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kayla N. Vanden Hoek, DPM	kayla.vandenhoeck@baptisthealth.net	I/We have nothing to disclose	
Julio C. Ortiz, DPM, FACFAS	Julio.Ortiz@baptisthealth.net	I/We have nothing to disclose	

Title

Case Study: Spastic Equinus Contractures Arising from Haemophagocytic Lymphohistiocytosis

Submit Date

10/15/2024

Correspondent

Last Name: Lahiri

Full Name: Rajat K Lahiri, DPM

Practice/Company/Residency Program:

Email: rajat.lahiri@live.com

Swedish Medical Center Residency

Authors

Author 1: Rajat K Lahiri, DPM

Author 2: Tony DH Kim, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case study examines a 45-year-old female with haemophagocytic lymphohistiocytosis and acquired spastic equinus contractures, highlighting her surgical correction and implications for patient management.

Methodology

Procedures

The case involves a 45-year-old female patient diagnosed with haemophagocytic lymphohistiocytosis (HLH), a severe immune response characterized by excessive inflammation and neurological abnormalities. HLH can lead to complications such as acquired spastic equinus contractures due to prolonged immobility and muscle imbalances. Initially managed with custom footwear and bracing, the patient later underwent staged bilateral surgery, including tendon transfers and fusions, to address her condition and improve mobility.

Results

The patient underwent bilateral surgical interventions to address her acquired spastic equinus contractures, with the procedures performed six months apart. The surgeries included tendon transfers and fusions, aimed at restoring functional mobility. Post-surgery, the patient demonstrated significant improvement in gait and reduced contracture severity.

Discussions

This case highlights the successful surgical outcome following staged surgeries addressing acquired spastic equinus contractures due to haemophagocytic lymphohistiocytosis (HLH). The condition's systemic effects can lead to musculoskeletal complications, such as muscle weakness and joint stiffness. By addressing these issues surgically, the patient experienced improved mobility and quality of life. This underscores the importance of early recognition and multidisciplinary management of HLH-related musculoskeletal problems

Format

Case Study

Case Rpt Followup

29

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Rajat K Lahiri, DPM	rajat.lahiri@live.com	I/We have nothing to disclose	
Tony DH Kim, DPM	tdhkdp@gmail.com	I/We have nothing to disclose	

Title

Surgical Treatment of Atypical Clubfoot in Developing Countries

Submit Date

10/15/2024

Correspondent

Last Name: Clougherty

Full Name: Coleman O. Clougherty, DPM, MA

Practice/Company/Residency Program:

Email: coleman.clougherty@gmail.com

Samuel Merritt University- College of Podiatric Medicine

Authors

Author 1: Coleman O. Clougherty, DPM, MA

Author 2: Hamda Shakil

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This poster presents our findings on the successful correction of pediatric neglected bilateral clubfoot using isolated soft tissue release and extra-articular osteotomies. With full weight-bearing achieved at two months post-surgery, our work highlights effective surgical strategies for developing countries. We aim to advocate for tailored surgical approaches and training of local healthcare providers to enhance podiatric care in resource-limited settings.

Methodology

Procedures

A 2 year old patient from Honduras with irreducible congenital clubfoot had rearfoot reconstruction done with posterior ankle capsulotomy, Z lengthening of PT, Achilles, and EHL tendons, a closing wedge osteotomy of the cuboid, and ankle and lateral column fixated with smooth K-wires and casted in BK cast at 90 degrees. Patient was placed in an ankle brace at 12 weeks.

Results

There was a successful correction of pediatric neglected bilateral clubfoot usling isolated soft tissue release and extra-articulated osteotomies with temporary fixation. Full weight bearing was achieved at 2 months.

Discussions

Our study demonstrated successful correction of pediatric neglected bilateral clubfoot through isolated soft tissue release and extra-articular osteotomies with temporary fixation. Remarkably, full weight-bearing was achieved within two months, indicating the efficacy of this approach. Although Ponseti casting is an efficacious treatment for traditional clubfoot deformities, not all developing countries have the ability and resources to perform such treatment, thus surgical options are the standard. In complex cases such as this atypical clubfoot, surgical correction is optimal. This outcome emphasizes the potential of tailored surgical techniques in resource-limited settings.

Format

Case Study

Case Rpt Followup

12

Student Club

Rearfoot and Ankle Reconstruction

Classification

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Coleman O. Clougherty, DPM, MA	coleman.clougherty@gmail.com	I/We have nothing to disclose	
Hamda Shakil	hamda.shakil@samuelmerritt.edu	I/We have nothing to disclose	

Title

Treatment of a Rare Vascular Tumor in the Ankle: A Case Study

Submit Date

10/15/2024

Correspondent

Last Name: Namasivayam

Full Name: Sanjna

Practice/Company/Residency Program:

Email: sanjna.namasivayam@gmail.com

St. Mary's General Hospital

Authors

Author 1: Sanjna Namasivayam, DPM

Author 2: Ambreen Sharif, DPM, AACFAS

Author 3: Michael Subik, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Spindle cell hemangioma (SCH) was described by Weiss and Enziger in 1986 as a rare benign vascular lesion, more common in children and young adults. It typically presents in the dermis and subcutaneous tissue of distal extremities. Multiple lesions are associated with Maffucci's syndrome. We present a case of SCH removed by wide local excision

Methodology

Procedures

A 73 yo female presents with a mass to her left anterior ankle that was present for over 10 years and increased in size. Imaging and intraoperative findings reveal a well-circumscribed, reddish-tan hemorrhagic nodule in the dermis of the ankle overlying the superior extensor retinaculum. Wide local excision of the soft tissue mass was performed and sent for fresh frozen pathology.

Results

Histopathology reveals spindle cell hemangioma with intraluminal calcified nodules

Discussions

Surgical excision and regular follow-up remain the current treatment method. An MRI for surgical planning and an accurate histological diagnosis is important to avoid mismanagement and worsening of patient outcomes. Our study contributes to the literature by presenting a unique case of SCH in the ankle of an elderly female patient that resulted in good cosmesis and functional outcomes. Physicians should include SCH in the differential diagnosis in cases with similar presentations.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Sanjna Namasivayam, DPM	sanjna.namasivayam@gmail.com	I/We have nothing to disclose	
Ambreen Sharif, DPM, AACFAS	asharif0215@gmail.com	I/We have nothing to disclose	
Michael Subik, DPM, FACFAS	drsubik@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Stryker, Orthofix, BD, Treace

Title

Intramedullary Percutaneous screwing for lesser metatarsal fracture (2,3,4) with PROMs

Submit Date

10/15/2024

Correspondent

Last Name:Giagnacova

Full Name:Albert

Practice/Company/Residency Program:

Email:Albertdpm@gmail.com

Company:

Authors

Author 1:Albert Giagnacova

Author 2:James Polowczyk DPM, FACFAS

Author 3:Wilven Smoody DPM

Author 4:Daniel Hennessey DPM

Author 5:Lev Blekher DPM

Author 6:

Author 7:

Author 8:

Purpose

We evaluated 3 techniques for lesser metatarsal fracture (2,3,4), Nonweighbearing/ Cam walker, percutaneous full threaded screwing and direct open repair. Factor we considered include return to work and shoe gear, functionality, edema, were parameters including radiographic. We used AOFAS Proms scoring system to validate results. Advent of Percutaneous-MIS surgery within the literature we felted appropriate to share our results.

Methodology

Procedures

Over 100 studies have been presented for Jones' type Fracture/ 5th metatarsal, including Sauer, Aynardi Zenios. Specifically Samalia looked at spiral fracture, further technique published for stress fractures 4th metatarsal, there is scant literature comparing lesser metatarsal with 3 different treatment option head to head outlined above.

Results

NWB/Cam walker group had the least amount of swelling, but least impressive radiographics. The Open Repair group struggled with swelling, nerve entrapment, scars, hardware irritation, but with good radiographics. The intramedullary percutaneous group had good alignment with no fore mention problems from the open repair group. Percutaneous intramedullary had excellent edema control return to work and patient satisfaction, and functionally. Midfoot circumference were used in three group including VAS. Socio-impact factors such as return to work and exercise were heavy-weighted factors. An independent factor - Percutaneous intramedullary had bone marrow aspirated injected.

Discussions

81 lesser metatarsal shows all three groups are appropriate. Percutaneous intramedullary group had the strongest PROMS, the criteria used showed patients were accepting of minor surgery, if they have a faster to return to day-to-day activity..Lisfrancs, metatarsal base, and direct impact faired best in terms of fracture pattern for our group.

Format

Case Study

Case Rpt Followup

27

Student Club

Classification

Trauma

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Albert Giagnacova	Albertdpm@gmail.com	I/We have nothing to disclose	
James Polowczyk DPM, FACFAS	jpolowczyk@gmail.com	I/We have nothing to disclose	
Wilven Smoody DPM	lbhpodiatry@gmail.com	I/We have nothing to disclose	
Daniel Hennessey DPM	lbhpodiatry@gmail.com	I/We have nothing to disclose	
Lev Blekher DPM	lev_blekher@hotmail.com	I/We have nothing to disclose	

Title

Double Tendon Transfer and Posteromedial Lengthening to Treat Varus Deformity After Fifth Ray Resection in Patient with Transmetatarsal Amputation: A Case Study

Submit Date

10/15/2024

Correspondent

Last Name: Krishnan

Full Name: Jannani

Practice/Company/Residency Program:

Email: jannani.krishnan@gmail.com

VA Palo Alto Health Care Systems

Authors

Author 1: Jannani Krishnan, DPM

Author 2: Aaron Handa, DPM

Author 3: Kevin Ragothaman, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case study investigates tibialis anterior and peroneus brevis tendon transfer with posteromedial lengthening to treat varus deformity following 5th ray resection in patient with transmetatarsal amputation.

Methodology

Procedures

A 66 year old diabetic male with right foot transmetatarsal amputation and equinovarus deformity presents with an infected ulcer beneath the fifth metatarsal base. MRI was suggestive of osteomyelitis to the fifth metatarsal base. The patient was admitted for antibiotics and staged surgery. He underwent source control with excision of the ulcer and the fifth metatarsal was disarticulated from the metatarsocuboid joint. Pathology margin from the cuboid was negative for osteomyelitis. After ensuring clearance of infection, he underwent tibialis anterior tendon transfer utilizing biotenodesis screw and external suture button to the lateral cuneiform, peroneus brevis transfer to the cuboid with knotless suture anchor, and tendo-Achilles and posterior tibial tendon lengthening.

Results

The surgical site healed and the patient was non-weight bearing for 6 weeks. The suture button was removed and the patient began weight bearing in boot. He developed ulcer beneath the residual 4th metatarsal which was treated with offloading. His ulcer healed and he is ambulating 15 months from initial surgery.

Discussions

Anterior tibial tendon transfer for treating varus contracture after transmetatarsal amputation is well known. We describe use of this technique along with peroneus brevis transfer and posteromedial lengthening in patient that otherwise would have undergone Lisfranc amputation. This case study suggests that proximal amputation can be avoided and describes a useful protocol for patients with transmetatarsal amputation and fifth ray osteomyelitis.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Diabetic Foot

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jannani Krishnan, DPM	jannani.krishnan@gmail.com	I/We have nothing to disclose	
Aaron Handa, DPM	azhanda325@gmail.com	I/We have nothing to disclose	
Kevin Ragothaman, DPM	kevin.ragothaman@gmail.com	I/We have nothing to disclose	

Title

Compartment Syndrome Secondary to Popliteal Artery Transection from Posterior Knee Dislocation in a 16-Year-Old Football Player Complicated by Pedal Ischemia

Submit Date

10/15/2024

Correspondent

Last Name:Azizi

Full Name:Soran, S, Azizi,DPM,PGY3

Practice/Company/Residency Program:

Email:soran.s.azizi@kp.org

Kaiser Foundation Hospital

Authors

Author 1:Soran, S, Azizi, DPM, PGY3

Author 2:Diana, T, Park, DPM, PGY3

Author 3:Kelly, J, Wallin,DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case details a rare instance of sport-related posterior knee dislocation leading to compartment syndrome and foot ischemia in a 16-year-old athlete. It highlights complications associated with knee dislocations, including lower extremity compartment syndrome and vascular injury, which can quickly result in tissue and limb ischemia.

Methodology

Procedures

Recent orthopedic literature notes that acute knee dislocation primarily occurs in younger patients, typically due to high-energy mechanisms. We present a unique case where a football injury caused posterior knee dislocation in a 16-year-old male, complicated by compartment syndrome in the foot and leg due to vascular insult. The patient underwent contralateral great saphenous vein bypass to the posterior tibial artery, as there was no flow to the foot; this was later revised to the anterior tibial artery. Orthopedics performed four compartment fasciotomies and applied a knee-spanning external fixator.

Results

Post-revascularization CTA revealed occlusion of the bypass, though a dorsalis pedis signal was present. The patient experienced sensory and motor loss in the foot, prompting a Podiatry consult one day after leg fasciotomy due to pedal paresthesia, pallor, pulselessness, and edema with cyanotic changes in the digits. Podiatry performed an immediate fasciotomy, resulting in improved pedal perfusion and restored signal in the posterior tibial artery. Unfortunately, due to extensive muscle necrosis in the leg and foot, the patient ultimately required an above-knee amputation.

Discussions

Rapid diagnosis and prompt intervention in cases of knee dislocation is crucial, as arterial compromise in LE may cause compartment syndrome leading to limb loss.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Soran, S, Azizi, DPM, PGY3	soran.s.azizi@kp.org	I/We have nothing to disclose	
Diana, T, Park, DPM, PGY3	diana.t.park@kp.org	I/We have nothing to disclose	
Kelly, J, Wallin,DPM	kelly.j.wallin@kp.org	I/We have nothing to disclose	

Title

Revisional Total Ankle Arthroplasty to a Tibial Stemmed Implant Following Early Failure of Low-Profile Implant in Two Patients that had Previous Trimalleolar Ankle Fractures

Submit Date

10/15/2024

Correspondent

Last Name: Loveland

Full Name: Jeffrey D. Loveland DPM, FACFAS

Practice/Company/Residency Program:

Email: lovelanddpm@yahoo.com

Central Tennessee Foot and Ankle Center

Authors

Author 1: Jeffrey D. Loveland DPM FACFAS

Author 2: Brandon Denton MBA, ABSA

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Two patients that had failure of low-profile tibial implant in Total Ankle Arthroplasty (TAA) in posttraumatic ankle arthritis with existing hardware in the tibial plafond.

Methodology

Procedures

Retrospective chart and radiographic review were conducted of the total ankle arthroplasty cases and prior procedures leading up to the early failure. Both patients presented 6 months post primary TAA for posttraumatic arthritis, with continued pain and loss of motion. Upon review of the patient charts and radiographs, the patients had loosening and subsidence of the tibial tray component around the anterior tibial plafond and bone spurring within the joint space. The patients wanted to maintain movement of the joint, so revisional TAA surgery was performed.

Results

The two patients had removal of the loose/subsided implant and revisional TAA with intramedullary tibial stemmed total ankle. Both patients achieved optimal results following revisional total ankle arthroplasty with pain-free ankle joint movement. Patients have been able to return to work in shoes with no implant issues for the past 36 months.

Discussions

Patients who undergo TAA, the tibial component should be carefully chosen to help prevent early subsidence. Closer consideration of the bone quality, existing hardware, and determination of cutline level in the preoperative period may be needed to determine appropriate implant for TAA patients with posttraumatic ankle arthritis. Tibial stemmed implants offer an excellent option for patients requiring more stability and the opportunity for improved long-term results from their total ankle replacement, in either the primary or revisional replacement.

Format

Case Study

Case Rpt Followup

36

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
		Consultant/Advisor/Speaker (List all affiliations)	Stryker, Vilex
Jeffrey D. Loveland DPM FACFAS	lovelanddpm@yahoo.com	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Treasurer Tennessee Podiatric Medical Association
		Grant/Research funding	Stryker
Brandon Denton MBA, ABSA	brandondenton15@gmail.com	I/We have nothing to disclose	

Title

Complex Management of a Verruca Carcinoma of the Plantar Foot

Submit Date

10/15/2024

Correspondent

Last Name: Ayazo

Full Name: Tarina, DPM

Practice/Company/Residency Program:

Email: tarinaayazi@gmail.com

MedStar Washington Hospital Center

Authors

Author 1: Tarina Ayazi

Author 2: Mitchell Goldman, DPM

Author 3: Caitlin Zarick, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Squamous cell carcinoma (SCC) is a malignant soft tissue tumor which presents less commonly in the foot. One specific type, verrucous carcinoma, has a morphology similar to a plantar wart, which often leads to misdiagnosis as verrucous vulgaris. This can lead to delayed treatment, emphasizing the need for early diagnosis to allow for aggressive management of the lesion.

Methodology

Procedures

This case report describes a 70 year-old healthy male with a painful plantar wart which failed several treatments over an 8 month period. Examination revealed a 1.5cm hyperkeratotic lesion at the plantar aspect of the foot at the fifth metatarsal head. Initial debridement revealed atypical hyperpigmentation and increased vascularity. Given these findings, a biopsy was taken. After the diagnosis of SCC, the patient underwent a wide excision of the malignant lesion. The resulting defect was large, and underwent staged closure. The wound bed was initially closed using a unique combination of rotational skin flap, and partially covered with a temporary skin substitute, and a split-thickness skin autograft was used for definitive closure.

Results

Following surgical resection and skin grafting, the patient went on to heal his previous lesion site without complication. The patient noted improved pain levels, and after several months his pain had resolved. Most importantly, there was no recurrence of his verruca carcinoma.

Discussions

This case highlights the importance of timely diagnosis and management of SCC. Management of large soft tissue defects can be achieved using complex plastic surgery techniques, including combinations of surgical debridement, rotational skin flap, and skin grafting.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Tarina Ayazi	tarinaayazi@gmail.com	I/We have nothing to disclose	
Mitchell Goldman, DPM	Mitchellg006@gmail.com	I/We have nothing to disclose	
Caitlin Zarick, DPM, FACFAS	caitlin.zarick@medstar.net	I/We have nothing to disclose	

Title

Bilateral Talectomy As A Primary Treatment For Severe Rigid Talipes Equinovarus In An Underserved Area: A Case Study

Submit Date

10/15/2024

Correspondent

Last Name: Poulin

Full Name: Erin E. Poulin, MS

Practice/Company/Residency Program:

Email: erin.poulin01@utrgv.edu

The University of Texas Rio Grande Valley School of Podiatric Medicine

Authors

Author 1: Erin E. Poulin, MS

Author 2: Katherine E. Castillo, MS

Author 3: Serena E. Markose

Author 4: Dustin B. Prins, DPM, MBA, FACFAS, CWSP

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Talectomy is a recommended treatment for severe rigid talipes equinovarus foot deformity, or clubfoot. This surgical intervention is also recommended for neglected cases of clubfoot and in medically underserved areas, due to limited access to follow-up care.

Methodology

Procedures

This study reports on a 24-month-old boy from Guam with bilateral rigid talipes equinovarus. Treatment approaches vary worldwide, especially in areas with limited healthcare access, where surgery is often advised. Because of these limitations, a bilateral talectomy was recommended.

Results

Because Guam laws posed restrictions that prevented the podiatrist who initially assessed the patient from providing ongoing surgical care, the patient underwent a bilateral talectomy by a surgeon in Hawaii. The patient was placed in UCBL orthotics by the podiatrist at his follow up appointment four years later. At that time he was plantigrade and able to ambulate. No complications were noted.

Discussions

Some limitations of this case to consider include significant lack of follow-up and inconsistent access to medical services and providers in medically underserved areas. These difficulties not only affect the patient but also the provider. Despite these challenges, we consider the patient a success, as his clubfoot was repaired through the talectomy and enabled him to ambulate. This outcome highlights the potential for effective surgical interventions, like talectomy, in the face of significant barriers.

Format

Case Study

Case Rpt Followup

48

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Erin E. Poulin, MS	erin.poulin01@utrgv.edu	I/We have nothing to disclose	
Katherine E. Castillo, MS	katherine.castillo02@utrgv.edu	I/We have nothing to disclose	
Serena E. Markose	serena.markose01@utrgv.edu	I/We have nothing to disclose	
Dustin B. Prins, DPM, MBA, FACFAS, CWSP	dustin.prins@utrgv.edu	I/We have nothing to disclose	

Title

Case Series of Patients that Underwent Tibiocalcaneal Arthrodesis for Treatment of Charcot Neuroarthropathy Deformities

Submit Date

10/15/2024

Correspondent

Last Name: Loveland

Full Name: Jeffrey D. Loveland DPM, FACFAS

Practice/Company/Residency Program:

Email: lovelanddpm@yahoo.com

Central Tennessee Foot and Ankle Center

Authors

Author 1: Jeffrey D. Loveland DPM, FACFAS

Author 2: Brandon Denton MBA, ABSA

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Charcot reconstruction is one of the most complex surgeries in the foot and ankle world. It can become a more difficult reconstruction when there is a subluxation and/or destruction of the talus. Having a solid hindfoot/ankle structure is essential when rebuilding and balancing the foot and ankle. Tibiocalcaneal arthrodesis is a salvage procedure with a goal to provide a pain-free, functionally stable, and realigned fused joint. The literature has reported tibiocalcaneal fusions to have a higher failure rate in this population.

Methodology

Procedures

Thirty patients underwent tibiocalcaneal fusion with a talectomy and the use of intramedullary fusion nail along with external fixation as part of a Charcot salvage procedure are included in this study. CT scans were obtained to assess fusion. Once the external fixator was removed the patients were weightbearing in a CROW Boot.

Results

Twenty-Seven (90%) Charcot tibiocalcaneal arthrodesis salvage cases had achieved boney union at 13 weeks on average and were walking in extra depth shoes at the 24-month follow-up visit. There were 2 revisions (6.7%) and 1 amputation (3.3%).

Discussions

Charcot neuropathic reconstructions are complex procedures associated with higher complication rates. When doing tibiocalcaneal arthrodesis in this population the complication rates have been higher. The authors disagree with the literature healing rates and have shown successful fusions in this difficult patient population with only one limb loss. Tibiocalcaneal arthrodesis should be considered when there is subluxation or destruction of the talus in this population.

Format

Case Study

Case Rpt Followup

24

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
		Consultant/Advisor/Speaker (List all affiliations)	Stryker, Vilex
Jeffrey D. Loveland DPM, FACFAS	lovelanddpm@yahoo.com	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Treasurer Tennessee Podiatric Medical Association
		Grant/Research funding	Stryker
Brandon Denton MBA, ABSA	brandondenton15@gmail.com	I/We have nothing to disclose	

Title

A Rare Case of Hemosiderotic Synovial Inflammation Formation Following Repetitive Trauma
itc ankle injury

Submit Date

10/15/2024

Correspondent

Last Name:Garvin

Full Name:Justin Garvin DPM

Practice/Company/Residency Program:

Email:garvinj@mlhs.org

Bryn Mawr Hospital

Authors

Author 1:Justin Garvin DPM

Author 2:Weiyuan Tian DPM

Author 3:Mark Capuzzi DPM AACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Hemosiderotic synovial inflammation is frequently observed in patients with blood clotting disorders like hemophilia. However, nonhemophilic hemosiderotic synovial arthritis is rare, making it challenging to diagnose. The prompt identification and management of hemarthrosis are crucial to minimize the risk of early-onset osteoarthritis. While guidelines exist for managing hemosiderotic synovial arthritis in hemophilic patients, they do not directly apply to nonhemophilic cases.

Methodology

Procedures

A 23-year-old female presents with history of right ankle impingement pain secondary to active sports playing. MRI revealed a large joint effusion present, large joint body noted in the anterior part of the ankle joint measuring 14 mm. Attending surgeon elected an anterior ankle approach. After anatomically dissection, an approximately 3.5 cm x 3 cm compressible, oval-shaped mass is noted encapsulated through adipose tissue with a peduncle at the anterior ankle joint. This is excised and sent for pathology

Results

Pathology report reads granulation tissue with ulceration, hemosiderin deposition, focal infarction, and hemorrhage, fibropurulent debris, chronically inflamed synovium, and benign fibroadipose tissue.

Discussions

Repetitive hemarthrosis can lead to the rare occurrence of hemosiderotic synovial inflammation and early-onset osteoarthritis. It remains unclear when the hemorrhagic joint initiates the degenerative process and at what point it becomes irreversible. The need for surgical intervention depends on the extent of joint damage, as is the case with any inflammatory arthritis. If left untreated, complete joint destruction may occur, necessitating fusion as the only viable surgical option.

Format

Case Study

Case Rpt Followup

18

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Justin Garvin DPM	garvinj@mlhs.org	I/We have nothing to disclose	
Weiyuan Tian DPM	TianW@mlhs.org	I/We have nothing to disclose	
Mark Capuzzi DPM AACFAS	CapuzziM@mlhs.org	I/We have nothing to disclose	

Title

The Use of Novel Synthetic Co-Polymer to Assist in the Repair of Achilles Tendon Ruptures

Submit Date

10/15/2024

Correspondent

Last Name: Loveland

Full Name: Jeffrey D. Loveland DPM, FACFAS

Practice/Company/Residency Program:

Email: lovelanddpm@yahoo.com

Central Tennessee Foot and Ankle Center

Authors

Author 1: Jeffrey D. Loveland DPM, FACFAS

Author 2: Brandon Denton MBA, ABSA

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Achilles tendon injuries, including ruptures and tendinopathies, are common and can significantly impair mobility and quality of life. Traditional surgical techniques for Achilles tendon repair often involve the use of sutures or grafts, which may result in complications such as re-rupture, limited functional recovery, and prolonged rehabilitation. A polycaprolactone and polyurethane-urea co-polymer, a synthetic biomaterial designed for soft tissue repair, offers a promising alternative due to its unique characteristics, including biocompatibility, mechanical strength, the ability to support cellular ingrowth, and accelerate the healing process.

Methodology

Procedures

This study explores the application of the co-polymer to assist with the repair of Achilles tendon ruptures in 10 patients, examining its effectiveness and safety in a case series.

Results

The patients were able to return to weightbearing status in a protective boot in 2 1/2 weeks and then returned to shoe gear in about 7 weeks. Patients were able to return to full activities with no restrictions on average at 12 weeks with a follow-up of 12 months. There were no infections, re-ruptures or graft rejection reported.

Discussions

The use of synthetic co-polymer in Achilles tendon repair represents a significant advancement in orthopedic surgery. The material's porous structure promotes vascularization and collagen deposition, which are critical for tendon regeneration. Furthermore, the biomechanical properties closely match those of native tendon tissue, reducing the risk of complications associated with traditional repair methods. It not only enhances healing and functional outcomes and allowed the patients to return to activities sooner than traditional repairs.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jeffrey D. Loveland DPM, FACFAS	lovelanddpm@yahoo.com	Consultant/Advisor/Speaker (List all affiliations)	Stryker, Vilex
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Treasurer Tennessee Podiatric Medical Association
		Grant/Research funding	Stryker
Brandon Denton MBA, ABSA	brandondenton15@gmail.com	I/We have nothing to disclose	

Title

Optimizing Outcomes in Pediatric Tarsal Coalitions: A Focus on Primary Arthrodesis vs Resection

Submit Date

10/15/2024

Correspondent

Last Name: Bernard

Full Name: Neil Bernard, DPM

Practice/Company/Residency Program:

Email: neilbernard36@gmail.com

Mercy Health Regional Medical Center

Authors

Author 1: Neil Bernard, DPM

Author 2: Anne Profeta, DPM

Author 3: Gary Most, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

In the amish population, pediatric tarsal coalitions are a common issue. Current literature supports coalition resection with graft interposition, we argue primary STJ arthrodesis in skeletally mature pediatric patients produces excellent results with less likely subsequent surgery.

Methodology

Procedures

A case series of 45 pediatric patients treated by a single surgeon at a single institution for talocalcaneal middle facet coalition with 12 month follow up. All pediatric patients arise from the amish community. Tarsal coalitions confirmed on CT, all showing a similar talocalcaneal middle facet coalition pattern. 30 patients were treated with primary subtalar joint arthrodesis with two screw fixation and 15 treated with resection.

Results

Despite current literature advocating against primary arthrodesis for TC coalitions, we report excellent results, no secondary surgery required to date, faster return to activity, minimal complications, no reported physical limitation, with an average follow up time of 5 years.

Discussions

Tarsal coalition is defined as abnormal fusion of two bones, for which TC coalitions commonly lead to rigid flatfoot. Current literature suggests primary resection of coalitions with fat interposition in young patients. Limited literature exists suggesting STJ fusion as primary treatment. Gantsoudes et al published a retrospective review on 49 feet treated with excision and fat graft interposition for symptomatic TC coalitions. 43% of patients required secondary procedures. Primary arthrodesis in the pediatric patient should be considered. OUR patients reported significant pain improvement 4 weeks postoperative and no limitation in activity at 1 year.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Neil Bernard, DPM	neilbernard36@gmail.com	I/We have nothing to disclose	
Anne Profeta, DPM	aprofeta@kent.edu	I/We have nothing to disclose	
Gary Most, DPM	garyjmost@sbcglobal.net	I/We have nothing to disclose	

Title

Angioleiomyoma of the ankle: a case report

Submit Date

10/15/2024

Correspondent

Last Name: Ley

Full Name: Gabriella, A, Ley, DPM

Practice/Company/Residency Program:

Email: Gabby.Ley94@gmail.com

Sutter Health - Palo Alto Medical Foundation

Authors

Author 1: Gabriella A. Ley, DPM, AACFAS

Author 2: Brennan K. Reardon, DPM, AACFAS

Author 3: Nicholas Todd, DPM, FACFAS

Author 4: Meagan M. Jennings, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Angioleiomyoma is a rare benign tumor which arises from smooth muscle. They account for approximately 4.4% of all benign soft tissue neoplasms and 0.2% of all foot and ankle tumors. Often they present as a subcutaneous mass, and are rarely accurately diagnosed preoperatively. We report on a case of angioleiomyoma in the ankle.

Methodology

Procedures

A 60 year old male who presented to clinic with complaint of a “cyst” on his ankle which had been present for months. This area would be painful due to rubbing on shoes. On physical exam, the lesion was mobile and had positive transillumination. Patient opted to have the mass surgical excised. Intraoperatively the mass was noted to have a hard consistency. Pathology results revealed the mass to be an angioleiomyoma measuring approximately 1.0 cm in diameter. After his skin incision had healed, patient was able to resume normal activities without reoccurrence of symptoms after 1 year. Angioleiomyomas are generally under 2 cm in diameter and can be associated with pain in 60% of cases. Of the 67% of cases which appear in the lower extremity, only 15.7% appear in the ankle. Most cases appear in middle-aged women. There have been reported cases of malignant transformation with angioleiomyoma. Reoccurrence is rare after surgical excision.

Results

1 year status post surgical excision, the patient was pain-free without reoccurrence of symptoms.

Discussions

Angioleiomyomas are rare benign tumors in the foot and ankle that can easily be misdiagnosed. It is important to keep it on the differential diagnosis for soft tissue masses, and they often do well with surgical excision.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Gabriella A. Ley, DPM, AACFAS	gabby.ley94@gmail.com	I/We have nothing to disclose	
Brennan K. Reardon, DPM, AACFAS	brennan.reardon@gmail.com	I/We have nothing to disclose	
Nicholas Todd, DPM, FACFAS	nicholas.todd@sutterhealth.org	Consultant/Advisor/Speaker (List all affiliations)	Arthrex consultant
Meagan M. Jennings, DPM, FACFAS	meagan.jennings@sutterhealth.org	Consultant/Advisor/Speaker (List all affiliations)	Stryker consultant

Title

Rare Presentation of Giant Cell Tumor Originating from Two Tendons

Submit Date

10/15/2024

Correspondent

Last Name: Brikho

Full Name: Marcell, DPM

Practice/Company/Residency Program:

Email: mbrikho1@hfhs.org

Henry Ford Wyandotte

Authors

Author 1: Marcell R. Brikho, DPM

Author 2: Mikayla A. Green, DPM

Author 3: Michael J. Stamey, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Giant cell tumor of the tendon sheaths (GCTTS) are benign solitary masses typically found in the flexor compartment of the foot and ankle. GCTTS account for approximately 1.6% of all soft tissue tumors. Literature review sites no documentation of GCTTS originating from multiple tendons. We present a rare presentation of the tumor originating from the peroneus brevis and peroneus tertius.

Methodology

Procedures

The case presented is of a 36-year-old male who presented with a slowly growing mass of the left foot which had become painful. Patient's medical history showed no prior trauma to the area. Radiographic report showed no osseous involvement. An MRI was performed, revealing a round, heterogeneous mass on the dorsal-lateral aspect of the foot, with diffuse enhancement, measuring approximately 4.4 cm (AP) x 2.7 cm (TR) x 3.8 cm (CC). The MRI report favored a diagnosis of tenosynovial giant cell tumor.

Results

The patient underwent surgical excision of the soft tissue mass which was noted to be originating from peroneus brevis tendon and peroneus tertius with extension into the extensor digitorum brevis. Pathology results confirmed the diagnosis of tenosynovial giant cell tumor.

Discussions

GCTTS involving multiple tendons are rarely reported in literature. GCTTS can mimic other lesions like lipomas, synovial sarcomas and ganglion cysts. Awareness of this tumor's clinical, imaging, and histological features can facilitate prompt diagnosis and appropriate management, ultimately improving patient outcomes. Therefore, GCTTS should be considered in the differential diagnosis of soft tissue masses in the foot and ankle, despite their rarity.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Marcell R. Brikho, DPM	mbrikho1@hfhs.org	I/We have nothing to disclose	
Mikayla A. Green, DPM	mgreen21@hfhs.org	I/We have nothing to disclose	
Michael J. Stamey, DPM, FACFAS	mstamey1@hfhs.org	I/We have nothing to disclose	

Title

Intact fish skin graft as an adjunct treatment to the reconstruction of tendon injuries in foot and ankle surgery: Case Series Report

Submit Date

10/15/2024

Correspondent

Last Name:Patel

Full Name:Rikesh A. Patel DPM AACFAS

Practice/Company/Residency Program:

Email:rikeshpatel93@gmail.com

Northern Illinois Foot and Ankle Specialists

Authors

Author 1:Patrick Mceneaney DPM, FACFAS

Author 2:Rimvydas Statkus DPM, FACFAS

Author 3:Justin Bichler DPM

Author 4:Rikesh A. Patel DPM, AACFAS

Author 5:Peter Lovato DPM, FACFAS

Author 6:

Author 7:

Author 8:

Purpose

Ligament and tendon injuries and tears are common in foot and ankle surgery. Multiple types of grafts on the market such as collagen substitute, extracellular matrix, cryopreserved umbilical grafts have been used to augment the tendon repair. This case review review shows how Intact fish skin graft is a great alternative biologic augmentation of these soft tissue injuries.

Methodology

Procedures

5 patients with tendon or ligament tears or injuries were treated and augmented with intact fish skin graft. Preoperative and 1 year postoperative MRIs were performed to evaluate the injuries and any complications.

Results

The use of intact fish skin graft in 5 patients for surgical treatment of tendon and ligament injuries or tears.

Discussions

1 year follow up after augmentation of ligament and tendon repairs shows intact fish skin grafts show significant improvement in functionality and mobility of the soft tissue repairs. Fish skin graft in this preliminary study shows early evidence that these grafts allow for accelerated healing and works as an excellent scaffold for soft tissue repair.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Patrick Mceneaney DPM, FACFAS	drmceneaney@illinoisfoot.com	Consultant/Advisor/Speaker (List all affiliations)	Kerecis
Rimvydas Statkus DPM, FACFAS	drstatkus@illinoisfoot.com	Consultant/Advisor/Speaker (List all affiliations)	Kerecis
Justin Bichler DPM	drbichler@illinoisfoot.com	I/We have nothing to disclose	
Rikesh A. Patel DPM, AACFAS	rikeshpatel93@gmail.com	I/We have nothing to disclose	
Peter Lovato DPM, FACFAS	drlovato@illinoisfoot.com	Consultant/Advisor/Speaker (List all affiliations)	Kerecis

Title

Utilization of the Youngs Tenosuspension as an Adjunctive Procedure for Flexible Pes Planovalgus Deformity: A Case Report

Submit Date

10/15/2024

Correspondent

Last Name: Roby

Full Name: Meghan, C. Roby, DPM

Practice/Company/Residency Program:

Email: meghan.robby@ohiohealth.com

Ohio Health, Grant Foot And Ankle Residency

Authors

Author 1: Meghan C. Roby, DPM

Author 2: Joseph R. Brown, DPM

Author 3: Timothy R. Holmes, DPM, FACFAS

Author 4: Sara J. Judickas, DPM

Author 5: Alexa T. Bykowski, DPM

Author 6: Nevin C. Joseph, DPM

Author 7:

Author 8:

Purpose

Lateral column lengthening is recognized as the most effective surgical intervention for flexible pes planovalgus deformity, typically achieved through an Evans osteotomy. However, this procedure alone does not address the residual forefoot supination that often persists after performing the Evans osteotomy alone. To correct forefoot supination, the Youngs Tenosuspension procedure can be used. This case report aims to show the positive outcomes of using the Young Tenosuspension as an adjunctive procedure for treating flexible flatfoot deformity. Additionally, we will discuss the surgical technique, and its advantages supported in current literature.

Methodology

Procedures

A 23-year-old male presented with bilateral painful flexible pes planovalgus deformity. After exhausting conservative treatment options, including activity modifications, physical therapy, shoe-wear modifications, and the use of an AFO, he opted for surgical intervention due to persistent pain. The surgical procedures performed included an open Strayer, Evans osteotomy, Kidner, Spring ligament repair, and Young’s Tenosuspension. Intra-operative images were obtained that can be included on final poster presentation.

Results

The patient has fully healed from his incisions with his arch height restored to his right foot. He is now interested in undergoing the same procedures on his left foot.

Discussions

Foot and ankle surgeons must be knowledgeable about the potential treatment options for flexible pes planovalgus deformity, if conservative measures fail. The Evans Osteotomy combined with the Youngs Tenosuspension, and other adjunct procedures are excellent alternatives that have proven satisfactory outcomes in appropriately selected patients.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Meghan C. Roby, DPM	meghan1510robby@gmail.com	I/We have nothing to disclose	
Joseph R. Brown, DPM	jbrowndpm@gmail.com	I/We have nothing to disclose	
Timothy R. Holmes, DPM, FACFAS	tholmesone@yahoo.com	I/We have nothing to disclose	
Sara J. Judickas, DPM	sara.judickas@ohiohealth.com	I/We have nothing to disclose	
Alexa T. Bykowski, DPM	alexa.bykowski@ohiohealth.com	I/We have nothing to disclose	
Nevin C. Joseph, DPM	nevin.joseph@ohiohealth.com	I/We have nothing to disclose	

Title

Percutaneous Pinning as a Superior Alternative to ORIF in Lisfranc Fractures: A Case Study

Submit Date

10/15/2024

Correspondent

Last Name: Nguyen

Full Name: Dung Nguyen

Practice/Company/Residency Program:

Email: nhtdung1007@gmail.com

Plainview Hospital

Authors

Author 1: Dung Nguyen, DPM

Author 2: Michael Livingston, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case study examines the use of percutaneous pinning as a minimally invasive alternative to traditional ORIF for Lisfranc injuries. The goal is to assess whether percutaneous pinning offers faster recovery, reduced complications, and less post-operative pain, particularly in elderly patients.

Methodology

Procedures

Lisfranc fractures are often treated with ORIF, but studies show this can result in prolonged recovery and higher complication rates, especially in elderly patients. Recent literature highlights percutaneous pinning as a less invasive option with fewer risks, offering faster recovery and less soft tissue trauma. In this case, a 65-year-old female with a Lisfranc fracture underwent percutaneous pinning due to her age and comorbidities. Fluoroscopic guidance allowed precise K-wire placement, minimizing surgical impact. The patient had minimal pain and an expedited recovery, with no complications. This case supports percutaneous pinning as a superior alternative to ORIF in selected cases.

Results

The patient achieved excellent outcomes following percutaneous K-wire pinning for her Lisfranc fracture. She experienced minimal pain post-operatively and was fully weight-bearing by six weeks. By three months, she ambulated normally without assistance. Radiographs showed proper alignment with no complications, demonstrating that K-wire pinning leads to faster recovery and reduced soft tissue trauma.

Discussions

Percutaneous K-wire pinning for Lisfranc injuries offers significant advantages over traditional ORIF, particularly in elderly patients. This technique results in less pain, quicker recovery, and fewer complications, supporting its use as a superior option for selected cases.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Dung Nguyen, DPM	nhtdung1007@gmail.com	I/We have nothing to disclose	
Michael Livingston, DPM, FACFAS	mlivingston@northwell.edu	I/We have nothing to disclose	

Title

Arthroscopic Debridement and Radiofrequency Induced Augmentation for Treatment of Predislocation Syndrome and Plantar Plate Dysfunction Technique Guide and Case Study

Submit Date

10/15/2024

Correspondent

Last Name: Fairman

Full Name: Brooke

Practice/Company/Residency Program:

Email: brookefairman@creighton.edu

Creighton University

Authors

Author 1: Brooke Fairman DPM Resident

Author 2: Olivia Sandstrom DPM Resident

Author 3: Lewis Freed DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

There are numerous treatment options for surgical management of plantar plate dysfunction and insufficiency, most are invasive and have varying outcomes. The goal of this poster is to provide a technique guide and case study for arthroscopic debridement and radiofrequency induced plantar plate repair.

Methodology

Procedures

For this case study the patient was followed post-operatively after undergoing arthroscopic plantar plate repair and debridement of the second metatarsophalangeal joint. Pre-operatively the patient had second metatarsophalangeal joint instability and pain. Intra-operatively, a 1.9 mm scope, a 2.0 mm shaver, and 2.0 mm radiofrequency ablator wand was used for debridement and repair. Prior to skin closure, allograft stem cells were injected. Approximately six weeks post-operatively, the patient was able to return to normal shoe gear. The patient was able to return to full activity and had improved functional outcomes. The patient had the contralateral limb operated on later that year with similar outcomes. In 2016, Reeves described and detailed arthroscopic management of the lesser joints in the foot, including the lesser metatarsophalangeal joints, and concluded that the procedure has favorable outcomes with minimal complications. Reeves CL, Shane AM, Payne T, Cavins Z. Small Joint Arthroscopy in the Foot. Clin Podiatry Med Surg. 2016 Oct;33(4):565-80.

Results

Based on this case study, arthroscopic debridement and radiofrequency induced augmentation can be beneficial prior to more invasive options.

Discussions

This case study shows that arthroscopic repair can have improved functional outcomes post-operatively. Arthroscopic repair is briefly discussed in the literature. Future research can include a retrospective study with larger sample size.

Format

Case Study

Case Rpt Followup

56

Student Club

Classification

Arthroscopy

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Brooke Fairman DPM Resident	brookefairman@creighton.edu	I/We have nothing to disclose	
Olivia Sandstrom DPM Resident	oliviasandstrom@creighton.edu	I/We have nothing to disclose	
Lewis Freed DPM	lfreed1@cox.net	I/We have nothing to disclose	

Title

Bilateral Lower Extremity Exertional Compartment Syndrome: A Rare Case Report

Submit Date

10/15/2024

Correspondent

Last Name: Roby

Full Name: Meghan, C, Roby, DPM

Practice/Company/Residency Program:

Email: meghan.robby@ohiohealth.com

Ohio Health, Grant Foot And Ankle Residency

Authors

Author 1: Meghan C. Roby, DPM

Author 2: Brian D. Steginsky, DO

Author 3: Sara J. Judickas, DPM

Author 4: Alexa T. Bykowski, DPM

Author 5: Nevin C. Joseph, DPM

Author 6:

Author 7:

Author 8:

Purpose

Chronic exertional compartment syndrome is a debilitating condition, particularly affecting young, active individuals. It occurs bilaterally in 10% of patients who experience CECS. Common symptoms include: pain, muscle cramping, and paresthesia. Intramuscular compartment testing is one of the most effective methods for diagnosing this condition. It can be misdiagnosed between 10-64% of cases with as high as a 22-month delay in diagnosis. This case report offers valuable insight into the identification, management, and treatment of bilateral CECS.

Methodology

Procedures

A 23-year-old male presented with bilateral anterior and lateral leg pain that had persisted for seven years. At the time of presentation, he was undergoing physical evaluations in pursuit of becoming a firefighter. Given the clinical suspicion of bilateral CECS, the patient underwent exertional compartment pressure testing, which yielded positive results for both the anterior and lateral compartments in his lower extremities. In order to complete the physical training requirements to become a firefighter, it was decided to proceed with bilateral fasciotomies for the anterior and lateral compartments of the legs.

Results

The patient has successfully healed their incisions, completed physical therapy, and has resumed running activities.

Discussions

Foot and ankle surgeons must be well-versed in diagnosing CECS, due to the condition often being misdiagnosed. This case report emphasizes the infrequency of bilateral compartment syndrome, discusses the procedure for conducting compartment pressure testing, and surgical technique involved in performing fasciotomies for both the anterior and lateral leg compartments.

Format

Case Study

Case Rpt Followup

12

Student Club

Soft Tissue/Tumor

Classification

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Meghan C. Roby, DPM	meghan.robby@ohiohealth.com	I/We have nothing to disclose	
Brian D. Steginsky, DO	brian.steginsky@ohiohealth.com	I/We have nothing to disclose	
Sara J. Judickas, DPM	sara.judickas@ohiohealth.com	I/We have nothing to disclose	
Alexa T. Bykowski, DPM	alexa.bykowski@ohiohealth.com	I/We have nothing to disclose	
Nevin C. Joseph, DPM	nevin.joseph@ohiohealth.com	I/We have nothing to disclose	

Title

Total Talus Replacement for Lower Extremity Limb Salvage Due to Post Traumatic Avascular Necrosis: Case Report

Submit Date

10/15/2024

Correspondent

Last Name: Yun

Full Name: Catherine R. Yun, DPM, PGY-3

Practice/Company/Residency Program: Community Medical Center Podiatric Residency Program

Email: catherine.rose.yun@gmail.com

Authors

Author 1: Catherine R. Yun, DPM, PGY-3

Author 2: Pranav S. Phadtare, DPM, PGY-3

Author 3: Julius Nadarajah, DPM, PGY-3

Author 4: Caleb Bayewu, DPM, PGY-2

Author 5: Sai Vemula, DPM, MS, Post-Graduate Fellow

Author 6: Matthew J. Modugno, DPM, FACFAS

Author 7:

Author 8:

Purpose

Avascular necrosis of talus is a serious complication after fracture of the talus. There is a scarcity of literature regarding treatment and management of total talus replacement. This case study shares how a total talus replacement allowed a patient to reduce pain, maintain limb length, and regain limb function.

Methodology

Procedures

61-year-old female suffered a right talus fracture while on vacation in Tennessee in 2021. She was treated conservatively, and the talus progressed to avascular necrosis. She failed numerous conservative treatment modalities. We performed a right ankle total talus replacement with navicular exostectomy (3/2/2023). The patient has been able to maintain range of motion and reduce pain to the right ankle at 14 months.

Results

The patient returned to her normal shoes and desired activity level at 14 months follow-up.

Discussions

Treatment of talar avascular necrosis is challenging. Previous treatments included pantalar arthrodesis, Blair arthrodesis, or other types of hindfoot arthrodesis procedures, however adjacent joint arthritis, shortening of the limb, and delayed union have been reported. This patient had no significant intra-articular cartilage erosion nor arthritic changes in the pantalar area. She was determined to maintain range of motion. Thus we performed the total talus replacement, which offered her a restoration of ankle joint function, pain relief, and maintenance of limb length, which ultimately elevated her quality of life.

Format

Case Study

Case Rpt Followup

14

Student Club

Rearfoot and Ankle Reconstruction

Classification

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Catherine R. Yun, DPM, PGY-3	catherine.rose.yun@gmail.com	I/We have nothing to disclose	
Pranav S. Phadtare, DPM, PGY-3	psphadtare0@gmail.com	I/We have nothing to disclose	
Julius Nadarajah, DPM, PGY-3	juliusnadarajah@gmail.com	I/We have nothing to disclose	
Caleb Bayewu, DPM, PGY-2	cbayewu@gmail.com	I/We have nothing to disclose	
Sai Vemula, DPM, MS, Post-Graduate Fellow	saivemuladpm@gmail.com	I/We have nothing to disclose	
Matthew J. Modugno, DPM, FACFAS	modugnomj@gmail.com	I/We have nothing to disclose	

Title

Total Talus Implant No Longer Needed For Two Stage Approach Total Ankle Replacement with Avascular Necrosis: A Case Report

Submit Date

10/15/2024

Correspondent

Last Name: Roby

Full Name: Meghan, C. Roby, DPM

Email: meghan.robby@ohiohealth.com

Practice/Company/Residency Program: Ohio Health, Grant Foot And Ankle Residency

Authors

Author 1: Meghan C. Roby, DPM

Author 2: Brian D. Steginsky, DO

Author 3: Nevin C. Joseph, DPM

Author 4: Sara J. Judickas, DPM

Author 5: Alexa T. Bykowski, DPM

Author 6:

Author 7:

Author 8:

Purpose

In today’s literature avascular necrosis of the talus has been an indication for a total ankle replacement but only when a total talus implant is considered. However, there is little literature on performing a TAR without a total talus implant in cases of talar AVN. This study shows a unique case of a patient who underwent a two-stage approach TAR in a patient with talar AVN with satisfactory postoperative outcomes.

Methodology

Procedures

A 62-year-old female presented with an open right subtalar joint dislocation after a motor-vehicle accident. Initially, treated with an external fixator followed by a subtalar joint fusion that went on to a non-union. She underwent a subtalar joint revision arthrodesis but, developed talar AVN with post-traumatic arthritis of the ankle that was evident on CT. Her pain persisted despite conservative treatment. Therefore, she underwent a TAR, tendon-achilles lengthening, calcaneal bone graft harvest, hardware removal, and open reduction internal fixation of the medial malleolus.

Results

After the final procedure, the patient is active and ambulating in normal shoe gear. Post-operatively, there have been no signs of talar subsidence despite the presence of AVN.

Discussions

Providers should consider performing a TAR without a total talus implant in patients with talar AVN. This unique case showed positive outcomes in a patient who had a hindfoot fusion followed by a standard TAR despite the presence of talar AVN. Therefore, this should be an alternative to consider for patients with talar AVN who are suitable candidates for a TAR.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Meghan C. Roby, DPM	meghan.robby@ohiohealth.com	I/We have nothing to disclose	
Brian D. Steginsky, DO	brian.steginsky@ohiohealth.com	I/We have nothing to disclose	
Nevin C. Joseph, DPM	nevin.joseph@ohiohealth.com	I/We have nothing to disclose	
Sara J. Judickas, DPM	sara.judickas@ohiohealth.com	I/We have nothing to disclose	
Alexa T. Bykowski, DPM	alexa.bykowski@ohiohealth.com	I/We have nothing to disclose	

Title

Salvage of Failed Hindfoot Nailing by Conversion to Tibiocalcaneal Fusion with Lateral Plating

Submit Date

10/15/2024

Correspondent

Last Name: Bustos

Full Name: Lindsey, N. Bustos, DPM

Email: Lindseybustos5@yahoo.com

Practice/Company/Residency Program: Scripps Mercy San Diego Hospital/Kaiser Sacramento

Authors

Author 1: Lindsey N. Bustos, DPM

Author 2: Ramez Sakkab, DPM, AACFAS

Author 3: Michael Radcliffe, DPM, AACFAS

Author 4: Zachary Flynn, DPM, FACFAS

Author 5: Jeffrey E. McAlister, DPM, FACFAS

Author 6:

Author 7:

Author 8:

Purpose

A useful technique for treatment of severe arthrosis of the tibiotalar and subtalar joints is tibiototalcaneal arthrodesis. There are numerous techniques to complete a tibiototalcaneal fusion which may include variations in approach, invasiveness, and fixation. A common modus operandi with many advantages is a hindfoot intramedullary nail. Given the popularity of nailing, options for revision and salvage work are needed.

Methodology

Procedures

The present study reviews patients who underwent lateral locked plating and salvage tibiocalcaneal arthrodesis after removal of hindfoot nails for tibiototalcaneal nonunion.

Results

A total of 10 consecutive patients of 2 fellowship-trained foot and ankle surgeons were reviewed. Etiology of painful pseudoarthrosis with nailing included recurrent charcot neuroarthropathy (6), talar avascular necrosis (2), tibial fracture (1), and infection (1). Patients were a mean 13.5 months from index surgery and mean follow up after revision was 26.6 months. Mean age was 59.6 and mean body-mass index 26.7 (kg*m2). Three cases were staged 6-12 weeks after ancillary procedures and 7 were simultaneous. Union rate, as defined as >30% osseous bridging on computed tomography, was 70% (7/10). All patients (10/10) returned to ambulation with commercially available foot wear, 3 with gauntlet-type ankle braces.

Discussions

Salvage arthrodesis after failed hindfoot nailing is a difficult problem given the pathology at play, bone loss at fusion sites, and recurrent deformity. The present series is limited in scope but provides a launchpoint for further research on options for failed tibiototalcaneal fusion. Other options include large bone block allograft (femoral head) and 3D printed space-occupying implants (such as spherical cages). The complexity of such cases justifies continued investigation.

Format

Case Study

Case Rpt Followup

26

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lindsey N. Bustos, DPM	lindseybustos5@yahoo.com	I/We have nothing to disclose	
Ramez Sakkab, DPM, AACFAS	rasakkab@gmail.com	I/We have nothing to disclose	
Michael Radcliffe, DPM, AACFAS	mjradcliffe1@gmail.com	I/We have nothing to disclose	
Zachary Flynn, DPM, FACFAS	zacharyflynn7@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Smith & Nephew
Jeffrey E. McAlister, DPM, FACFAS	Jeff.mcalister@phoenixfai.com	Consultant/Advisor/Speaker (List all affiliations)	Exactech and Smith & Nephew Inc.

Title

Lateral Ankle Stabilization in the Presence of Comminuted Fibular Fracture: A Case Report

Submit Date

10/15/2024

Correspondent

Last Name: Fletcher

Full Name: Nathan Fletcher, DPM

Email: fletcher.nathane@gmail.com

Practice/Company/Residency Program: Phoenixville Hospital - Tower Health

Authors

Author 1: Stephen Soondar, DPM

Author 2: Colin Flannery, DPM

Author 3: Anthony Popoff, DPM

Author 4: Nathan Fletcher, DPM

Author 5: Ayushi Bisaria, DPM

Author 6:

Author 7:

Author 8:

Purpose

Repair of lateral ankle ligamentous injury has not been described in literature in the setting of comminuted fibular fracture. This case demonstrates use of soft tissue repair with non-absorbable suture in conjunction with standard plate and screw fixation of comminuted fibular fracture.

Methodology

Procedures

Our study found no literature regarding techniques for lateral ankle stabilization in the presence of comminuted fibular fracture. Similar studies focus on anatomic alignment of ankle mortise but do not mention ligamentous repair. The ankle was noted to be unstable intraoperatively via positive anterior drawer and inversion stress tests, indicating rupture of calcaneofibular ligament (CFL) and partial rupture of anterior talofibular ligament (ATFL). Suture was used to reapproximate ends of ATFL. Non-absorbable suture was threaded through a fibular plate, then two knotless suture anchors were inserted into the lateral calcaneus. The non-absorbable suture secured within the plate served as an artificial CFL. Ankle tested with stress inversion and noted to be stable post-procedure.

Results

Sutures remained in place until 5 weeks with necrotic wound complication. Wound was treated conservatively and resolved at 3.5 months. Patient transitioned to partial weight-bearing in boot at 2.5 months, weight-bearing with brace at 3.5 months, and ambulating without brace at 6 months. Patient was able to weight-bear at 1 year follow-up without pain or failure of fixation.

Discussions

Our case highlights a unique fixation technique using a plate and suture anchors for a rare pathology, resulting in excellent outcomes. The patient regained full ambulation, independent exercise, and daily function without pain or bracing.

Format

Case Study

Case Rpt Followup

13

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Stephen Soondar, DPM	ssoondar@gmail.com	I/We have nothing to disclose	
Colin Flannery, DPM	drcolinflannery@gmail.com	I/We have nothing to disclose	
Anthony Popoff, DPM	apopoff731@gmail.com	I/We have nothing to disclose	
Nathan Fletcher, DPM	fletcher.nathane@gmail.com	I/We have nothing to disclose	
Ayushi Bisaria, DPM	ayushi.bisaria23@gmail.com	I/We have nothing to disclose	

Title

Periprosthetic Tibial Fractures: An Algorithm for Treatment

Submit Date

10/15/2024

Correspondent

Last Name: Jain

Full Name: Akshay

Practice/Company/Residency Program:

Email: akshayjaindpm@gmail.com

Paley Orthopedic and Spine Institute

Authors

Author 1: Akshay Jain, DPM, AACFAS

Author 2: Jarrett D. Cain, DPM. MS, AACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Many complications of intramedullary nailing have been described including malunion, nonunion, delayed union, hardware failure, wound healing issues, and deep infection. Few studies exist regarding peri-prosthetic fractures of hindfoot intramedullary nailing, and even fewer studies exist discussing a treatment approach. In an effort to further assist readers in treatment of these complex problems we present an algorithm we feel can help determine operative vs nonoperative treatment from a more comprehensive perspective.

Methodology

Procedures

This is a 72-year-old female with a hindfoot intramedullary tibial nail whom was found to have a peri-prosthetic fracture of unknown etiology. Thorough workup for this patient was performed and an algorithm was devised. The patient underwent hindfoot nail explanation and exchange with successful postoperative outcome. Currently the patient is ambulating without assistive devices in supportive shoe gear.

Results

Peri-prosthetic implant fractures are complex injuries that are difficult to treat regardless of location. We present a 4 stage algorithmic approach in dealing with this injury to help deduce whether the pathology is surgical or nonsurgical, and how comprehensive workup should be performed in this patient population.

Discussions

Stage 1 is the evaluation stage comprising a comprehensive physical exam with basic questions. Stage 2 is the diagnostic stage to help determine the cause or etiology of the periprosthetic fracture. Stage 3 is medical decision making stage, this is the culmination of the previous 2 stages into a logical and feasible decision. Stage 4 is the execution stage where either surgical or nonsurgical treatment is decided.

Format

Case Study

Case Rpt Followup

16

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Akshay Jain, DPM, AACFAS	akshayjaindpm@gmail.com	I/We have nothing to disclose	
Jarrett D. Cain, DPM. MS, AACFAS	jdcaain@upmc.edu	I/We have nothing to disclose	

Title

Tibial Widening and Foot Lengthening for Residual Clubfoot: A Case Study

Submit Date

10/15/2024

Correspondent

Last Name: Lamm

Full Name: Bradley

Practice/Company/Residency Program:

Email: blamm@paleyinstitute.org

Paley Orthopedic and Spine Institute

Authors

Author 1: Akshay Jain DPM, AACFAS

Author 2: Garrett Nguyen DPM, AACFAS

Author 3: Bradley Lamm DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Adult residual clubfoot deformities are difficult pathologies to treat. Most notably this population struggles with ambulation given the shortened pedal architecture, difficulty with balance, and poor muscle strength. These complex deformities require thorough biomechanical work up to determine how to correct the complicated foot type. Few techniques exist to help this patient population. We present a unique surgical approach in a residual clubfoot case.

Methodology

Procedures

This is a 31-year-old male with long standing congenital clubfoot pain. The patient was surgically overcorrected. As a result of the congenital clubfoot and surgical overcorrection the patient had very weak posterior muscle group strength, poor balance, difficulty with ambulation, shortened pedal architecture. Additionally, the patient was self-conscious regarding the size of his calves.

Results

The patient underwent bilateral multiplanar external fixator placement for the purposes of tibial widening and foot lengthening with a focus on correcting the biomechanical abnormalities. Postoperatively the patient is ambulating unassisted in supportive shoe gear.

Discussions

Residual clubfoot deformities with superimposed overcorrection can be debilitating. We present a novel approach to help patients ambulate with better biomechanical function. By elongating the foot and increasing the lever arm, the patient is able to work through the gait cycle with better function and less exertion. Additionally, by translating the heel plantar in the axial plane and increasing the length of the posterior muscle groups we tighten the soft tissue to further engage power through the gait cycle. This approach has helped the patient achieve near normal foot function, with better lower extremity stability.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Akshay Jain DPM, AACFAS	akshayjaindpm@gmail.com	I/We have nothing to disclose	
Garrett Nguyen DPM, AACFAS	gnguyen@paleyinstitute.org	I/We have nothing to disclose	
Bradley Lamm DPM, FACFAS	blamm@paleyinstitute.org	I/We have nothing to disclose	

Title

Utilizing the Talus as a “Constant Fragment” in a Failed Neuropathic Ankle Fracture-
A Case Study

Submit Date

10/15/2024

Correspondent

Last Name: Joshi

Full Name: Alisha P Joshi, DPM

Practice/Company/Residency Program:

Email: joshi.alisha@gmail.com

Morristown Medical Center

Authors

Author 1: Rohan G. Desai, DPM, FACFAS

Author 2: Brian S. Sullivan, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Neuropathic ankle fractures are often extremely complex cases and are noted to have a high failure rate. Failed neuropathic ankle fractures cases become more complex in regards to diabetes, neuropathy, and eventually limb salvage. The most necessary portion of a failed ankle fracture is often the talus, essentially acting as a “constant fragment”. Optimal treatment strategies for management of these neuropathic failed ankle fractures are often uncertain. The purpose of this abstract is to highlight technical strategies and successful use of the talus as a “constant fragment” in salvage arthrodesis procedures.

Methodology

Procedures

This patient underwent multiple procedures to help fix a failed neuropathic ankle fracture. Multiple failed procedures lead to the use of an in situ dowel procedure performed to help stabilize the tibiotalar arthrodesis site to use the talus as a “constant fragment” and stable base to reconstruct the foot to the stable platform. Close follow up and subsequent procedures were performed in the operative setting.

Results

A neuropathic ankle fracture that was fixated with the usage of the talus as the “constant fragment” using ankle dowel allograft and ankle reconstruction in an attempt at limb salvage.

Discussions

Failed ankle fracture fusion remains a challenging complication for podiatric surgeons. Achieving optimal bone healing and biomechanical outcomes requires a comprehensive approach that addresses multiple contributing factors. The Dowel procedure, utilizing the talus as a “constant fragment” and building block, is one potential technique that has been used successfully. Adjunctive procedures and diligent follow-up are especially critical in patients with diabetic neuropathy.

Format

Case Study

Case Rpt Followup

60

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Rohan G. Desai, DPM, FACFAS	rohdesai007@gmail.com	I/We have nothing to disclose	
Brian S. Sullivan, DPM, FACFAS	bssully@hotmail.com	I/We have nothing to disclose	

Title

Overcompression of the Syndesmosis in a Traumatic Geriatric Ankle Fracture Dislocation, a Case Report

Submit Date

10/15/2024

Correspondent

Last Name: Adams

Full Name: Lucas S Adams

Practice/Company/Residency Program:

Email: adamsls1809@gmail.com

Mercy Health St. Vincents Medical Center

Authors

Author 1: Lucas S Adams

Author 2: Kyle McKray Smith, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this case report was to highlight our experience clinically and radiographically of malreduction and overcompression of a geriatric ankle fracture, with surgical intervention and subsequent revision surgical intervention.

Methodology

Procedures

A threshold of syndesmosis malreduction and over compression has been defined in literature, however exact tolerances of syndesmotic malreduction before a clinically significant change in outcome is observed is not yet agreed upon. There is also a lack of understanding of which malreduction characteristics have implications to clinical outcomes, such as overcompression. A 79-year-old female was involved in a motor vehicle collision and sustained a closed bimalleolar fracture dislocation to the left ankle. Index procedure was performed with open reduction internal fixation of the ankle fracture. Intraoperative imaging demonstrated displacement of alignment after syndesmotic fixation and there was suspicion for syndesmotic involvement. Postoperative computer tomography (CT) of the bilateral ankles demonstrated malreduction of the syndesmosis with overcompression. (Fig 5). She underwent revisional open reduction internal fixation of ankle fracture and syndesmosis successfully. Post operatively she returned to normal activity and weightbearing in normal shoe gear at 13 weeks.

Results

Postoperative radiographs demonstrated malreduction and overcompression with anterior subluxation of the talus within the tibiotalar joint mortise (Fig 4). Radiographic comparison of the operative extremity syndesmosis on axial CT to the contralateral side showed >2mm of syndesmotic asymmetry and narrowing. The operative syndesmotic gap was 2.47mm and the contralateral extremity was 4.60mm.

Discussions

Geriatric ankle fractures and syndesmotic injuries remain a challenging and complex issue for foot and ankle surgeons.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lucas S Adams	adamsls1809@gmail.com	I/We have nothing to disclose	
Kyle McKray Smith, DPM, FACFAS	kmckraysmith@toledoclinic.com	Consultant/Advisor/Speaker (List all affiliations)	Orthofix, Integra

Title

Epithelioid Angiosarcoma of the Foot : A Case Report

Submit Date

10/15/2024

Correspondent

Last Name: Maroshek

Full Name: Alexander

Practice/Company/Residency Program:

Email: admaroshek@gmail.com

Hackensack Meridian Health - Jersey Shore University Medical Center

Authors

Author 1: Alexander Maroshek, DPM

Author 2: Tayyaba Hasan, DPM

Author 3: Evan Adler, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To present a case study of epithelioid angiosarcoma in the lower extremity.

Methodology

Procedures

Angiosarcomas are rare malignant neoplasms comprising 1-3% of adult soft tissue sarcomas, typically developing in the 7th decade of life in males. They are aggressive lesions and often unstageable due to their aggressive nature. We present an 80 year-old male with previous history of sub-renal Abdominal Aortic Aneurysm without rupture that underwent repair and revision, basal cell carcinoma, coronary angioplasty, and 40 pack-year smoking history. Followed in outpatient setting and worked up by multiple specialties for painful violations lesion starting on the left hallux and spreading proximally to the lateral column and heel. He was admitted with concern for left foot cellulitis with suspected underlying osteomyelitis in the setting of shower emboli. He consented to a left hallux amputation and primary closure for treatment of likely osteomyelitis. Pathology specimen returned as Epithelioid Angiosarcoma without bone involvement. Postoperatively PET/CT was ordered finding metastatic disease to the entirety of the left lower extremity and nodular opacity in the left lung that was later biopsied and described as adenocarcinoma. Patient and his family opted for hospice care in place of definitive treatment for two separate cancers after diagnosis.

Results

We present an atypical case of angiosarcoma presenting in the lower extremity.

Discussions

In our case study, we present an atypical presentation of anigosarcoma in the lower extremity. Although; patient opted for hospice care we hope our report adds to the body of evidence for tumors found in the lower extremity.

Format

Case Study

Case Rpt Followup

12

Student Club

Soft Tissue/Tumor

Classification

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Alexander Maroshek, DPM	admaroshek@gmail.com	I/We have nothing to disclose	
Tayyaba Hasan, DPM	admaroshek@gmail.com	I/We have nothing to disclose	
Evan Adler, DPM	admaroshek@gmail.com	I/We have nothing to disclose	

Title

Flipping the Script on Fibroma Excision with Use of Synthetic Graft

Submit Date

10/15/2024

Correspondent

Last Name: Paramasivam

Full Name: Divya

Practice/Company/Residency Program:

Email: divya.paramasivam@jax.ufl.edu

UF Health Jacksonville

Authors

Author 1: Divya S. Paramasivam, DPM

Author 2: Jason A. Piraino, DPM, MS, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Plantar fibromas are benign tumors that form along the plantar fascia, manifesting as firm nodules that vary in size and quantity. Although these tumors are non-cancerous and generally pose minimal health risks, they can cause significant discomfort. Surgical excision may offer relief; however, the high recurrence rates often discourage foot and ankle surgeons from pursuing this treatment option. In this case study, we investigate the use of a synthetic graft as a strategy to prevent recurrence after excision.

Methodology

Procedures

We evaluated two patients with plantar fibromas: one with bilateral fibromas and the other with a unilateral fibroma. During the excision, an Artelon synthetic graft was placed in the void to act as a scaffold for tissue regeneration. The mean follow-up period for all three feet was one year. While there is limited literature specifically on synthetic grafts for plantar fibroma excision, previous research by Dr. Lauf and colleagues in 1998 examined the use of a dermal fat graft at the excision site, which successfully resulted in no recurrence.

Results

In our study, no recurrences were observed and no complications related to the graft were reported. Both patients healed well, remained asymptomatic, and ambulated without restrictions.

Discussions

Our investigation into synthetic graft material aims to prevent recurrence of plantar fibromas. Our objectives align with the 1998 research: to serve as a scaffold, preserve anatomical structure, and ensure biomechanical stability with minimized scar tissue. Our findings indicate that synthetic grafts can effectively meet these objectives, contributing valuable insights to improve outcomes in plantar fibroma excisions.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Divya S. Paramasivam, DPM	divya.paramasivam@jax.ufl.edu	I/We have nothing to disclose	
Jason A. Piraino, DPM, MS, FACFAS	jason.piraino@jax.ufl.edu	I/We have nothing to disclose	

Title

Successful Management of a Rare Expansile Giant Cell Tumor in the Distal Tibia: A Retrospective Case Report

Submit Date

10/15/2024

Correspondent

Last Name:Wanniarachchi

Full Name:Gayana

Practice/Company/Residency Program:

Email:ghwanniarachchi@gmail.com

Katherine Shaw Bethea Hospital

Authors

Author 1:Gayana, H. Wanniarachchi, DPM

Author 2:Roshni Patel, DPM

Author 3:Nathan R. Mauren, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case study highlights the successful management of an expansile giant cell tumor with aggressive curettage and grafting with fixation of rafting screws in the distal tibia.

Methodology

Procedures

A retrospective chart review was performed utilizing electronic medical records at a single institution. A 53-year-old female patient was referred to our clinic with worsening right ankle pain for several months and a suspicious lesion on x-ray. On exam, there was a palpable and painful mass on the anterolateral aspect of the tibia with mild limitations of ankle joint motion and positive Tinnel's sign along the superficial peroneal nerve. X-rays showed an expansile mass in the distal tibia with an intact cortex, sclerotic margins, and a bubbly appearance. MRI revealed a well-demarcated expansile lesion of the distal tibia measuring 4x4x2 cm extending to the tibial plafond and involving distal syndesmosis. Staged surgical intervention was done, starting with a bone biopsy which confirmed a GCT, followed by aggressive curettage and grafting with rafting screws of the distal tibia.

Results

Following the surgery, symptoms were resolved, and normal function was attained. At the 18-month follow-up, the patient had no signs of recurrence, and the osseous void in the distal tibia was consolidated.

Discussions

Giant cell tumors (GCT) comprise approximately 10% of all osseous tumors being the most common benign bone lesion. They can become locally aggressive, painful and have a 5% chance of metastasis. Typically, GCT occur in the distal radius or around the knee joint, but rarely near the ankle joint.

Format

Case Study

Case Rpt Followup

18

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Gayana, H. Wanniarachchi, DPM	ghwanniarachchi@gmail.com	I/We have nothing to disclose	
Roshni Patel, DPM	roshnip218@gmail.com	I/We have nothing to disclose	
Nathan R. Mauren, DPM	nmaurendpm@gmail.com	I/We have nothing to disclose	

Title

Tibiototalcaneal Arthrodesis with Concomitant Distraction Osteogenesis for Large Segmental Bone Defects Following a Failed Total Ankle Implant Arthroplasty

Submit Date

10/15/2024

Correspondent

Last Name: Hidalgo

Full Name: Maria

Practice/Company/Residency Program:

Email: maria.hidalgo@mymail.barry.edu

Barry University School of Podiatric Medicine

Authors

Author 1: Maria P. Hidalgo, BS

Author 2: Garrett B. Nguyen, DPM, AACFAS

Author 3: Akshay Jain, DPM, AACFAS

Author 4: Bradley M. Lamm, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Revision surgery with large segmental defects following a failed total ankle replacement (TAR) can be challenging. The purpose of this case study is to document a successful reconstruction of a failed total ankle implant arthroplasty with a large segmental bone defect utilizing a bulk femoral head allograft for a tibiototalcaneal (TTC) arthrodesis with concomitant distraction osteogenesis via a motorized multiplanar external fixator device.

Methodology

Procedures

A 66-year-old female presented with a large segmental bone defect following a failed TAR for the treatment of a post-traumatic talar avascular necrosis. A staged approach was performed. A masqueteel induced membrane technique was utilized. A computer programmed multiplanar external fixator with motorized struts was applied. TTC distraction arthrodesis was performed with a bulk femoral head allograft. Proximal tibia and fibula was osteotomized and a gradual distraction osteogenesis performed via the motorized external fixator device.

Results

Post-operatively, the patient healed uneventfully. At 12 months, the patient ambulates without difficulty and relates no pain. Serial radiographs reveal complete osseous bridging and healing across the arthrodesis site and regenerate without evidence of reabsorption, subsidence, or loss of structural integrity.

Discussions

Revision surgeries for total ankle replacements with significant osseous deficits have high rates of non-union and complications causing pain and dysfunction. Use of a TTC arthrodesis with a motorized external fixator for distraction osteogenesis corrects the deformity while preserving limb length thus mitigating structural imbalances. This case highlights a successful staged approach for complex hindfoot revision after failed total ankle arthroplasty.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Maria P. Hidalgo, BS	maria.hidalgo@mymail.barry.edu	I/We have nothing to disclose	
Garrett B. Nguyen, DPM, AACFAS	gnguyen@paleyinstitute.org	I/We have nothing to disclose	
Akshay Jain, DPM, AACFAS	ajain@paleyinstitute.org	I/We have nothing to disclose	
Bradley M. Lamm, DPM, FACFAS	blamm@paleyinstitute.org	I/We have nothing to disclose	

Title

Microscopic Repair of Tibial Nerve neuroma following Trimalleolar ankle fracture repair: A case report

Submit Date

10/15/2024

Correspondent

Last Name:Malik

Full Name:Inshal MalikEmail:inshal.malik@hmn.org

Practice/Company/Residency Program:Jersey Shore University Medical Center

Authors

Author 1:Inshal Malik DPM

Author 2:James Polowczyk DPM

Author 3:Christolavantis Lakhiani MD

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this case report is to illuminate potential complications associated with nerve injury following ankle fracture repair. Ankle fractures are common injuries that often require surgical intervention, yet the risk of neurovascular complications remains a critical concern. This specific case involving a patient who experienced tibial nerve injury following surgical repair of a trimalleolar ankle fracture. Our objective is to highlight the importance of meticulous surgical technique, preoperative planning, and postoperative monitoring in mitigating the risk of nerve damage.

Methodology

Procedures

An unfortunate 69-year-old woman suffered persistent right ankle pain and hypoesthesia of her plantar foot after a trimalleolar fracture repair and subsequent hardware removal after healing of fractures. EMG confirmed tibial nerve injury at the tarsal tunnel, prompting a decompression and release. Intraoperative findings revealed dense scar tissue and a 4 mm neuroma-in-continuity, which was excised. An 8 mm cadaver nerve graft was then utilized for a tension-free microsurgical epineurial repair with 8-0 nylon sutures and thrombin glue. This surgical intervention aimed to alleviate complications from her previous injuries and enhance function and pain relief.

Results

Following nerve repair, the patient experienced significant pain reduction, improved sensation in the plantar foot, enhanced toe flexion strength, and increased overall function, leading to a better quality of life upon followup.

Discussions

The surgical intervention addressed severe complications from an ankle injury, including scar tissue/neuroma. The use of a cadaver nerve graft and microsurgical techniques aimed for effective repair. Positive outcomes expected include pain relief, improved function, and enhanced quality of life.

Format

Case Study

Case Rpt Followup

24

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Inshal Malik DPM	inshal.malik@hmn.org	I/We have nothing to disclose	
James Polowczyk DPM	james.polowczyk@hmn.org	I/We have nothing to disclose	
Christolavantis Lakhiani MD	christolavantis.lakhiani@hmn.org	I/We have nothing to disclose	

Title

Combination of Bisphosphonates and Bone Morphogenetic Protein (BMP) for Repeat Neuropathic Limb Salvage Reconstruction: A Novel Adjunct for Union Optimization

Submit Date

10/15/2024

Correspondent

Last Name: Azizi

Full Name: Soran, S, Azizi, DPM, PGY3

Practice/Company/Residency Program:

Email: soran.s.azizi@kp.org

Kaiser Foundation Hospital

Authors

Author 1: Soran, S, Azizi, DPM,PGY3

Author 2: Yaseer Y. Parupia, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This report is the first of its kind to illustrate the supplementation of BMP with bisphosphonates as an adjunct modality to aid in bony fusion following complex neuropathic rearfoot arthrodesis that required revision. In the case of challenging Charcot foot reconstruction, the incidence of delayed and non-union remains a hindrance to a successful outcome. We aim to mitigate this by combining the two with augmentation of allograft in complex revisional procedures.

Methodology

Procedures

In recent years, many orthopedic literature reports have provided convincing evidence for the synergy between local BMP and systemic bisphosphonates to improve bone fracture healing. Although most of the research is based on animal studies, there is a growing body of preclinical evidence, particularly in rodent models, that supports the biology behind BMP and bisphosphonates as dual interventions. We present a case of two patients, aged 60 and 48, who both underwent Charcot foot reconstruction via TTC nail. The index procedures led to suboptimal outcomes due to poor bony union. Ultimately, they underwent HWR and revisional TTC via a plating approach, in which BMP was added intraoperatively with allograft, in addition to bisphosphonate supplementation throughout the postoperative healing period.

Results

S/P HWR with TTC revision, both patients exhibited callus formation across the fusion mass, with adequate anatomic alignment and intact hardware.

Discussions

The utilization of combined BMP and bisphosphonates has the potential to optimize fusion rates following complex rearfoot arthrodesis procedures. More research, particularly focused on the clinical application of the two, is needed to support their use in Podiatric surgery.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Soran, S, Azizi, DPM,PGY3	soran.s.azizi@kp.org	I/We have nothing to disclose	
Yaseer Y. Parupia, DPM	yaseer.parupia@kp.org	I/We have nothing to disclose	

Title

Surgical Management of Checkrein Deformity in an 18-Year-Old Patient: A Case Study

Submit Date

10/15/2024

Correspondent

Last Name: Saggi

Full Name: Harvinder

Practice/Company/Residency Program:

Email: harvinder.saggi14@gmail.com

Tower Health- Reading Hospital

Authors

Author 1: Harvinder Saggi, DPM PGY3

Author 2: Jared Cicero, DPM

Author 3: Kaitlyn Krug, DPM PGY3

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case study explores the successful surgical treatment of a rare Checkrein deformity in an 18-year-old patient, emphasizing surgical techniques, outcomes, and recommendations for future cases.

Methodology

Procedures

Checkrein deformity is marked by involuntary toe plantarflexion due to flexor tendon fibrosis or tethering, often after trauma. Literature suggests surgery, including tendon release, can be effective, but guidance is limited for young athletes. An 18-year-old active patient presented with unilateral checkrein deformity affecting gait and athletic ability. Imaging confirmed tight, fibrotic FHL and FDL tendons without significant osseous issues. Surgery was performed after conservative measures failed. The patient underwent tarsal tunnel decompression with adjunctive Z-lengthening of the flexor hallucis longus (FHL) and flexor digitorum longus (FDL) tendons to alleviate contracture. A structured post-operative protocol, including immobilization and physical therapy, was implemented.

Results

Post-operative outcomes were positive, with complete resolution of the deformity and restored toe mobility. The patient successfully completed physical therapy and returned to sports without recurrence. 14-month follow-up confirmed sustained improvement without complications.

Discussions

The combination of decompression and tendon lengthening proved effective, leading to full recovery. Future procedural improvements could involve pinning the digits after tendon lengthening to prevent contracture and enhance stability. Further research is needed to confirm the long-term success of this approach. This case underscores the need for tailored surgical and rehabilitation strategies to achieve optimal outcomes for young, active patients with Checkrein deformity.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Harvinder Saggi, DPM PGY3	harvinder.saggi14@gmail.com	I/We have nothing to disclose	
Jared Cicero, DPM	hargur4@yahoo.com	I/We have nothing to disclose	
Kaitlyn Krug, DPM PGY3	kaitlyn.krug2@towerhealth.org	I/We have nothing to disclose	

Title

A Novel Surgical Approach for Isolated Exostosis and Dislocation of the 4th Tarsometatarsal Joint Using an Internal Brace

Submit Date

10/15/2024

Correspondent

Last Name: Saggi

Full Name: Harvinder

Practice/Company/Residency Program:

Email: harvinder.saggi14@gmail.com

Tower Health - Reading Hospital

Authors

Author 1: Harvinder Saggi DPM PGY3

Author 2: Jeffery Zimmerman, DPM

Author 3: Kevin Naugle, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To present a novel approach for treating an isolated exostosis and dislocation of the 4th tarsometatarsal joint (TMTJ) using an internal brace system for open reduction internal fixation (ORIF).

Methodology

Procedures

The 4th TMTJ is a critical mobile adapter in gait, and injuries here can lead to instability and pain. Traditional fixation methods may not always ensure optimal outcomes, highlighting the need for innovative techniques to improve joint stability without compromising mobility. A 33-year-old female with an isolated 4th TMTJ exostosis, dislocation, and mild degenerative joint disease (DJD) underwent ORIF using an internal brace system. The surgical procedure included resection of the exostosis, reduction, and stable yet flexible fixation. Post-operatively, the patient was managed with a CAM boot and progressed to weight-bearing as tolerated (WBAT) along with physical therapy.

Results

The internal brace facilitated anatomical alignment, allowing gradual weight-bearing and rehabilitation. At 2 months, the patient returned to normal activities without pain. Radiographs showed stable alignment, and the patient had full range of motion and strength without hardware complications. 14-month follow-up confirmed positive outcomes without reoccurrence.

Discussions

The internal brace effectively balanced stability and flexibility, aligning with literature emphasizing the 4th TMTJ's role as a mobile adapter. The positive outcome supports its potential as a preferred treatment option, warranting further studies to validate these findings.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Harvinder Saggi DPM PGY3	harvinder.saggi14@gmail.com	I/We have nothing to disclose	
Jeffery Zimmerman, DPM	hargur4@yahoo.com	Consultant/Advisor/Speaker (List all affiliations)	Arthrex
Kevin Naugle, DPM	kevin.naugle@towerhealth.org	I/We have nothing to disclose	

Title

Clinical Considerations for the Treatment of Pathological Sesamoid Fractures

Submit Date

10/16/2024

Correspondent

Last Name:Sholakh

Full Name:Aleem Sholakh B.S.

Practice/Company/Residency Program:

Email:asholakh@kent.edu

Kent State University College of Podiatric Medicine

Authors

Author 1:Dalon Paredes, DPM, PGY-1

Author 2:Shannon King, DO, PGY-4

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This paper compares the outcomes of three patients with a fractured sesamoid who were treated either with a sesamoidectomy or with an open reduction internal fixation (ORIF) with a screw or with non-surgical care.

Methodology

Procedures

fusion and avoid complications of delayed surgery. Sesamoidectomies may be an intervention that would be fine for the average individual, athletes competing at an advanced level may not be good candidates. For example, for a professional soccer player, it is even more crucial to reestablish the former anatomical position of the medial sesamoid rather than performing a sesamoidectomy, which could lead to altered biomechanics and reduced push-off strength. In Nakajima's case, a full return to pre-injury professional sport level was achieved within 10 weeks, which is comparable to the current literature of operatively treated fractures of the sesamoid.

Results

The subjects in this review were evaluated using a visual analog scale (VAS), numerical rating scale (NRS), biomechanical evaluation via gait analysis, and return to activities timelines.

Discussions

Physicians should consider an ORIF approach for patients that are deemed to be a good candidate for this procedure, so that additional data can be analyzed and compared versus other traditional treatment methods. The data generated creates an argument to consider ORIF even though a longer duration of postoperative recovery than sesamoid excision, which is typically eight weeks, the results seem to be promising when considering the increased likelihood of a patient achieving a long-term healthy prognosis with a biomechanically stable foot.

Format

Case Study

Case Rpt Followup

24

Student Club

Classification

Biomechanics and Anatomy

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Dalon Paredes, DPM, PGY-1	dparedes3@kent.edu	I/We have nothing to disclose	
Shannon King, DO, PGY-4	Skimg@UniversityHospitals.Org	I/We have nothing to disclose	

Title

Intraosseous Bioplasty - A Technique for Treating Cuboid Stress Injuries

Submit Date

08/15/2024

Correspondent

Last Name: Hill

Full Name: Zachary

Practice/Company/Residency Program:

Email: zph1582@gmail.com

Indy Foot and Ankle Reconstructive Surgery Fellowship

Authors

Author 1: Zachary Hill, DPM

Author 2: Andrew Regal, DPM

Author 3: Andrew Kapsalis, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Cuboid stress reactions are a relatively rare but significant source of pain and disability in the foot and ankle. Traditional treatments often include rest, immobilization, and physical therapy, which can result in prolonged recovery times. This case series explores the efficacy of the Bioplasty technique—a method widely supported in hip and knee literature—in treating cuboid stress reactions.

Methodology

Procedures

Three patients with symptomatic cuboid stress reactions underwent percutaneous Bioplasty. Each patient failed to respond to conservative treatments and experienced persistent pain and functional limitations. This minimally invasive procedure involves the percutaneous injection of a bone substitute material into the affected area to promote structural support and healing. The procedure was performed under fluoroscopic guidance to ensure the precise placement of bone substitute. Postoperative outcomes were evaluated based on pain relief, return to normal activity, and imaging studies to assess bone healing.

Results

All three patients experienced significant pain reduction and could return to their pre-injury activity levels within six weeks post-procedure. Follow-up imaging demonstrated satisfactory incorporation of the bone substitute with evidence of healing and resolution of the stress reactions. No complications or adverse events were reported at the final follow-up.

Discussions

This case series suggests that bioplasty is a viable and effective option for treating cuboid stress reactions, offering rapid pain relief and expedited return to activity. Given its success in these cases, further research and larger studies are warranted to validate the use of intraosseous bioplasty in the broader context of foot and ankle pathology.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Zachary Hill, DPM	zph1582@gmail.com	I/We have nothing to disclose	
Andrew Regal, DPM	regal.dpm@gmail.com	I/We have nothing to disclose	
Andrew Kapsalis, DPM	andrew_kapsalis@ahni.com	I/We have nothing to disclose	

Title

Benign Plexiform Schwannoma of the Foot and Ankle: A Case Study

Submit Date

08/15/2024

Correspondent

Last Name: Stallings

Full Name: William DPM

Practice/Company/Residency Program:

Email: wstallings.stallings@yale.edu

Department of Podiatric Surgery, Yale New Haven Hospital, New Haven, CT

Authors

Author 1: William Stallings, DPM

Author 2: Timothy P. Cheung, DPM, PhD, CPT

Author 3: Uzair Amjad, DPM

Author 4: Michael I. Gazes, DPM, MPH, FACFAS

Author 5: Fernando Pinero, DPM, AACFAS

Author 6:

Author 7:

Author 8:

Purpose

This study presents a rare case of plexiform schwannoma of the ankle, emphasizing the importance of surgical excision for effective symptom relief and prevention of neural deficits.

Methodology

Procedures

A 54-year-old woman presented with a painful 3 cm mass on her right ankle, initially suspected to be a ganglion cyst. Aspiration attempts failed, and only slight reduction occurred after a steroid injection. MRI revealed an indeterminate soft tissue mass, prompting the patient to opt for surgical excision.

Results

The mass, involving the superficial peroneal nerve, was successfully removed without nerve damage. Pathology confirmed a benign plexiform schwannoma. The patient recovered fully with no sensory deficits, and at the 1-year follow-up, there was no recurrence. This case study discusses a rare benign plexiform schwannoma in the lower extremity, emphasizing diagnostic imaging techniques like X-ray, ultrasound, and MRI, and highlights surgical excision as the primary treatment, with careful nerve preservation.

Discussions

Although superficial peroneal nerve plexiform schwannomas are relatively rare in the lower extremity, they should remain a consideration for practitioners evaluating soft tissue masses. When encountering an unidentified symptomatic mass, and opting for excisional biopsy as the treatment, it is crucial to perform careful dissection and preserve the surrounding soft tissue structures to minimize patient morbidity and ensure a successful outcome. While this case study provides valuable insights into these rare benign tumors and demonstrates no recurrence or complications in a 1 year follow up, further research is needed to quantify recurrence rates and identify additional etiologies or risk factors for their development.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
William Stallings, DPM	wstallings.stallings@yale.edu	I/We have nothing to disclose	
Timothy P. Cheung, DPM, PhD, CPT	timothy.cheung@yale.edu	I/We have nothing to disclose	
Uzair Amjad, DPM	uzair.amjad00@gmail.com	I/We have nothing to disclose	
Michael I. Gazes, DPM, MPH, FACFAS	michael.gazes@yale.edu	I/We have nothing to disclose	
Fernando Pinero, DPM, AACFAS	fpinero2018@gmail.com	I/We have nothing to disclose	

Title

A Reproducible technique in Midfoot Charcot Reconstruction

Submit Date

08/15/2024

Correspondent

Last Name: Stallings

Full Name: William, DPM

Practice/Company/Residency Program:

Email: william.stallings@yale.edu

Resident Physician, Podiatric Medicine and Surgery, Yale New Haven Hospital

Authors

Author 1: William Stallings, DPM

Author 2: Arij M. Rashid, DPM

Author 3: Timothy P. Cheung, DPM, PhD,CPT

Author 4: Garrett Rhoton, DPM

Author 5: Rafi Fasihuddin DPM

Author 6: Zachary Korwek DPM

Author 7: Peter Blume, DPM, FACFAS

Author 8:

Purpose

This study aims to evaluate the effectiveness of a novel limb salvage technique in three adult patients with midfoot Charcot breakdown complicated by chronic plantar ulceration and osteomyelitis. Through a multidisciplinary approach, combining advanced imaging, bone biopsies, targeted antimicrobial therapy, midfoot debridement, multiplanar correction, and septic fusion with external fixation, we achieved successful limb salvage.

Methodology

Procedures

This retrospective review examined three diabetic patients treated from summer 2022 to January 2024, all at high risk of limb amputation due to severe midfoot ulceration with osteomyelitis. The patients had rocker-bottom deformities and midfoot collapse, underwent wound debridement, wedge resection, and external fixation instead of proximal amputation.

Results

Radiographs showed bony/fibrous union in all three patients with midfoot collapse. Cultures primarily grew MRSA, treated with Vancomycin and other antibiotics. Pathology confirmed osteomyelitis. At 12 months post-surgery, all patients had plantigrade feet, no acute infection, and could ambulate with custom orthoses.

Discussions

Charcot Neuropathy presents a significant challenge for Foot and Ankle surgeons, especially when patients fail early treatments or present at advanced stages. This study outlines a technically demanding, multi-team approach for treating midfoot Charcot neuroarthropathy with osteomyelitis, leading to a wound-free, plantigrade foot within 12 months. The technique offers a practical solution for restoring function and preventing ulceration, though future studies with larger samples are needed to validate its effectiveness and reproducibility.

Format

Case Study

Case Rpt Followup

12

Student Club

Diabetic Foot

Classification

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
William Stallings, DPM	william.stallings@yale.edu	I/We have nothing to disclose	
Arij M. Rashid, DPM	arijrashid94@gmail.com	I/We have nothing to disclose	
Timothy P. Cheung, DPM, PhD,CPT	Timothy.cheung@yale.edu	I/We have nothing to disclose	
Garrett Rhoton, DPM	garrett.rhoton@yale.edu	I/We have nothing to disclose	
Rafi Fasihuddin DPM	rafi.fasihuddin@yale.edu	I/We have nothing to disclose	
Zachary Korwek DPM	zachary.korwek@yale.edu	I/We have nothing to disclose	
Peter Blume, DPM, FACFAS	peterb@ctfootandanklesurgery.com	I/We have nothing to disclose	

TitleLipofibromatosis-like Neural Tumor of the Foot: A Case Report

Submit Date08/31/2024

Correspondent

Last Name:KroleskiFull Name:JannaEmail:Jkrole@midwestern.eduPractice/Company/Residency Program:Midwestern University School of Podiatric Medicine

Authors

Author 1:Derek Swanson, PMSIIAuthor 2:Robert C. Lee, PMSIIAuthor 3:Annie Phan, MA, OMSIIAuthor 4:Janna Kroleski, DPM, MSAuthor 5:Author 6:Author 7:Author 8:

PurposeLipofibromatosis-like Neural Tumors (LPF-NTs) are an exceptionally rare, slow-growing, benign neural tumor typically appearing as purplish-red blisters on the hands, or buttocks. LPF-NTs were identified and named within the last 10 years, with only one other documented case within the foot, making proper diagnosis difficult. Diagnosis involves MRI, ultrasound, and histochemical analysis. Treatment mainly involves surgical excision, with NTRK inhibitors as an alternative. This case series documents a successful identification, and surgical removal of an LPF-NT and reviews the literature to enhance recognition, diagnosis, and treatment.

Methodology

ProceduresThe patient, a 26 year old female, presented in the clinic with a painful, red and purple mass and reported pain at the site. MRI and ultrasound revealed a primarily solid, hyperechoic mass, with the superior half being fluid-filled and hypoechoic. Doppler indicated vascular flow in the fluid area. Excisional removal of the LPF-NT was performed using blunt dissection down to the subcutaneous tissue.

ResultsPathological analysis identified no high-grade morphological features, ruling out metastasis. Immunohistochemistry revealed dermal spindle cell proliferation, cells positive for CD34/S100, and a KI-67 index of 10-15%. NTRK1 molecular abnormalities confirmed an LPF-NT diagnosis. At the most recent follow up no recurrence was noted.

DiscussionsExcision is the most common treatment for LPF-NTs. NTRK inhibitors have also been shown to reduce tumor size and growth, and are viable for cases with surgical risks. Further research is needed on treatments and diagnostic guidelines for LPF-NTs due to their novelty.

FormatCase Study

Case Rpt Followup15

Student ClubSoft Tissue/Tumor

Classification

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Derek Swanson, PMSII	Derek.swanson@midwestern.edu	I/We have nothing to disclose	
Robert C. Lee, PMSII	Robert.lee@midwestern.edu	I/We have nothing to disclose	
Annie Phan, MA, OMSII	Annie.phan@midwestern.edu	I/We have nothing to disclose	
Janna Kroleski, DPM, MS	jkrole@midwestern.edu	I/We have nothing to disclose	

Title

A Case Series of Talar Fracture Stabilization Utilizing Screws Made From Human Allograft Cortical Bone

Submit Date

09/16/2024

Correspondent

Last Name: Nguyen

Full Name: Khoa D. Nguyen, DPM, FACFAS

Email: kdn@valepodiatry.com

Practice/Company/Residency Program: Vale Foot & Ankle Surgery, PLLC

Authors

Author 1: Khoa D. Nguyen, DPM, FACFAS

Author 2: Boris Tirala, MD

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this case series is to present an alternative fracture stabilization with screws made from human allograft cortical bone in the setting of talar fracture Hawkins Type II and IV with high risk of avascular necrosis

Methodology

Procedures

Avascular necrosis (AVN) is among the most common complications of post surgical stabilization of talar fractures. Incidences of AVN in Hawkins Type II and IV can be as high as 49% and 70-100% respectively. The aim of this case study is to present an alternative fracture stabilization with human allograft cortical bone screw to further minimize incidence of AVN

Results

The two cases presented in this series consisted of a Hawkins type II and a Hawkins type IV fractures. Both cases underwent ORIF of the talus with human allograft cortical bone screws and in addition to subtalar/talonavicular joints arthrodesis in type IV fracture. There was no evidence of avascular necrosis observed after 12 months postoperatively.

Discussions

3 allograft cortical screws were utilized to stabilize the talar neck fracture and reduction of subtalar joint in Hawkins type II fracture. As for the Hawkins type IV fracture, 3 allograft cortical screws were utilized to primarily stabilize the talar body fracture in addition to subtalar joint and talonavicular joint arthrodesis via metal screws and staple. Both cases healed with no incidence of AVN observed in a limited case study. With such high risk of AVN following Hawkins Type II and IV fractures ORIF, human allograft cortical bone screw can be a viable option in these challenging cases.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Khoa D. Nguyen, DPM, FACFAS	kdn@valepodiatry.com	Consultant/Advisor/Speaker (List all affiliations)	Surgebright, Orthofix
Boris Tirala, MD	boris.tirala@kh-schwaz.at	Consultant/Advisor/Speaker (List all affiliations)	Surgebright

Title

Minocycline-Induced Black Bone Disease in Foot and Ankle Surgery: A Case Report

Submit Date

09/23/2024

Correspondent

Last Name:Cheung

Full Name:Timothy P Cheung, DPM, PhD, CPT

Practice/Company/Residency Program:

Email:timothy.cheung@yale.edu

Yale New Haven Hospital

Authors

Author 1:Timothy P Cheung, DPM, PhD, CPT

Author 2:Arij M Rashid, DPM, AACFAS

Author 3:Rumzah Paracha, MD

Author 4:Aashi Modi, DPM

Author 5:Glenn C Vitale, DPM, FACFAS

Author 6:Steven D Vyce, DPM, FACFAS

Author 7:

Author 8:

Purpose

The purpose of this case study is to report a rare case of Minocycline-Induced Black Bone Disease (MIBBD).

Methodology

Procedures

Bone and periarticular tissue discoloration can be an unexpected finding that is often disconcerting for surgeons and can alter surgical plans and overall patient management. Common causes of bone discoloration include infection, avascular necrosis, and bone inflammation. Minocycline-Induced Black Bone Disease is a rare and relatively benign pathology encountered in foot and ankle surgery that can cause significant black, blue and gray discoloration of bone. Unanticipated intraoperative findings of diffuse black, blue, and gray bone discoloration during an elective forefoot surgery raised concern for a metabolically malignant process and prompted the conversion of plans for a first metatarsophalangeal joint implant arthroplasty to a Keller arthroplasty. The plan for proximal interphalangeal joint arthroplasties of the lesser digits were continued as planned. Bone specimens were sent for pathologic analysis.

Results

Postoperative analysis identified chronic use of a minocycline for acne vulgaris. Pathologic analysis of the specimens ruled out malignant processes. Altogether, the data available led to the diagnosis of MIBBD. Since the last follow up, the patient has healed well without complications.

Discussions

Our case report underscores the importance of including the chronic use of tetracyclines in medical history intake during preoperative visits to assist the surgeon in intraoperative decision-making.

Format

Case Study

Case Rpt Followup

16

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Timothy P Cheung, DPM, PhD, CPT	timothy.cheung@yale.edu	I/We have nothing to disclose	
Arij M Rashid, DPM, AACFAS	arijrashid94@gmail.com	I/We have nothing to disclose	
Rumzah Paracha, MD	rumzah.paracha@yale.edu	I/We have nothing to disclose	
Aashi Modi, DPM	aashi.modi@yale.edu	I/We have nothing to disclose	
Glenn C Vitale, DPM, FACFAS	footfixers4@aol.com	I/We have nothing to disclose	
Steven D Vyce, DPM, FACFAS	steven.vyce@yale.edu	I/We have nothing to disclose	

Title

Surgical Correction of Cavus Foot after Partial Fifth Ray Amputation

Submit Date

08/22/2024

Correspondent

Last Name: Vyas

Full Name: Phoram B. Vyas, DPM

Practice/Company/Residency Program:

Email: phoram.vyas@gmail.com

Hunt Regional Medical Center

Authors

Author 1: Phoram B. Vyas, DPM

Author 2: Payaam P. Tavakoli, DPM

Author 3: Paul Brancheau, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Lateral column wounds are often attributed to biomechanical and structural deformities of the foot. Amputation of the entire fifth metatarsal is avoided when possible to maintain the pronatory forces of the peroneus brevis. However, cavus foot deformities can still occur with partial 5th ray amputations resulting in lateral column overload. This case series documents 3 cases of recurrent lateral column ulcers after partial 5th ray amputations treated with a combination of a tibialis anterior tendon transfer (TATT) and a lateral displacement calcaneal osteotomy (LDCO).

Methodology

Procedures

2 patients undergoing tibialis anterior tendon transfer and lateral displacement calcaneal osteotomy are included in this study. Both patients had recurrent lateral column wounds with bone biopsies confirming osteomyelitis of the residual 5th metatarsal. Preoperative standard x-rays revealed calcaneal varus deformities.

Results

Post-operative radiographs revealed correction of cavus foot with no non-unions or hardware failure in both patients. Both patients achieved an ulcer free foot within 12 weeks and have remained ulcer free.

Discussions

Infected wounds resulting in partial fifth ray amputations can create a power imbalance between muscle groups leading to lateral column overload. Evaluating for biomechanical pathology is important in operative planning. The combination of a tibialis anterior tendon transfer and lateral displacement calcaneal osteotomy can help create a more plantigrade ulcer free foot.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Diabetic Foot

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Phoram B. Vyas, DPM	phoram.vyas@gmail.com	I/We have nothing to disclose	
Payaam P. Tavakoli, DPM	payaamt1@gmail.com	I/We have nothing to disclose	
Paul Brancheau, DPM	pbrancheaudpm@gmail.com	I/We have nothing to disclose	

Case Study Report: Hydroxyapatite Coated Anchor Implant for Hallux Rigidus in a 62-Year-Old Female Patient

09/26/2024

Last Name: Taye

Full Name: LTC Michael Taye, DPM, FACFAS Email: michael.taye.mil@health.mil

Practice/Company/Residency Program: Walter Reed National Medical Center, United States Army

Author 1:	LTC Michael Taye, DPM, FAFAS	Author 2:	MAJ Kalani A. Parker, DPM, FAFAS
Author 3:		Author 4:	
Author 5:		Author 6:	
Author 7:		Author 8:	

Hallux rigidus presents a considerable challenge in forefoot surgery. This report outlines a novel approach with the hydroxyapatite coated anchor implant (HACAI) in a 62-year-old female with longstanding hallux rigidus and concurrent traumatic injury.

Procedures

Patient Presentation: 62-year-old female with Stage 3 hallux rigidus with persistent pain over 10 years. MRI of the foot was obtained to assess subchondral bone and identify cystic changes and revealed central metatarsal head cystic changes. The patient was provided with two surgical options of fusion or HACAI. During the decision-making process, the patient accidentally stubbed her hallux resulting in a proximal phalangeal head comminution fracture. Given this unforeseen injury, a more comprehensive surgical plan was devised. The surgical procedure involved interphalangeal joint fusion and cheilectomy with HACAI in the 1st metatarsal head.

The HACAI presents a joint preservation option, allowing for a more natural foot movement post-operation. The concurrent identification of metatarsal cystic changes underscores the importance of MRI in the diagnostic process for hallux rigidus.

MRI should be a standard diagnostic tool for patients with hallux limitus or rigidus to examine the subchondral bone. The HACAI should be considered as a joint preservation option, especially for patients who have cystic changes in the metatarsal or who sustain traumatic injuries concurrent with their hallux pathology. The case illustrates the potential benefits of a multi-pronged surgical approach that incorporates the HACAI in managing hallux rigidus, especially in complex presentations. The proactive use of MRI can enhance surgical planning and potentially improve patient outcomes.

Case Study

12

Classification	Forefoot Reconstruction
-----------------------	-------------------------

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
LTC Michael Taye, DPM, FACFAS	michael.taye.mil@health.mil	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Podiatry Consultant for Army Surgeon General
MAJ Kalani A. Parker, DPM, FACFAS	kalani.a.parker.mil@health.mil	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Podiatry Deputy Consultant for Army Surgeon General

Title

Compartment Syndrome in the Foot Induced by Hematogenous Spread of Abscess

Submit Date

08/22/2024

Correspondent

Last Name:Patel

Full Name:Niral A Patel, MS, DPM

Practice/Company/Residency Program:

Email:niral1994@gmail.com

Ascension St. Vicent - Indianapolis

Authors

Author 1:Niral A Patel, MS, DPM

Author 2:Patrick A. DeHeer, MS, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To present a case study highlighting the development of compartment syndrome in the foot due to hematogenous spread of an abscess in a patient with MSSA bacteremia, emphasizing the importance of early recognition and intervention.

Methodology

Procedures

Compartment syndrome secondary to hematogenous spread of an abscess is a rare but potentially devastating complication. Early recognition is challenging due to nonspecific symptoms, necessitating a high index of suspicion. Timely intervention, including surgical drainage and fasciotomy, is crucial to prevent irreversible tissue damage. This case underscores the importance of interdisciplinary collaboration and highlights the need for heightened clinical vigilance in managing similar presentations. Further research is warranted to explore optimal diagnostic strategies and treatment modalities for such complex cases.

Results

The patient underwent emergent surgical procedures, including multi-compartment fasciotomies of the foot, resulting in alleviation of compartmental pressure and improvement in vascular and neurological deficits. Multiloculated abscess was encountered intraoperatively displaying a metastatic phenomena of MSSA bacteremia. Postoperative recovery demonstrated significant improvement in symptoms and limb functionality.

Discussions

This case study emphasizes the significance of prompt diagnosis and intervention in preventing severe complications associated with compartment syndrome induced by hematogenous spread of an abscess in the foot. It also underscores the importance of interdisciplinary collaboration in managing complex cases and calls for further research to enhance our understanding of optimal diagnostic and therapeutic approaches.

Format

Case Study

Case Rpt Followup

16

Student Club

Wound Care/Infectious Diseases

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Niral A Patel, MS, DPM	niral1994@gmail.com	I/We have nothing to disclose	
Patrick A. DeHeer, MS, DPM	padeheer@gmail.com	I/We have nothing to disclose	

TitleMerkel Cell Carcinoma of the Foot: Case Study and Literature Review

Submit Date08/25/2024

Correspondent

Last Name:KungFull Name:Michelle, DPMEmail:mkung@bidmc.harvard.eduPractice/Company/Residency Program:Beth Israel Deaconess Medical Center

Authors

Author 1:Michelle Kung, DPMAuthor 2:Thanh Dinh, DPM, FACFASAuthor 3:Author 4:Author 5:Author 6:Author 7:Author 8:

PurposeThe purpose of this case study is to review current literature regarding Merkel cell carcinoma including etiology, diagnosis, clinical and histopathological presentation, and to present a rare instance of Merkel cell carcinoma of the foot at our home institution.

Methodology

Procedures62M with a PMH of congenital hearing loss, cerebral palsy, developmental delay, hypertension, hyperlipidemia, peripheral vascular disease, chronic obstructive pulmonary disorder, urinary incontinence and hepatitis C presenting with a painful soft tissue mass to the right heel. Physical exam of the right foot revealed an open lesion to the lateral heel with a granular base and an underlying palpable firm soft tissue mass that was tender upon palpation. Neurovascular status was intact. Radiographs revealed a multilobulated fullness without any underlying osseous abnormality. MRI demonstrated multiple lobulated subcutaneous lesions along the lateral hindfoot and midfoot.

ResultsHistopathological assessment of the surgically resected specimen revealed Merkel cell carcinoma

DiscussionsMerkel cell carcinoma (MCC) is a rare and aggressive form of carcinoma of the skin that presents as a rapidly growing, violaceous, firm, dome-shaped lesion typically found on sun-exposed areas. We present a rare case of MCC to the lateral aspect of the right heel. Given its high recurrence rate, metastatic risk and mortality rate, management of MCC involves a multimodal approach through wide excision, lymph node biopsy, routine PET CT scan imaging, radiation and cytotoxic chemotherapy. This case emphasizes the importance of such an approach in diagnosing, treating and managing MCC.

FormatCase Study

Case Rpt Followup12

Student Club

ClassificationSoft Tissue/Tumor

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Michelle Kung, DPM	mkung@bidmc.harvard.edu	I/We have nothing to disclose	
Thanh Dinh, DPM, FACFAS	tdinh@bidmc.harvard.edu	I/We have nothing to disclose	

TitleRevision Total Talus Replacement Due to Recurrent Deformity: A Case Report

Submit Date08/26/2024

Correspondent

Last Name:RegalFull Name:Andrew J Regal, DPM, AACFASEmail:regal.dpm@gmail.comPractice/Company/Residency Program:Indy Foot and Ankle - Reconstructive Surgical Fellowship

Authors

Author 1:Andrew J Regal, DPM, AACFASAuthor 2:Zachary Hill, DPM, AACFASAuthor 3:Kalen Farr, DPM, AACFASAuthor 4:Donald McDonald, DPM AACFASAuthor 5:Douglas K Blacklidge, DPM FACFASAuthor 6:Author 7:Author 8:

PurposeAvascular necrosis (AVN) of the talus is a significantly debilitating condition which continues to be difficult to treat. Operative treatment frequently necessitates ankle and/or hindfoot arthrodesis. 3D printing advancements have allowed for development of custom prosthesis, including talar replacements, to address significant bone voids. These prostheses have improved over time, with modern implants replacing the entire talus and allowing for many modifications including modular components. Revisional total talus replacements have not been well described.

Methodology

Procedures47 year old female patient who has undergone a revision total talus replacement due to recurrent deformity and pain status post total talus replacement with talonavicular fusion and flatfoot reconstructive osteotomies. Procedures: Hardware removal and replacement of total talus prosthesis, talonavicular and subtalar joint arthrodesis. These were performed to address recurrent deformity, hindfoot pain, and to prepare for possible future procedures including total ankle replacement.

ResultsImproved function and alignment with questionable radiographic osseous integration at final follow-up. She is now ambulating utilizing a fixed AFO.

DiscussionsAs 3D printed custom total prostheses become more popular and complications are encountered, revisional procedures will be required. We present a case of recurrent pes planus deformity and chronic pain in the hindfoot successfully treated with a revisional total talus implant constrained to the navicular and calcaneus. The implant includes modular capabilities to allow for future procedures such as implantation of total ankle replacement tibial tray with polyethylene.

FormatCase Study

Case Rpt Followup34

Student Club

ClassificationRearfoot and Ankle Reconstruction

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Andrew J Regal, DPM, AACFAS	regal.dpm@gmail.com	I/We have nothing to disclose	
Zachary Hill, DPM, AACFAS	zachary.hill@ahni.com	I/We have nothing to disclose	
Kalen Farr, DPM, AACFAS	kalen_farr@ahni.com	Consultant/Advisor/Speaker (List all affiliations)	Enovis Medical
Donald McDonald, DPM AACFAS	donald_mcdonald@ahni.com	I/We have nothing to disclose	
Douglas K Blacklidge, DPM FACFAS	douglas_blacklidge@ahni.com	Consultant/Advisor/Speaker (List all affiliations)	Paragon28

Submission ID	05-00711		Ref ID CS-711
Title	A Typhus Among Us: An Introduction to a Rare Rickettsia typhi Infection #2		
Submit Date	08/27/2024		
Correspondent	Last Name:	Armstrong	
	Full Name:	Alexandria, A, Armstrong, DPM PGY2	Email: armstronga4@uthscsa.edu
	Practice/Company/Residency Program:	University of Texas Health Science Center San Antonio	
Authors	Author 1:	Alexandria, A, Armstrong, DPM PGY2	Author 2:
	Author 3:		Author 4:
	Author 5:		Author 6:
	Author 7:		Author 8:
Purpose	Rickettsia typhi is a flea-borne disease most noted for the disease murine typhus seen worldwide. With pest prevention practices, incidence has dropped to less than 100 cases reported annually across the United States. Most cases are self-limiting, beginning as fever, chills, malaise which resolve in 99% of cases, with 1% of cases causing systemic illness and potentially death.		
Methodology			
Procedures	A 35-year-old male with no PMH presents to the ED from OSH where he spent 3 weeks intubated for disseminated Typhus and septic shock. Patient presents with gangrene of his hands and feet from pressor use. Upon presentation, BP 126/62, HR 120s, CRP 19.30 and WBC 9.79. Patient notes he was bitten by a flea from a cat at his friends house approx 2 weeks prior. Patient was transferred from ED to the floor to be monitored for potential surgical intervention.		
Results	Decision was made to wait until demarcation of pressor induced gangrene for b/l lower extremities. During this time, patient had his b/l hands amputated. After initial b/l TMAs patient had multiple surgical debridement's with application of skin grafts and wound VAC which eventually lead to b/l Chopart amputations with intramedullary rod insertion. Patient was then discharged and seen in podiatry clinic. s/p debridement's in clinic patient healed approximately 1 month after discharge from hospital.		
Discussions	Rickettsia typhi is a rare flea-borne disease which often takes multiple tests to be recognized. Proper surgical management with a multidisciplinary team approach is necessary to increase quality of life from pressor induced gangrene.		
Format	Case Study		
Case Rpt Followup	13		
Student Club			
Classification	Wound Care/Infectious Diseases		
Level of Evidence	Level IV		
Authors/Financial Disclosures			
Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Alexandria, A, Armstrong, DPM PGY2	armstronga4@uthscsa.edu	I/We have nothing to disclose	

Title

Management of A Degloved Injury of Posterior Heel After Severe Foot Crush Injury

Submit Date

09/02/2024

Correspondent

Last Name: Tran

Full Name: Nhan L. Tran DPM MBS

Practice/Company/Residency Program:

Email: tranlnl@cmich.edu

Central Michigan University Podiatric Medicine & Surgery Residency

Authors

Author 1: Derek R. Tesoro DPM FACFAS

Author 2:

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Degloving injuries involving foot and ankle are often seen in high-energy trauma such as crush injuries or motor vehicle accidents. However, degloving injury to the posterior heel is very rare and not well reported in orthopedic trauma literature. In this case study, we present a salvage strategy for an open injury to the foot and ankle with full-thickness soft tissue detachment from posterior heel.

Methodology

Procedures

A 66-year-old male presented to the ED with a crush injury to his left foot that had resulted in a degloving injury of the posterior heel. Furthermore, radiographic imaging also revealed non-displaced distal phalanx fracture of the left hallux, small avulsion fracture of posteromedial of the left talus, small fracture fragment of the anterior process of the calcaneus and minimally displaced oblique fracture of the proximal left fibular. No tendon or arterial injury was noted. The initial management involved irrigation and debridement of necrotic tissues. Negative pressure wound therapy (NPWT) was applied for 2 weeks. Subsequently, Kerecis MariGen fish-skin graft and local wound care were employed to promote closure of the soft tissue defect at the left posterior heel.

Results

At 13-month follow up, patient's degloved injury to the left posterior heel was fully closed without complications. Patient was able to ambulate without having discomfort or weakness to the left foot.

Discussions

In conclusion, the combination of early negative pressure wound therapy (NPWT), local wound care and application of xenograft provided a good functional and cosmetic outcome to the degloving injury of posterior heel.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name: Derek R. Tesoro DPM FACFAS

Email: tesor1dr@cmich.edu

Disclosure(s) selected: I/We have nothing to disclose

Disclosed Organisation(s):

Title

Remote Care for wounds using super absorbent polymer dressings for patients unable to receive direct care due to social or economical disadvantages

Submit Date

09/01/2024

Correspondent

Last Name:Abukhieran

Full Name:Ibrahim

Practice/Company/Residency Program:

Email:abukhieran.ibrahim@scrippshealth.org

Scripps Mercy Hospital/ PGY-2 resident

Authors

Author 1:Trent Brookshier, DPM

Author 2:Ibrahim Abukhieran, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Lower extremity wounds, especially in patients with diabetes, vascular disease, or other chronic conditions, face challenges in healing due to poor blood flow, infection, mechanical stress, and socioeconomic barriers. Superabsorbent dressings offer an effective solution by managing wound exudate, reducing infection risk, and promoting healing. They are easy to use, suitable for home care, and minimize the need for frequent changes, making them ideal for patients with limited healthcare access. This research aims to assess the effectiveness of these dressings in improving outcomes for socioeconomically disadvantaged patients.

Methodology

Procedures

This study followed 12 patients over 24 months focusing on 5 cases. Patients with diabetes, peripheral vascular disease, and other comorbidities were treated with Zetuvit. Wound healing progress was measured from initial to final visits, especially for those with limited care access

Results

Superabsorbent polymer dressings showed significant benefits, including reduced wound size, improved healing, and fewer complications like infections. Patients experienced greater comfort and convenience with fewer dressing changes, reducing the need for frequent doctor visits. These dressings played a crucial role in promoting tissue repair, highlighting its potential as an effective wound care solution.

Discussions

Superabsorbent polymer dressings improve healing in non-healing wounds by effectively managing exudate, reducing infection risk, and minimizing dressing changes, which benefits patients with limited healthcare access. Key biomarkers like IL-1, TNF, and MMPs are crucial in identifying healing potential. Our study showed that these dressings reduce wound size, enhance healing, and lower complications, making them valuable for patients with limited access to medical care

Format

Case Study

Case Rpt Followup

24

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Trent Brookshier, DPM	trentbrookshier@gmail.com	I/We have nothing to disclose	
Ibrahim Abukhieran, DPM	abukhieran.ibrahim@scrippshealth.org	I/We have nothing to disclose	

Title

Tumor Necrosis Factor- Alpha (TNF- α) Inhibitor Induced Podiatric Pustular Psoriasis

Submit Date

09/02/2024

Correspondent

Last Name: correale

Full Name: Celina, L, Correale, DPM

Practice/Company/Residency Program:

Email: celina.correale@nyulangone.org

NYU Grossman Long Island School of Medicine

Authors

Author 1: Celina, L, Correale, DPM

Author 3:

Author 5:

Author 7:

Author 2:

Author 4:

Author 6:

Author 8:

Purpose

This reports serves to bring awareness to common side effects of TNF- α inhibitor agents, including pustular psoriatic eruptions. This study aims to assist physicians in recognizing the adverse effects of TNF- α inhibitor agents and inform them on effective treatments. By highlighting this challenge, this case report aims to increase efforts towards advancing therapeutic strategies in the management of this condition.

Methodology

Procedures

This is a 52-year-old female who presented to the emergency room with a sudden outbreak of pustular lesions affecting both plantar feet. The patient reported a history of rheumatoid arthritis being managed with anti-TNF- α inhibitor agent, Infliximab. Upon examination, numerous erythematous pustules were observed on bilateral feet, accompanied by severe pain. The lesions appeared shortly after the initiation of anti-TNF- α therapy. Literature on anti-TNF- α induced pustular psoriasis and it's treatment, highlights the complexity of managing this adverse reaction.

Results

The patient was discharged from the hospital on oral retinoids and methotrexate. The patient was to continue with local wound care consisting of mupirocin and dry sterile dressing to the lesions. The patient was started on Rinovoq which has controlled the pustular psoriasis.

Discussions

Studies have noted the occurrence of pustular psoriasis in patient's undergoing treatment with anti-TNF- α agents. Management typically entails discontinuation of the anti-TNF- α agent and initiation of topical corticosteroids, phototherapy, or immunosuppressants. However, challenges persist in resolution of symptoms, emphasizing the necessity for further research to refine therapeutic strategies for the treatment of this adverse reaction.

Format

Case Study

Case Rpt Followup

13

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:

Email:

Disclosure(s) selected:

Disclosed Organisation(s):

Celina, L, Correale, DPM

celina.correale@nyulangone.org

I/We have nothing to disclose

TitleAll Arthroscopic Brostrom Repair using Bio-Inductive Biocomposite Scaffold Graft

Submit Date10/08/2024

Correspondent

Last Name:VerdoniFull Name:Tyler J. Verdoni, DPM AACFASPractice/Company/Residency Program:Tyler J. Verdoni, DPM AACFASEmail:tyler.verdoni@gmail.comFlorida Orthopedic Foot and Ankle Center (FLOFAC)

Authors

Author 1:Tyler J. Verdoni, DPM AACFASAuthor 2:Jay S. Badell, DPM FACFASAuthor 3:James M. Cottom, DPM, FACFASAuthor 4:Author 5:Author 6:Author 7:Author 8:

PurposeTo describe the use of a bio-inductive biocomposite scaffold graft for an all arthroscopic brostrom repair

Methodology

ProceduresSuture tape augmentation has become the gold standard for lateral ankle stabilization with augmentation over the past decade. Recently, biologic synthetic ligaments have been used for augmentation of the ATFL due to its nature of elasticity which more closely mimics the native ligament. In this case report, we present the use of the bio-inductive biocomposite scaffold graft during an all arthroscopic brostrom repair. The procedure was done in standard fashion after adequate ankle arthroscopy and utilizing the bio-inductive biocomposite scaffold graft, the ATFL repair was augmented with an all inside approach.

ResultsWe present a 59 year old female with chronic ankle instability who underwent a successful all arthroscopic brostrom repair utilizing a bio-inductive biocomposite scaffold graft.

DiscussionsThe use of a bio-inductive biocomposite scaffold graft in lateral ankle stabilization has proven beneficial. While the graft has the tensile strength to augment and protect the ATFL repair, its ability to promote healing of the ligament due to its collagenous nature helps reinforce the repair. In our practice, we routinely use an all arthroscopic approach for lateral ankle stabilization. This case report is the first of its kind to describe the use of this novel bio-inductive biocomposite scaffold graft for lateral ankle stabilization using an all arthroscopic approach. As technology continues to advance the foot and ankle surgeon should utilize products that most closely mimic native tissue.

FormatCase Study

Case Rpt Followup12

Student Club

ClassificationArthroscopy

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Tyler J. Verdoni, DPM AACFAS	tyler.verdoni@gmail.com	I/We have nothing to disclose	
Jay S. Badell, DPM FACFAS	jaybadell@gmail.com	I/We have nothing to disclose	
James M. Cottom, DPM, FACFAS	jamescottom300@hotmail.com	I/We have nothing to disclose	

Title

Eccrine Poroma of the Foot: An Atypical Presentation

Submit Date

09/05/2024

Correspondent

Last Name: Tran

Full Name: David V. Tran, DPM, FACFAS

Practice/Company/Residency Program:

Email: dtran3209@gmail.com

St. Francis Medical Center

Authors

Author 1: David V. Tran, DPM, FACFAS

Author 2: Nghia V. Tran, MD

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

We sought to highlight a soft tissue tumor of the foot, seen with aberrant size secondary to the patient's underlying immunocompromised status.

Methodology

Procedures

A 68-year-old male presented with a painful soft tissue mass on the central, plantar aspect of the foot. The mass has been present for at least 7 years and was noted to have increased in size and pain over the past 6 months. The inability to stand for long durations or ambulate for ADLs has brought the patient to seek treatment.

Results

The mass was excised and measured 4.0 x 3.5cm x 1.0cm. Histopathology confirmed complete excision of the mass which was determined to be a pendulating eccrine poroma. The patient's wound was closed with a local rotational flap. At one year follow up, the patient is ambulating without pain or recurrence of the lesion.

Discussions

In primary skin lesions, sweat gland tumors account for approximately 1% of all cases, whereas eccrine and apocrine poromas are believed to account for approximately 10%. There have been several case reports of eccrine poromas found on the plantar foot, however the largest reported case of an eccrine poroma measured 2.5cm x 2.0cm with a base 0.5cm. This case highlights a unique presentation of a pendulating tumor nearly twice as large as has been previously reported. This aberrant growth is likely precipitated by the patient's underlying immunocompromised status.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
David V. Tran, DPM, FACFAS	dtran3209@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Integra LifeSciences
Nghia V. Tran, MD	d_tran3209@yahoo.com	I/We have nothing to disclose	

Title

Surgical Management of Malignant Skin Lesions of the Webspace with Wide Excision and Syndactylization

Submit Date

09/07/2024

Correspondent

Last Name: Mahadai

Full Name: Adena Mahadai, DPM

Practice/Company/Residency Program:

Email: adena9170@yahoo.com

University of Cincinnati Medical Center

Authors

Author 1: Adena Mahadai, DPM

Author 2: Michael McKerson, DPM

Author 3: Sameer Patel, MD

Author 4: Michael Liette, DPM, FACFAS, ABPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To discuss the utility of syndactylization as a primary soft tissue reconstructive option after the wide local excision of skin cancers located within the webspace. Interdigital lesions are often associated with benign conditions and may frequently be overlooked. We aim to bring awareness to the increased frequency of these lesions encountered in the immunocompromised patient population as well as the appropriate diagnosis and treatment of these skin cancers.

Methodology

Procedures

Two immunocompromised patients with skin cancer located within the webspace who underwent wide local excision followed by syndactylization of the adjacent digits.

Results

Successful soft tissue reconstruction after wide local excision of malignancy via syndactylization of adjacent digits.

Discussions

Syndactylization is a commonly used surgical procedure performed to treat various interdigital skin lesions as well as stabilize adjacent toes. This procedure may additionally be utilized to reconstruct webspace soft tissue deficits after wide local excision of malignant tumors. Malignancy of the lower extremity is often considered rare, but more frequently encountered in patients with immunocompromise, including those with HIV. Expedited soft tissue coverage via syndactylization may provide additional value in this patient population to minimize risk of infection and additional patient morbidity.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Adena Mahadai, DPM	mahadaaa@ucmail.uc.edu	I/We have nothing to disclose	
Michael McKerson, DPM	mckersml@ucmail.uc.edu	I/We have nothing to disclose	
Sameer Patel, MD	patel5se@ucmail.uc.edu	I/We have nothing to disclose	
Michael Liette, DPM, FACFAS, ABPM	lietteml@ucmail.uc.edu	I/We have nothing to disclose	

TitleSAPHO Syndrome Mimicking Acute Osteomyelitis in the Lower Extremity: A Case Study

Submit Date09/07/2024

CorrespondentLast Name: DhawanFull Name: Gurdrishti, Dhawan, DPM, MPHEmail: gdhawan@bidmc.harvard.eduPractice/Company/Residency Program: Beth Israel Deaconess Medical Center Boston

AuthorsAuthor 1: Gurdrishti, Dhawan, DPM, MPHAuthor 2: Shadi, Mattar, DPMAuthor 3: John, T, Marcoux, DPM, FACFASAuthor 4: Author 5: Author 6: Author 7: Author 8:

PurposeSAPHO syndrome is a rare disorder characterized by osseous and dermatological symptoms. We present a case of SAPHO mimicking acute osteomyelitis in the foot and emphasize the importance of recognizing atypical rheumatological diseases as potential differential diagnoses, particularly when conventional treatments have proven ineffective.

Methodology

Procedures27F PMHx exertional compartment syndrome, childhood eczema, and cystic acne presenting to clinic with a painful right fifth digit. Two weeks prior to presentation, patient was hospitalized and treated with IV antibiotics for cellulitis and vesicular rash eruption on the affected digit. Inpatient imaging was inconclusive for osteomyelitis and showed no evidence of drainable fluid collection. Patient remained afebrile with no abnormal lab values. Patient was discharged on oral antibiotics with recurrence of symptoms upon discharge. Physical examination in clinic revealed intact neurovascular status with erythema and edema to the right fifth digit. No open lesions or palpable fluid collections were noted. Pain was present on passive and active range of motion of the fifth MTPJ without crepitus. A repeat MRI remained inconclusive for early osteomyelitis, revealing osteitis without evidence of synovitis or tenosynovitis. These findings were confirmed by ultrasound.

ResultsPatient concurrently developed new-onset dermatologic, orthopedic, and pulmonary symptoms and was referred to rheumatology. Rheumatology workup was positive for SAPHO, and the patient responded positively to NSAID, Humira, Methotrexate, and Plaquenil treatment.

DiscussionsStandardized diagnostic and treatment criteria for SAPHO are limited, and further research is needed for optimal outcomes. It is essential to consider Rheumatologic diseases as potential differential diagnoses during a comprehensive podiatric evaluation.

FormatCase Study

Case Rpt Followup36

Student Club

ClassificationWound Care/Infectious Diseases

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Gurdrishti, Dhawan, DPM, MPH	gdhawan@bidmc.harvard.edu	I/We have nothing to disclose	
Shadi, Mattar, DPM	sdmattar@lhs.org	I/We have nothing to disclose	
John, T, Marcoux, DPM, FACFAS	marcou2@bidmc.harvard.edu	I/We have nothing to disclose	

Title

Not Your Average Mass: A Rare Case of Soft Tissue Chondroma in the Foot

Submit Date

09/09/2024

Correspondent

Last Name: Dhawan

Full Name: Gurdrishti, Dhawan, DPM, MPH

Practice/Company/Residency Program:

Email: gdhawan@bidmc.harvard.edu

Beth Israel Deaconess Medical Center Boston

Authors

Author 1: Michelle, Kung, DPM

Author 2: Gurdrishti, Dhawan, DPM, MPH

Author 3: John, T, Marcoux, DPM, FAFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To present a case of a rare soft tissue chondroma in the foot

Methodology

Procedures

49M presenting with painful soft tissue mass at the ball of his left foot, ongoing for one year chronicity with no increase in size. Patient underwent unsuccessful aspiration of the STM with failed treatment with prednisone at OSH. Physical exam of the left foot revealed a palpable, firm soft tissue mass, approximately 2 cm in diameter, beneath the dermis of the plantar aspect of the second metatarsal. There were no overlying skin changes and the mass was not tender to palpation. Neurovascular status was intact. Radiographs revealed a small area of calcification in the area of the soft tissue mass. MRI demonstrated a mass adjacent to the FDL tendon of the second digit. As a result, patient underwent surgical excisional biopsy

Results

Histopathological assessment of the surgically resected specimen revealed a soft tissue chondroma

Discussions

Soft tissue chondroma (STC) is a rare clinical pathology that is characterized by several unique features: 1. Benign, 2. Not attached to underlying bone, 3. Slow growing, 4. No predilection for specific age or sex, 5. Characteristic cell atypia on histology. Due to its low incidence, the diagnosis of STC can often be overlooked. We present a case of STC localized to the plantar aspect of the second MTPJ. Recurrence rates for STC post-excision range from 15% to 25% and vary based on location, size, and quality of surgical excision. This case emphasizes the importance of surgical excision as a definitive procedure for both the accurate diagnosis and treatment of STC.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Michelle, Kung, DPM	mkung@bidmc.harvard.edu	I/We have nothing to disclose	
Gurdrishti, Dhawan, DPM, MPH	gdhawan@bidmc.harvard.edu	I/We have nothing to disclose	
John, T, Marcoux, DPM, FAFAS	jmarcou2@bidmc.harvard.edu	I/We have nothing to disclose	

Title

Tibial Nerve External Neurolysis with Nerve Wrap and Flatfoot Correction for Revision Tarsal Tunnel Surgery

Submit Date

09/09/2024

Correspondent

Last Name: Liette

Full Name: Michael D Liette FACFAS

Email: mliettedpm@gmail.com

Practice/Company/Residency Program: University of Cincinnati

Authors

Author 1: Bryce Yamat, DPM

Author 2: Adena Mahadai, DPM

Author 3: Zoe Dolcimascolo, DPM

Author 4: Richard Laughlin, MD

Author 5: Michael D. Liette, DPM, FACFAS

Author 6:

Author 7: Author 8:

Purpose

To identify and bring recognition to the potential multifactorial etiology of tarsal tunnel syndrome and the need to simultaneously address contributing pathologies while performing nerve release.

Methodology

Procedures

Thirty-three-year-old female undergoing revision tarsal tunnel with external neurolysis/nerve wrap and simultaneous flatfoot reconstruction. Procedures performed after appropriate clinical and diagnostic testing including: clinical examination, radiographs, MRI, and diagnostic block.

Results

No recurrence of symptoms at this time.

Discussions

Tarsal tunnel syndrome is a complex, potentially multifactorial disorder. Patients typically present with paresthesia although clinical symptoms may vary widely and lead to misdiagnosis. There is a slight female predilection, 56%. An identifying cause may be seen in 60-80% of cases, including: trauma, space occupying lesions, fibrosis, or hindfoot deformity. Underlying valgus deformities may play a significant role in the symptoms of tarsal tunnel syndrome, contributing to increased tension on the nerve. Failure to identify and correct other contributing pathologies may lead to inadequate patient outcomes. Revision cases require detailed physical examination and diagnostic modalities to ensure proper treatment is performed but outcomes are seen as variable with several treatment approaches described.

Format

Case Study

Case Rpt Followup

24

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Bryce Yamat, DPM	yamatbr@ucmail.uc.edu	I/We have nothing to disclose	
Adena Mahadai, DPM	mahadaaa@ucmail.uc.edu	I/We have nothing to disclose	
Zoe Dolcimascolo, DPM	dolcimze@ucmail.uc.edu	I/We have nothing to disclose	
Richard Laughlin, MD	laughlrt@ucmail.uc.edu	I/We have nothing to disclose	
Michael D. Liette, DPM, FACFAS	mliettedpm@gmail.com	I/We have nothing to disclose	

Title

Utilizing Spare Part Technique to Aid in Complex Wound Reconstruction

Submit Date

09/09/2024

Correspondent

Last Name: Liette

Full Name: Michael D. Liette, FACFAS

Practice/Company/Residency Program: University of Cincinnati Medical Center

Email: mliettedpm@gmail.com

Authors

Author 1: Zoe Dolcimascolo, DPM

Author 2: Bryce Yamat, DPM

Author 3: Suhail Masadeh, DPM, FACFAS

Author 4: Zachary Washburn, DPM

Author 5: Michael D. Liette, DPM, FACFAS

Author 6:

Author 7:

Author 8:

Purpose

To present a case of limb salvage utilizing spare parts surgery to aid in coverage of a large soft tissue deficit after a necrotizing infection.

Methodology

Procedures

A forty-three-year-old patient with necrotizing fasciitis undergoing serial debridements resulting in a large soft tissue deficit. Spare parts technique utilized to reduce patient morbidity and retain function.

Results

Successful salvage of the foot after surgical management of necrotizing fasciitis utilizing spare part techniques to aid in soft tissue coverage.

Discussions

Necrotizing fasciitis is a rapidly progressive infection that often results in large soft tissue deficits, amputation, significant morbidity or mortality. This infection requires emergent surgical debridement and the end result of these surgeries often results in large soft tissue defects with complex wounds. "Spare parts" surgery utilizes viable tissue from non-salvageable areas of the extremity to aid in coverage of these defects. Several types of "spare parts" have been described and include digital fillet flaps, full thickness skin grafts, and free flaps. This surgical technique has been utilized in oncologic reconstruction, post-infectious reconstruction and post-traumatic reconstruction. The use of full thickness skin grafts over joints has been shown to reduce contracture and retain function.

Format

Case Study

Case Rpt Followup

16

Student Club

Classification

Diabetic Foot

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Zoe Dolcimascolo, DPM	dolcimze@ucmail.uc.edu	I/We have nothing to disclose	
Bryce Yamat, DPM	yamatbr@ucmail.uc.edu	I/We have nothing to disclose	
Suhail Masadeh, DPM, FACFAS	masadesb@ucmail.uc.edu	I/We have nothing to disclose	
Zachary Washburn, DPM	washbuzymd@ucmail.uc.edu	I/We have nothing to disclose	
Michael D. Liette, DPM, FACFAS	mliettedpm@gmail.com	I/We have nothing to disclose	

Title

Surgical Management of Malignant Skin Lesions of the Webspace with Wide Excision and Syndactylization in Immunocmopromised Patient

Submit Date

09/09/2024

Correspondent

Last Name: Liette

Full Name: Michael D. Liette, DPM, FACFAS

Practice/Company/Residency Program:

Email: mliettedpm@gmail.com

University of Cincinnati Medical Center

Authors

Author 1: Adena Mahadai, DPM

Author 2: Michael McKerson, DPM

Author 3: Sameer Patel, MD

Author 4: Suhail Masadeh, DPM, FACFAS

Author 5: Michael D. Liette, DPM FACFAS

Author 6:

Author 7:

Author 8:

Purpose

To discuss the utility of syndactylization as a primary soft tissue reconstructive option after the wide local excision of skin cancers located within the webspace. Interdigital lesions are often associated with benign conditions and may frequently be overlooked. We aim to bring awareness to the increased frequency of these lesions encountered in the immunocompromised patient population as well as the appropriate diagnosis and treatment of these skin cancers.

Methodology

Procedures

Two immunocompromised patients with skin cancer located within the webspace who underwent wide local excision followed by syndactylization of the adjacent digits.

Results

Successful soft tissue reconstruction after wide local excision of malignancy via syndactylization of adjacent digits.

Discussions

Syndactylization is a commonly used surgical procedure performed to treat various interdigital skin lesions as well as stabilize adjacent toes. This procedure may additionally be utilized to reconstruct webspace soft tissue deficits after wide local excision of malignant tumors. Malignancy of the lower extremity is often considered rare but more frequently encountered in patients with immunocompromise, including those with HIV. Expedited soft tissue coverage via syndactylization may provide additional value in this patient population to minimize risk of infection and additional patient morbidity.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Adena Mahadai, DPM	mahadaaa@ucmail.uc.edu	I/We have nothing to disclose	
Michael McKerson, DPM	mckersml@ucmail.uc.edu	I/We have nothing to disclose	
Sameer Patel, MD	patel5se@ucmail.uc.edu	I/We have nothing to disclose	
Suhail Masadeh, DPM, FACFAS	masadesb@ucmail.uc.edu	I/We have nothing to disclose	
Michael D. Liette, DPM FACFAS	mliettedpm@gmail.com	I/We have nothing to disclose	

Title

A Rare Case of Skeletal Sarcoidosis in the Foot Causing a Symptomatic Degenerative First Metatarsophalangeal Joint

Submit Date

09/09/2024

Correspondent

Last Name: Dolcimascolo

Full Name: Zoe Dolcimascolo, DPM

Practice/Company/Residency Program:

Email: dolcimze@ucmail.uc.edu

University of Cincinnati

Authors

Author 1: Zoe Dolcimascolo, DPM

Author 2: Bryan Hall, DPM, FACFAS

Author 3: Zachary Washburn, DPM, AACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To present a rare case of a sarcoid cystic lesion in the first metatarsal head and its symptomatic management with excision and first metatarsophalangeal joint arthrodesis.

Methodology

Procedures

A fifty-year-old female with painful degenerative first metatarsophalangeal joint and an associated large cystic lesion to the first metatarsal head with pathology confirmed sarcoid lesion. Procedures include excision of bone cyst, first metatarsophalangeal joint arthrodesis and autogenous bone graft harvest.

Results

Pathology confirmed noncaseating granuloma of excised bone lesion consistent with sarcoidosis. Successful fusion of the first metatarsophalangeal joint with resolution of pain upon last follow up.

Discussions

Sarcoidosis is a multisystem granulomatous disease with pulmonary involvement being the most common manifestation of the disease. The occurrence of bony involvement of sarcoidosis has been reported as ranging from 3-13% of patients, with approximately 50% being asymptomatic lesions. The bone lesions can have different morphologies including more permeative appearance, lytic lesions, or sclerotic lesions. The hallmark of the pathology for these lesions are noncaseating granulomas that are non-necrotizing in nature. This is an uncommon lesion with only a few reported in case studies and in our case, caused a symptomatic degenerative joint. Though this is an exceedingly rare finding, foot and ankle diagnosticians should keep this on their differential for aid in future treatment.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Zoe Dolcimascolo, DPM	dolcimze@ucmail.uc.edu	I/We have nothing to disclose	
Bryan Hall, DPM, FACFAS	hall2bl@ucmail.uc.edu	I/We have nothing to disclose	
Zachary Washburn, DPM, AACFAS	washbuzy@ucmail.uc.edu	I/We have nothing to disclose	

Title

Restoration of Medial Column Length with Ipsilateral Fibular Strut Graft Following Infected Lapidus Non-union

Submit Date

10/07/2024

Correspondent

Last Name: Tiberi

Full Name: Lee

Practice/Company/Residency Program:

Email: ltiberi14@gmail.com

Kent Hospital

Authors

Author 1: Lee Tiberi

Author 2: Alexander A. Trotter, DPM

Author 3: Douglas J. Glod, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To provide alternatives for maintaining medial column length for revision of infected and or non-union of lapidus bunionectomy. Ipsilateral fibular graft offers bulk autograft to preserve length in reconstruction of excessive medial column shortening which would otherwise have limited options.

Methodology

Procedures

Revision surgery for lapidus non-union is challenging and can be complicated by significant medial column shortening. Primary options for maintaining length include autograft/allograft bone block arthrodesis and 3d-printed cages which have their own shortcomings including graft resorption, expense, mal/non-union, donor site morbidity, etc. This case highlights an infected lapidus non-union which presented with nearly 3.0 cm bone void following source control. Our novel technique uses ipsilateral fibular autograft sectioned into struts which fill the deficit of the corresponding void. This solution serves as a cost effective alternative of harvesting a large quantity of autograft in order to restore length in salvage medial column reconstruction cases.

Results

Following reconstruction, serial radiographic imaging was performed with index CT obtained at 10 weeks showing minimal osseous bridging at the graft interface. Patient was advised to remain NWB until further consolidation was noted. Despite noncompliance, repeat CT at 7 months showed graft incorporation with osseous bridging. She has since returned to normal, asymptomatic weight bearing in diabetic shoes.

Discussions

Cases with significant medial column shortening present as a reconstructive challenge with few alternatives for salvage. Research is limited with respect to void-filling alternatives in setting of large bone loss. Ipsilateral fibular graft provides viable, autogenous bone for salvage medial column reconstruction.

Format

Case Study

Case Rpt Followup

13

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lee Tiberi	ltiberi14@gmail.com	I/We have nothing to disclose	
Alexander A. Trotter, DPM	atrot2012@gmail.com	I/We have nothing to disclose	
Douglas J. Glod, DPM	ftcarpenter@gmail.com	I/We have nothing to disclose	

TitleSchwannomas of the Foot and Ankle: A Case Study and Literature Review

Submit Date09/13/2024

CorrespondentLast Name: DhawanFull Name: Gurdrishti, Dhawan, DPM, MPHEmail: gdhawan@bidmc.harvard.eduPractice/Company/Residency Program: Beth Israel Deaconess Medical Center - Boston

AuthorsAuthor 1: Gurdrishti, Dhawan, DPM, MPHAuthor 2: Thanh, Dinh, DPM, FAFASAuthor 3: Author 4: Author 5: Author 6: Author 7: Author 8:

PurposeTo present two rare cases of schwannomas originating in the foot and ankle, highlighting clinical presentation, diagnostic challenges, and surgical management

Methodology

ProceduresSchwannomas are benign peripheral nerve sheath tumors originating from Schwann cells which are responsible for the myelination of peripheral nerves. These slow-growing, encapsulated tumors can develop from any peripheral nerve but are usually encountered in the head, neck, and upper extremities. Schwannomas are infrequently encountered in the foot and ankle. We present two cases of schwannoma in the foot and ankle associated with the lateral plantar nerve and medial dorsal cutaneous nerve.

ResultsExcisional biopsy of soft tissue mass with histopathological assessment of the resected specimen revealed schwannoma

DiscussionsSchwannomas, though rare in the lower extremity, should be considered in the differential diagnosis of soft tissue masses. Their benign nature, coupled with their slow-growing and often asymptomatic presentation, can lead to diagnostic delays. The preferred treatment for schwannoma is surgical excision. Careful dissection of the tumor from surrounding nerves is essential to preserve or optimize nerve function. The recurrence rate of schwannomas after surgical excision is typically less than 5%, with most patients achieving favorable postoperative outcomes. However, higher recurrence rates are observed in conditions such as NF2 or schwannomatosis, as seen in this case study. We present two rare cases of pedal schwannomas successfully treated with surgical excision, emphasizing the importance of identifying schwannomas in atypical locations and the need for diligent outpatient follow-up to monitor for recurrence or the development of new lesions.

FormatCase Study

Case Rpt Followup12

Student Club

ClassificationSoft Tissue/Tumor

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Gurdrishti, Dhawan, DPM, MPH	gdhawan@bidmc.harvard.edu	I/We have nothing to disclose	
Thanh, Dinh, DPM, FAFAS	tdinh@bidmc.harvard.edu	I/We have nothing to disclose	

TitleTransverse Tibial Bone Transport in a Non-Healing Heel Wound: A Case Report

Submit Date09/23/2024

CorrespondentLast Name: CheungFull Name: Timothy P Cheung, DPM, PhD, CPTEmail: timothy.cheung@yale.eduPractice/Company/Residency Program: Yale New Haven Hospital

AuthorsAuthor 1: Ally A Yang, MDAuthor 2: Timothy P Cheung, DPM, PhD, CPTAuthor 3: Katherine Powell, MSN, FNPAuthor 4: Michael I Gazes, DPM, MPH, FACFAS, FACPMAuthor 5: David B Frumberg, MD, FAAOSAuthor 6: Author 7: Author 8:

PurposeThe purpose of this case study is to present the effectiveness of a Transverse Tibial Transport (TTT) technique for the treatment of a chronic, non-healing, diabetic heel wound.

Methodology

ProceduresTransverse Tibial Transport (TTT) is a variation of the Ilizarov technique in which an osteotomy of the medial tibia cortex is performed, and the cortex is transported transversely with an external apparatus. Through continuous and slow transfer of the external fixator and tension-stress effect, TTT promotes local tissue and vascular regeneration. We present the case of a 32-year-old male with diabetes mellitus and a non-healing left heel ulcer for more than one year, refractory to vascular surgery and local wound interventions. Latency period for TTT was 10 days. 14mm of distraction was gradually performed at a rate of 0.5mm/day over 28 days, at which point distraction was reversed and closing of the distraction gap was performed over 28 days using the same rate. The fixator was left in place for an additional 6 weeks and then removed under moderate sedation. The patient was allowed to bear weight throughout treatment but was instructed to keep his heel offloaded.

ResultsWound healing was deemed complete at 20 weeks after TTT was initiated. TTT with uniplanar external fixation was successful in healing the ulcer after 4 months. No complications were observed during follow up.

DiscussionsTTT is a reasonable and effective surgical method to treat diabetic foot ulcer. It can improve angiogenesis of the affected limb and promote healing of the diabetic foot wounds to reduce amputation rates.

FormatCase Study

Case Rpt Followup12

Student ClubDiabetic Foot

Classification

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Ally A Yang, MD	ally.yang@yale.edu	I/We have nothing to disclose	
Timothy P Cheung, DPM, PhD, CPT	timothy.cheung@yale.edu	I/We have nothing to disclose	
Katherine Powell, MSN, FNP	katherine.powell@yale.edu	I/We have nothing to disclose	
Michael I Gazes, DPM, MPH, FACFAS, FACPM	michael.gazes@yale.edu	I/We have nothing to disclose	
David B Frumberg, MD, FAAOS	david.frumberg@yale.edu	I/We have nothing to disclose	

Title

A Case Study of Surgical Repair and Outcomes in a 13-Year-Old with Rare Unilateral Preaxial Polydactyly

Submit Date

10/03/2024

Correspondent

Last Name: Iranmanesh

Full Name: Niki Iranmanesh, DPM

Practice/Company/Residency Program:

Email: nikiiranmanesh@gmail.com

Henry Ford Providence Southfield/Novi

Authors

Author 1: Niki Iranmanesh, DPM

Author 2: Dr. Tara Scott, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

I aim to investigate the functional and psychosocial outcomes of a 13-year-old patient who underwent surgical repair for unilateral preaxial polydactyly. This congenital anomaly affected my patients self-esteem and she was essentially peer pressured into this procedure. The decision to focus on a pediatric patient is based on the critical developmental stage, where psychological factors interplay significantly in shaping future outcomes.

Methodology

Procedures

With no great research regarding psychological factors that affect a patients decision on surgery, this was a prime example to me of what psychological factors pushed my patient into having surgical repair of her polydactyly. Her dance friends would always ridicule her when she wound change her shoes in dance class and she finally reached the point of asking her parents to surgically repair the toe. Closest research to this was found in "Carlsson, I. K., Dahlin, L. B., & Rosberg, H. E. (2016). Congenital thumb anomalies and the consequences for daily life: patients' long-term experience after corrective surgery. A qualitative study. Disability and Rehabilitation, 40(1), 69–75. <https://doi.org/10.1080/09638288.2016.1243159>"

Results

Patient is now 14 months post op and is very grateful to have undergone this surgery. She states that she is more confident and is not fearful to change her shoes in dance class

Discussions

For my 13 year old patient, undergoing revision/resection of this polydactyly was truly life changing. Patient is able to continue with daily life activities and no shame regarding her toe anymore. Her fear of bullying was gone within four months of surgery

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Biomechanics and Anatomy

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Niki Iranmanesh, DPM	nikiiranmanesh@gmail.com	I/We have nothing to disclose	
Dr. Tara Scott, DPM	drdst2@aol.com	I/We have nothing to disclose	

Title

The Use of Methacrylate Transforming Powder Dressing in the treatment of leg wounds in a patient undergoing ankle deformity correction with external fixation

Submit Date

10/15/2024

Correspondent

Last Name:Kagel

Full Name:Patrick, Robert, Kagel, DPMEmail:patrick.kagel@medstar.net

Practice/Company/Residency Program:MedStar Health

Authors

Author 1:Patrick Kagel, DPM

Author 2:Paul Carroll, DPM, FACFAS

Author 3:Harsh Bhavsar, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case study explores the use of Methacrylate Transforming Powder Dressing as an effective alternative to negative pressure therapy in patients undergoing external fixation for deformity correction.

Methodology

Procedures

61 year old male with non-healing leg wounds, undergoing ankle deformity correction with external fixation, was treated using Methacrylate Transforming Powder Dressing. Weekly wound measurements were recorded to assess healing progress over time.

Results

The use of Methacrylate Transforming Powder Dressing resulted in notable wound healing, with fewer and less complex dressing changes required compared to negative pressure therapy.

Discussions

Methacrylate Transforming Powder Dressing proved to be an effective alternative to negative pressure therapy for managing chronic wounds in a patient with external fixation. The dressing simplified wound care by reducing both the frequency and complexity of dressing changes, offering a more efficient treatment option. Previous research, such as Lin et al. (2019), highlighted its success in nasal surgical defects, and this case extends its potential application to lower extremity wounds. Further studies are needed to validate its benefits across different wound types.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Patrick Kagel, DPM	patrick.kagel@medstar.net	I/We have nothing to disclose	
Paul Carroll, DPM, FACFAS	paul.j.carroll@medstar.net	Consultant/Advisor/Speaker (List all affiliations)	Altrazeal consultant, non-monetary
Harsh Bhavsar, DPM	harsh.bhavsar@medstar.net	I/We have nothing to disclose	

Title

Multi-Stage Treatment of a Chronic Wound and Tibial Intramedullary Osteomyelitis Using Removable Antibiotic Coated Cement Rods and an Adipofascial Perforator Flap: A Case Report

Submit Date

09/21/2024

Correspondent

Last Name: Porrata

Full Name: Valeria C. Porrata, MS-4

Practice/Company/Residency Program:

Email: porrata.valeria@gmail.com

Centro Medico Episcopal San Lucas

Authors

Author 1: Valeria C. Porrata, MS-4

Author 2: Carlos Arroyo, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Osteomyelitis is a progressive infectious pathology typically caused by a pyogenic bacterium that destroys bone and can seed into bone marrow, soft tissue, and the bloodstream. Soft tissue defect reconstruction can be challenging due to the lack of available local tissue. Intramedullary osteomyelitis and chronic soft tissue defects yield a poor prognosis with a high risk of amputation in diabetic patients. This case study presents a successful multi-staged limb salvage case. Salvage plan involved using multiple temporary antibiotics-coated cement rods and an adipo-fascial posterior tibial artery perforator turndown flap.

Methodology

Procedures

A 63-year-old diabetic female patient suffering from chronic right ankle equino-varus which was complicated by intramedullary osteomyelitis and wound dehiscence post ankle and subtalar arthrodesis.

Results

Eradication of intramedullary osteomyelitis was achieved while providing vascularized wound coverage and a stable functional pain free plantigrade foot for the patient.

Discussions

Our innovative technique utilized a biweekly removable external fixator rod coated with antibiotic-impregnated bone cement as an intramedullary nail, maintaining a high concentration of antibiotics in the canal. A perforator adipose-fascial flap was used to close the anterior ankle wound, bringing vascularity into the area, and promoting antibiotic delivery. This flap allowed a wider degree of freedom regarding the size and shape of the graft. A split-thickness skin graft harvested from the medial calf region was used to grant closure. Further research is required for warranted reproducibility of this technique.

Format

Case Study

Case Rpt Followup

24

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Valeria C. Porrata, MS-4	porrata.valeria@gmail.com	I/We have nothing to disclose	
Carlos Arroyo, DPM, FACFAS	carroyoromeu@gmail.com	I/We have nothing to disclose	

Title

Loose and ossified bodies within the ankle joint: A rare case of synovial Osteochondromatosis

Submit Date

09/21/2024

Correspondent

Last Name:Williams

Full Name:Kyle A. WilliamsEmail:kyleaw3@gmail.com

Practice/Company/Residency Program:SSM Health DePaul Hospital

Authors

Author 1:Kyle A Williams, DPM

Author 2:Jared Visser, DPM

Author 3:Harry John Visser, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Synovial chondromatosis is a rare synovial proliferative disease secondary to chondral metaplasia within the synovia of various joints. The purpose of this study is to show a presentation of this arthropathy for future providers.

Methodology

Procedures

A 28-year-old male who presented to clinic with left ankle pain for a little over 2 weeks with insidious onset of pain. On examination of the affected ankle there was moderate swelling and limited range of motion. Radiographs were performed in office showing suspicious cortical bodies at the ankle joint. The patient then was sent for MRI for further analysis. MRI showed multiple osteochondral bodies within the tibiotalar joint suspicious for primary osteochondromatosis. Patient underwent a surgical procedure to remove the osseous bodies, brostrum repair, and OCD repair. An anterolateral approach to the ankle was taken with a 4 mm incision. 6 smooth, ossified bodies were removed from the ankle joint measuring between 5 and 8 mm in diameter.

Results

Following surgical excision post operative care was oriented to treatment of the osteochondral lesion repair with four-weeks of non-weight bearing. Patient transitioned to a boot at four weeks and returned to shoes at eight weeks. At week eight, patient reported relief of ankle symptoms.

Discussions

Synovial chondromatosis is rarely found in the foot or ankle. The aim of treatment is to decrease pain and limit the development of osteoarthritis. According to Bojanic et al. (2021) early surgical excision of the loose bodies whether open or arthroscopically is key to improving joint function and preventing degenerative disease within the ankle joint.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kyle A Williams, DPM	kyleaw3@gmail.com	I/We have nothing to disclose	
Jared Visser, DPM	jvisser23@gmail.com	I/We have nothing to disclose	
Harry John Visser, DPM	tsarhvj@icloud.com	I/We have nothing to disclose	

Title

Below-Knee Amputation with Targeted Muscle Reinnervation & Regenerative Peripheral Nerve Interface for Phantom Limb Pain Prevention

Submit Date

10/01/2024

Correspondent

Last Name: Curlis

Full Name: Kayla L Curlis, DPM

Practice/Company/Residency Program:

Email: kcurlis1@kent.edu

St. Vincent Medical Center

Authors

Author 1: Kayla L. Curlis, DPM

Author 2: Lucas S. Adams, DPM

Author 3: Manpreet Kaur, MS4

Author 4: Quinn M. Schroeder, DPM

Author 5: Seth A. Philips, DO

Author 6: Kyle McKray-Smith, DPM

Author 7:

Author 8:

Purpose

This case study supports an alternative management for patients undergoing major limb amputation with the potentiation for phantom limb pain (PLP)/ phantom limb sensation (PLS). This case showcases a patient who underwent a below knee amputation (BKA) with concurrent Targeted Muscle Reinnervation (TMR) of three nerves and Regenerative Peripheral Nerve Interface (RPNI) of one nerve.

Methodology

Procedures

PLP following major amputations is prevalent in about 30-50% of patients (1). In nearly 60% of this same population, a major complicated outcome is neuroma formation (1). TMR can be performed as either a primary or revisional procedure for patients experiencing post-operative limb loss pain (5). TMR & RPNI performed during the primary amputation procedure can disrupt chronic pain cycles, decreasing the chance of neuroma formation (7). A 53- year- old male with extensive medical history and failed limb salvage ultimately went on to a BKA with simultaneous conduit-assisted procedure of three nerves and one RPNI adjunct for prevention of PLP/PLP.

Results

The patient received his prosthetic and completed a 7-week course of physical therapy. With prosthetic assistance, the patient was able to ambulate with minimal pain. The patient was satisfied with the outcome and only reported a complaint of lateral left toe paresthesia. It is noteworthy that due to time restraints the sural nerve was not augmented.

Discussions

Literature supports TMR and RPNI procedures as an adjunct in the realm of limb salvage following amputation for cessation of acute or chronic limb loss pain. The goal to provide safe, efficient ambulation with post amputation pain relief was achieved.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kayla L. Curlis, DPM	kcurlis@mercy.com	I/We have nothing to disclose	
Lucas S. Adams, DPM	ladams@mercy.com	I/We have nothing to disclose	
Manpreet Kaur, MS4	mkaur8@kent.edu	I/We have nothing to disclose	
Quinn M. Schroeder, DPM	qschroeder@mercy.com	I/We have nothing to disclose	
Seth A. Philips, DO	sphilips@mercy.com	I/We have nothing to disclose	
Kyle McKray-Smith, DPM	kmckraysmith@toledoclinic.com	I/We have nothing to disclose	

Title

Erenumab, a New Migraine Medication, Negatively Impacts Surgical Wound and Bone Healing in the Foot and Ankle

Submit Date

09/23/2024

Correspondent

Last Name: Cheung

Full Name: Timothy P Cheung, DPM, PhD, CPT

Practice/Company/Residency Program:

Email: timothy.cheung@yale.edu

Yale New Haven Hospital

Authors

Author 1: Timothy P Cheung, DPM, PhD, CPT

Author 2: Zachary Korwek, DPM

Author 3: Arij M Rashid, DPM, AACFAS

Author 4: Rumzah Paracha, MD

Author 5: Motasem Salamah, DPM

Author 6: Ashley Bruno, DPM, FACFAS

Author 7:

Author 8:

Purpose

Patient selection and optimization are crucial components of successful surgery outcomes. The purpose of this case study is to report a side effect of a novel migraine medication, Erenumab, its effect on foot and ankle surgery.

Methodology

Procedures

A healthy 68 year old female with migraines presented with a hypermobile HAV deformity. The patient underwent a Lapidus and went to achieve successful union uneventfully. Of note, the patient started a new migraine medication, erenumab, prescribed by the neuropharmacist within the postoperative course. At the 6 months postoperative period, the patient presented back with a recurrent HAV deformity. Further investigation revealed a pathologic fracture of the 1st metatarsal distal to the Lapidus arthrodesis screws. A SPECT/CT revealed healing potential and the patient underwent a subsequent first metatarsal open reduction internal fixation and a first metatarsophalangeal joint arthrodesis and was placed in a posterior splint and to be nonweightbearing.

Results

The patient's postoperative course was complicated by a wound dehiscence with hardware exposure and first metatarsophalangeal joint nonunion. Infectious disease was consulted and ruled out infection, who prescribed long-term suppressive doxycycline. The wounds underwent local wound care for 9 months. A thorough chart review of all her medications was performed and determined that it was possible that the erenumab was causing a nonunion and wound healing. Erenumab was discontinued and the wounds healed by the next visit.

Discussions

This case substantiates the need for considering erenumab, a specific migraine medication, in the preoperative planning and optimization in elective foot and ankle surgery.

Format

Case Study

Case Rpt Followup

24

Student Club

Forefoot Reconstruction

Classification

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Timothy P Cheung, DPM, PhD, CPT	timothy.cheung@yale.edu	I/We have nothing to disclose	
Zachary Korwek, DPM	zachary.korwek@yale.edu	I/We have nothing to disclose	
Arij M Rashid, DPM, AACFAS	arijrashid94@gmail.com	I/We have nothing to disclose	
Rumzah Paracha, MD	rumzah.paracha@yale.edu	I/We have nothing to disclose	
Motasem Salamah, DPM	Motasem.Salamah@yale.edu	I/We have nothing to disclose	
Ashley Bruno, DPM, FACFAS	ashley.bruno@va.gov	I/We have nothing to disclose	

TitleComorbidities Associated with 71 Patients Presenting with Soft Tissue Emphysema in the Midfoot

Submit Date10/01/2024

CorrespondentLast Name: CurlisFull Name: Kayla L. Curlis, DPMEmail: kcurlis1@kent.eduPractice/Company/Residency Program: St. Vincent Medical Center

AuthorsAuthor 1: Kayla L Curlis, DPMAuthor 2: Adnan A. Rammouni, DPMAuthor 3: Quinn M. Schroeder, DPMAuthor 4: Lawrence C. Carlson, DPMAuthor 5: Manpreet Kaur, MS4Author 6: Khase Wilkinson, DPM, FACFASAuthor 7:Author 8:

PurposeThis poster describes comorbidity and mortality rates for patients with mid-foot soft tissue emphysema (STE) seen on imaging who underwent surgical intervention.

Methodology

ProceduresSTE can be challenging to diagnose clinically since patients often present with similar findings to other soft-tissue infections such as cellulitis, abscesses, or compartment syndrome (1). Studies have shown that patients diagnosed with STE also suffered from comorbid conditions such as diabetes mellitus and chronic renal failure (2). Peripheral arterial disease (PAD) is also a major contributor as soft tissue infections cannot resolve in the absence of adequate perfusion to the foot (6). Patient data was collected between January 2013 and December 2022 at a Multi-hospital System. 71 out of 542 patients were found to have STE extending into, but not proximal to, the midfoot. Comorbidities and mortalities were calculated.

ResultsDiabetes Mellitus was the most prevalent comorbidity found in our extracted data at 97%. The hemoglobin A1C% of the patient's analyzed was increased at 9.68%. 36.6% of patients presented with ESRD. Nearly half of our patients also had concurrent osteomyelitis alongside a progressive soft tissue infection. Our 5-year mortality rate was calculated at 51%.

DiscussionsPatients with STE of the foot usually have other complicated medical conditions which drastically impact their course for healing. The final decision for amputation can be strongly influenced by the timing of medical management that the patient receives. Therefore, to minimize the rapid progression of the infection early diagnosis, resuscitation and surgical debridement is recommended (3).

FormatCase Study

Case Rpt Followup60

Student Club

ClassificationDiabetic Foot

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kayla L Curlis, DPM	kcurlis1@kent.edu	I/We have nothing to disclose	
Adnan A. Rammouni, DPM	arammouni@mercy.com	I/We have nothing to disclose	
Quinn M. Schroeder, DPM	qschroeder@mercy.com	I/We have nothing to disclose	
Lawrence C. Carlson, DPM	lcarlson@mercy.com	I/We have nothing to disclose	
Manpreet Kaur, MS4	mkaur8@kent.edu	I/We have nothing to disclose	
Khase Wilkinson, DPM, FACFAS	kawilkinson@mercy.com	I/We have nothing to disclose	

Title

Indication of Midfoot Soft Tissue Emphysema as a Prognostic Indicator of Amputation Level and Mortality.

Submit Date

10/01/2024

Correspondent

Last Name: Curlis

Full Name: Kayla L Curlis, DPM

Practice/Company/Residency Program:

Email: kcurlis1@kent.edu

St. Vincent Medical Center

Authors

Author 1: Adnan A. Rammouni, DPM

Author 2: Quinn M. Schroeder, DPM

Author 3: Lawrence C. Carlson, DPM

Author 4: Kayla L. Curlis, DPM

Author 5: Manpreet Kaur, MS4

Author 6: Khase A. Wilkinson, DPM, FACFAS

Author 7:

Author 8:

Purpose

This poster intends to describe the surgical involvement and survivorship for patients presenting with midfoot soft tissue emphysema (STE) seen on imaging. This is one arm of a larger study looking at the proximal extent of lower extremity STE on imaging as a prognostic indicator of morbidity and mortality. It is the first known review of this kind.

Methodology

Procedures

1 in 5 patients who present to the Emergency Department with soft tissue emphysema of the foot will have the primary radiographic location specific to the midfoot (1). Literature reports that 52% of patients who present on admission with soft tissue emphysema in the foot will require a minor/ major amputation within 30 days of that admission (1). Patient data between January 2013 and December 2022 was retrospectively collected from the NW Ohio Mercy Health Multi-hospital System electronic medical record database. Patients were screened based on applied ICD-10 codes. Timestamps included hospital admission, 1-year, 3-years, and 5-years post-admission for the cohort. 71 out of 542 patients were screened and placed into 7 different categories.

Results

Standout data includes mean age of 59 years. 16.9% of limbs already had ipsilateral amputations. 56.3% of limbs had concurrent osteomyelitis. Final extinct & extant limbs included at five years showed 8% experienced debridements only, 3% digital amputations, 58% TMAs, 5% hindfoot/ankle amputations, 23% BKAs, 3% AKAs, & 0% hip disarticulations/hemi-pelvis amputations.

Discussions

This poster is a subset of a larger study further assessing the prognostic indicators for patients who present with soft tissue emphysema of the midfoot.

Format

Case Study

Case Rpt Followup

60

Student Club

Classification

Diabetic Foot

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Adnan A. Rammouni, DPM	arammouni@mercy.com	I/We have nothing to disclose	
Quinn M. Schroeder, DPM	qschroeder@mercy.com	I/We have nothing to disclose	
Lawrence C. Carlson, DPM	lcarlson@mercy.com	I/We have nothing to disclose	
Kayla L. Curlis, DPM	kcurlis@mercy.com	I/We have nothing to disclose	
Manpreet Kaur, MS4	mkaur8@kent.edu	I/We have nothing to disclose	
Khase A. Wilkinson, DPM, FACFAS	kawilkinson@mercy.com	I/We have nothing to disclose	

TitleA rare Morel-Lavallée Lesion of the ankle: Case report and literature review

Submit Date09/24/2024

Correspondent

Last Name:AckomFull Name:Hughes, Ackom, DPMEmail:hughes.ackom@gundersenhealth.orgPractice/Company/Residency Program:Emplify Health

Authors

Author 1:Hughes, Ackom, DPMAuthor 2:Andrew D. Elliot, DPM, FACFASAuthor 3:Author 4:Author 5:Author 6:Author 7:Author 8:

PurposeThe Morel-Lavallée Lesion (MLL) is an internal, soft tissue, degloving injury associated with high velocity trauma. MLL is overwhelmingly reported in the hip (30.4%), thigh (20.1%), and pelvis (18.6%). Definitive treatment of MLL remain uncertain. We report a rare case of MLL of the ankle and a review of the literature.

Methodology

ProceduresA 48-year-old male sustained a right ankle injury after jumping from an 8-foot rock. He presented with defuse lateral ankle swelling but minimal ankle pain or muscle weakness. Radiographs were negative for osseous injury. MRI showed a well circumscribed fluid filled lesion of the lateral ankle. Conservative therapy was agreed upon. After 8 weeks of compression, activity restriction and monitoring, the MLL resolved with no neurologic, cutaneous or musculoskeletal sequela.

ResultsResolved internal lesion without complication.

DiscussionsMLL is an internal separation of soft tissue layers creating a space which accumulates fluid. Sequelae include infection or skin necrosis. MRI is the preferred modality for diagnosis. Management options include compression, aspiration, incision and drainage, and sclerotherapy. A review of literature reveals no English language case report of ankle MLL. We report a rare case of MLL of ankle that was managed conservatively without complication at 13 months follow-up.

FormatCase Study

Case Rpt Followup13

Student Club

ClassificationTrauma

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Hughes, Ackom, DPM	hughes.ackom@gundersenhealth.org	I/We have nothing to disclose	
Andrew D. Elliot, DPM, FACFAS	adelliot@gundersenhealth.org	I/We have nothing to disclose	

Title

Comminuted Talar Neck and Body fracture; a case study

Submit Date

10/06/2024

Correspondent

Last Name: Zimmer

Full Name: Christopher

Practice/Company/Residency Program:

Email: cwzimmer94@gmail.com

HCA Florida Westside

Authors

Author 1: Christopher Zimmer, DPM

Author 2: Warren Windram, MS, DPM, FACFAS, DABFAS, CWS

Author 3: Allyne Andrade, DPM

Author 4: Angelica Carillo, MD

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

A combination of talar neck and body fractures are extremely rare which make up approximately less than 1% of all fractures in the body. Talar neck and body fractures are challenging problems to treat in terms of fixation, rates of avascular necrosis and much more. The purpose of this case report is to demonstrate that even with a severe talar neck fracture with proximal extension into the body, salvage and healing is possible with proper surgical technique and understanding of the unique fracture pattern.

Methodology

Procedures

One patient suffered comminuted hawkins type 2 talar neck and body fracture which underwent ORIF with a lateral bridge plate and medially based interfragmentary compression screw. The rates of avascular necrosis for talar neck fractures with proximal extension into the talar body demonstrates approximately 49% chance of avascular necrosis. Our patient demonstrated a comminuted Hawkins type 2 talar neck fracture with proximal extension into the talar body and achieved healing.

Results

One patient demonstrated clinical and radiographic signs of healing after a talar neck and body fracture at 1 year.

Discussions

The rates of avascular necrosis of talar neck fractures with proximal extension into the body varies in the literature as well as nonunion and collapse rate. In general AVN is approximately 49%, nonunion is 26%, and collapse is 14%. With stable strong fixation, and careful anatomic dissection excellent outcomes can be accomplished with patients who suffer this type of injury.

Format

Case Study

Case Rpt Followup

12

Student Club

Trauma

Classification

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Christopher Zimmer, DPM	cwzimmer94@gmail.com	I/We have nothing to disclose	
Warren Windram, MS, DPM, FACFAS, DABFAS, CWS	warrenwindram@gmail.com	I/We have nothing to disclose	
Allyne Andrade, DPM	patelroshni95@gmail.com	I/We have nothing to disclose	
Angelica Carillo, MD	angelicarasmussencarrillo@gmail.com	I/We have nothing to disclose	

Title

Diabetic Limb Salvage and Charcot Arthropathy Reconstruction Using Antibiotic-Cement TTC Nail and External Fixation in Patient with Multiple Maggot Infested Ulcerations and Lower Extremity Osteomyelitis

Submit Date

10/15/2024

Correspondent

Last Name: SICARD

Full Name: RITA MALI ELIZABETH SICARD, DPM

Practice/Company/Residency Program:

Email: RELIZABETHSICARD@GMAIL.COM

AULTMAN ALLIANCE COMMUNITY HOSPITAL

Authors

Author 1: R. Mali Elizabeth Sicard, DPM

Author 2: Justin M Kane, MD FAAOS

Author 3: David Bishop, DPM

Author 4: Alexandra Pixton, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Studies have shown that major lower extremity amputations (MLEAs) have a 5 year post-operative mortality rate ranging from 50-80%, and that multimodal and interdisciplinary limb salvage techniques can drastically reduce the aforementioned risk. Therefore, the exploration and application of modernized salvage techniques should be prioritized in applicable healthcare specialties.

Methodology

Procedures

We present a case of a 67 year old female with unilateral advanced charcot arthropathy, various decubitus ulcerations with bony involvement, and maggot infestation. This patient had pre-existing endocrine and psychiatric co-morbidities, and initially presented with acute medical instability and adult failure to thrive. In this report we discuss an extensive limb salvage attempt using a novel approach involving the formulation and insertion of an antibiotic cement TCC nail, in tandem with more traditional surgical modalities.

Results

The patient presented in this case is followed throughout the course of one year, which ultimately proves success of the salvage attempt yielding a plantigrade ambulatory lower extremity, free from pain or disease progression.

Discussions

The success of this case was made possible by novel technique, multidisciplinary systemic stabilization, frequent monitoring, wound care, and dedicated follow-up. Extensive tissue salvage is often paramount for long-term survival, and the sharing of techniques between clinicians and specialties is high yield for the evolution of limb salvage as a focal point in podiatric and orthopedic surgery.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
R. Mali Elizabeth Sicard, DPM	relizabethsicard@gmail.com	I/We have nothing to disclose	
Justin M Kane, MD FAAOS	justin.kane@oint.org	Consultant/Advisor/Speaker (List all affiliations)	Stryker; Orthosolutions
David Bishop, DPM	dbishop2@kent.edu	I/We have nothing to disclose	
Alexandra Pixton, DPM	pixtonal@gmail.com	I/We have nothing to disclose	

Title

Treatment of peri-prosthetic fracture of tibia following tibiototalcalcanal fusion in patient with prior midfoot Charcot reconstruction

Submit Date

09/25/2024

Correspondent

Last Name: Khosravi

Full Name: Melody M. Khosravi, DPM

Practice/Company/Residency Program:

Email: melokhos@gmail.com

Veterans Affairs Palo Alto Health Care Systems

Authors

Author 1: Melody M. Khosravi, DPM

Author 2: Aaron Handa, DPM

Author 3: Kevin Ragothaman, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Tibia fracture is a known complication following ankle Charcot reconstruction. This case study describes the use of retrograde nail for a peri-prosthetic tibia fracture sustained following tibiototalcalcanal fusion in patient with prior midfoot Charcot reconstruction.

Methodology

Procedures

An active 65 year old neuropathic male who underwent midfoot Charcot reconstruction with medial and lateral column beaming and MCDO presented with a plantar lateral ulcer due to development of ankle Charcot causing varus ankle deformity. He underwent transfibular tibiototalcalcanal fusion with plate and screw fixation. He sustained peri-prosthetic tibia fracture 5 months post-operatively. The patient refused below knee amputation. He subsequently underwent removal of hardware and retrograde intramedullary nailing to fix the tibia fracture and to reinforce the tibiototalcalcanal fusion. This was accomplished with the use of intramedullary nail of 300 mm length.

Results

The fracture healed at 8 weeks post-operatively. The patient began weight bearing in a Charcot Restraint Orthotic Walker and knee brace at 3 months following the surgery. He was transitioned out of knee brace at 8 months. He is now 13 months post-op and ambulates in a CROW boot without clinical or radiographic signs of tibia stress.

Discussions

Prior studies have relayed the risk of peri-prosthetic and tibia stress fracture following ankle and tibiototalcalcanal fusion, but the literature is void of recommendation for tibia fracture following tibiototalcalcanal fusion in neuropathic patient with prior midfoot Charcot reconstruction. This case study suggests retrograde intramedullary nail as a viable option for this situation and discusses rationale behind implant selection.

Format

Case Study

Case Rpt Followup

13

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Melody M. Khosravi, DPM	melokhos@gmail.com	I/We have nothing to disclose	
Aaron Handa, DPM	aaron.handa@va.gov	I/We have nothing to disclose	
Kevin Ragothaman, DPM	kevin.ragothaman@va.gov	I/We have nothing to disclose	

TitleImportance of frontal plane control when performing midfoot beaming for Charcot neuroarthropathy

Submit Date09/26/2024

CorrespondentLast Name: ParkerFull Name: Kyle Parker, DPM, PGY-2Email: kyleparker1515@gmail.comPractice/Company/Residency Program: New Mexico Veterans affairs medical center residency

AuthorsAuthor 1: Kyle Parker, DPM. PGY-2Author 2: Rachel Beckman, DPM, PGY-2Author 3: Joshua Marshall, DPMAuthor 4: Author 5: Author 6: Author 7: Author 8:

PurposeCharcot neuroarthropathy is a destructive joint disease which results in progressive deformity of the foot and ankle. Patients can be treated conservatively but many require surgical intervention. Midfoot beaming is a mainstay surgery for midfoot charcot. Midfoot beaming provides a rigid construct but ultimately fails to control the frontal plane failure of reconstruction. This study aims to highlight the importance of frontal plane control in midfoot beaming

Methodology

ProceduresTrue incidence of Charcot neuroarthropathy is unknown but in diabetics it effects 8.5 people per 1000. Pinzur et al noted in 2004 that 60% percent of patients with midfoot Charcot can be treated conservatively. Midfoot beaming is common which reduces the deformity however has resulted in high complication rate. Manchanda et al shows that adding STJ fusion reduced the complication rate by 80%. Case study: Podiatry was consulted for patient with midfoot charcot and plantar midfoot wound. Patient was treated with a total contact cast however his wound recurred and became infected. Once infection resolved patient underwent midfoot beaming with STJ fusion and maintained his correction post operatively without complications.

ResultsPatient underwent midfoot beaming with combination of bolts (6.5mm and 5.0mm) through 1st, 2nd and 4th columns with subtalar joint fusion using 7mm screws and Achilles tendon lengthening

DiscussionsMidfoot beaming has been a mainstay of treatment for Charcot for many years. However, recent literature has shown that supplementation with a STJ fusion better controls frontal plane deforming forces and reduces complications. This case study highlights the importance of this supplementation and adds to the body of supporting literature.

FormatCase Study

Case Rpt Followup18

Student Club

ClassificationRearfoot and Ankle Reconstruction

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kyle Parker, DPM. PGY-2	kyleparker1515@gmail.com	I/We have nothing to disclose	
Rachel Beckman, DPM, PGY-2	Rachel.beckman@va.gov	I/We have nothing to disclose	
Joshua Marshall, DPM	Joshua.Marshall3@va.gov	I/We have nothing to disclose	

Title

Fixation Constructs for Calcaneal Avulsion Fractures

Submit Date

09/26/2024

Correspondent

Last Name:Beckett

Full Name:Lauren Beckett, DPM PGY-2

Practice/Company/Residency Program:

Email:lauren.beckett024@gmail.com

New Mexico Veterans Affairs Medical Center

Authors

Author 1:Lauren Beckett, DPM PGY-2

Author 2:Megan Allen, DPM Diplomate, ABFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

There is limited literature on fixation constructs for calcaneal avulsion fractures. Extra-articular avulsion fractures of the calcaneal tuberosity are rare, representing 1.3-2.7% of all calcaneal fractures with a peak incidence in females in their seventh decade of life. Calcaneal avulsion fractures are most commonly seen in those with poor bone quality such as those with osteoporosis or diabetes. This case study aims to highlight rare calcaneal avulsion fractures and optimal fixation constructs.

Methodology

Procedures

Literature Review: Multiple case reports, including Shota et al and Rauer et al, show that combinations of braided suture techniques and hardware appear to have the highest success rate. Case study: This patient is a 56-year-old male with alcoholic neuropathy who fell down a flight of stairs and sustained a closed displaced calcaneal avulsion fracture. He subsequently underwent ORIF with reattachment of the Achilles tendon. Patient with non-compliance and walked post operatively. Patient returned with an open fracture of the calcaneal tuberosity with complete dehiscence and an abscess. Patient subsequently developed osteomyelitis, underwent multiple debridements, and eventually healed.

Results

Patient underwent ORIF with a 4.0 fully threaded screw with washer and suture anchors. Due to patient noncompliance attributed to his neuropathy, ORIF failed, his incision dehisced, and the hardware was exposed and became infected.

Discussions

Limited and low-level studies are available for fixation constructs of calcaneal avulsion fractures. According to current literature, combinations of braided suture techniques with hardware appear to make the strongest construct. Higher level studies are needed to further assess reproducibility of these constructs.

Format

Case Study

Case Rpt Followup

22

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lauren Beckett, DPM PGY-2	lauren.beckett024@gmail.com	I/We have nothing to disclose	
Megan Allen, DPM Diplomate, ABFAS	megan.allen@va.gov	I/We have nothing to disclose	

Title

Overuse of MRI in Diagnosing Osteomyelitis in the Foot and Ankle: A Case Study and Bayes' Theorem Application

Submit Date

10/07/2024

Correspondent

Last Name: Tran

Full Name: Alina, T, Tran, DPM

Practice/Company/Residency Program:

Email: alinatran.dpm@gmail.com

Scripps Memorial Hospital Encinitas

Authors

Author 1: Alina, T, Tran, DPM

Author 2: Nicklaus, M, Nishijima, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study is to consider overuse and dependency of MRIs in diagnosing osteomyelitis in patients with low clinical suspicion. We will apply Bayes' Theorem and widely accepted clinical tools to better interpret the accuracy of MRI findings. The rationale arises from the reliance on MRI's high sensitivity, despite its moderate specificity, which can lead to false positives and unnecessary medical intervention. Our intent is to highlight the importance of clinical judgment in guiding accurate diagnosis.

Methodology

Procedures

A 59 year old male with a history of idiopathic peripheral neuropathy presented with right foot swelling and erythema, without open wounds or systemic symptoms. X-rays revealed sclerotic changes at the tarsometatarsal joints, and MRI demonstrated marrow edema along the fifth metatarsal, raising suspicion for osteomyelitis. Despite elevated CRP (40.6) and ESR (92), a bone biopsy revealed negative for osteomyelitis.

Results

We applied Bayes' Theorem to this case, which showed a low pretest probability of 10% for osteomyelitis due to the absence of open wounds or systemic signs of infection. Despite MRI's high sensitivity (90%), the posttest probability was only 32.3%, indicating a significant chance of a false positive MRI result for osteomyelitis.

Discussions

The findings emphasize that MRI alone should not dictate the diagnosis of osteomyelitis in patients with low clinical suspicion. Clinical judgment, combined with widely accepted diagnostic tools is crucial. Bayes' Theorem demonstrated how both the low pretest probability and posttest probability can be a useful tool for overcoming strong biases in our natural way of thinking and how it can aid in medical decision making.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Alina, T, Tran, DPM	alinatran.dpm@gmail.com	I/We have nothing to disclose	
Nicklaus, M, Nishijima, DPM	nicklaus.nishijima@gmail.com	I/We have nothing to disclose	

Title

Distal Phalanx Desmoplastic Fibroma of the Hallux: A unique case mimicking a Glomus Tumor

Submit Date

09/26/2024

Correspondent

Last Name: Ajarrag

Full Name: Samy

Practice/Company/Residency Program:

Email: samy.ajarrag@gmail.com

Université du Québec à Trois-Rivières

Authors

Author 1: Samy Ajarrag, MSc, DPM student UQTR

Author 2: Marie-Christine Torchon, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Desmoplastic Fibroma (DF) is a rare benign bone tumor usually found in the mandible and long bones. Its occurrence in the foot, particularly in the small bones like the hallux, is exceedingly rare. With fewer than five cases reported in the scientific literature, diagnosing it can be particularly challenging. We report an unusual case of DF in the subungual region of the hallux, initially mimicking a Glomus Tumor. This case aims to provide insight into both the clinical presentation and treatment of DF in this rare location.

Methodology

Procedures

A 38-year-old female with a history of hallux trauma and thyroid cancer presented with persistent pain, subungual tenderness, and cold hypersensitivity in her feet. X-ray and MRI findings suggested a Glomus Tumor with bone erosion. Surgical excision with wide margins was performed, but histopathology revealed Desmoplastic Fibroma. A two-year follow-up, including X-rays, was conducted.

Results

At the four-month follow-up, the skin had fully healed with no complications. After two years, the patient exhibited good skin health, normal nail regrowth, and no reported pain. X-rays showed no signs of recurrence.

Discussions

This case highlights the importance of confirming diagnoses through biopsy and pathology, especially in rare conditions like DF, which can mimic more common lesions such as Glomus Tumors. The rarity of DF in the hallux emphasizes the need for thorough differential diagnosis. Successful excision with wide margins and no recurrence after two years demonstrates the effectiveness of this treatment approach

Format

Case Study

Case Rpt Followup

24

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Samy Ajarrag, MSc, DPM student UQTR	samy.ajarrag@gmail.com	I/We have nothing to disclose	
Marie-Christine Torchon, DPM	marie-christine.torchon@uqtr.ca	I/We have nothing to disclose	

TitleManagement of a Complex Hallux Crush Injury: A Case Report

Submit Date10/06/2024

Correspondent

Last Name: ZimmerFull Name: ChristopherEmail: cwzimmer94@gmail.comPractice/Company/Residency Program: HCA Florida Westside

Authors

Author 1: Christopher Zimmer, DPMAuthor 2: Warren Windram, MS, DPM, FACFAS, DABFAS, CWSAuthor 3: Nishit Vora DPM, MPH, FACPM, AACFASAuthor 4: Allyne Andrade, DPMAuthor 5:Author 6:Author 7:Author 8:

PurposeCrushing injuries to the hallux, although relatively uncommon, can result in significant morbidity and functional impairment if not managed promptly and appropriately. This case report presents the successful management of a 64-year-old male patient who sustained a crushing injury to his hallux in a workplace accident involving heavy machinery.

Methodology

Procedures64 year old male presented with an open comminuted left hallux crush fracture after he dropped a steel rod on his foot at work. Subsequently underwent open reduction internal fixation of left hallux. Following this, he developed dehiscence, hardware was removed and plastics was consulted and underwent radial forearm free flap. Patient ultimately clinically healed.

ResultsPatient suffered soft tissue injury that ultimately required plastics consultation. Pedal flow is already tenuous and crush injuries furth decimate that flow. Immediate intervention and careful care is needed. Ultimately, in this case, plastic consultation was required for proper soft tissue coverage allowing for a functional and salvageable foot.

DiscussionsThis case underscores the importance of prompt surgical intervention and multidisciplinary management in achieving optimal outcomes for patients who are neuropathic with crushing injuries to the lower extremity. This limb salvage procedure ultimately allows the patient to preserve the lower extremity and prevent the need for an amputation procedure.

FormatCase Study

Case Rpt Followup13

Student Club

ClassificationTrauma

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Christopher Zimmer, DPM	cwzimmer94@gmail.com	I/We have nothing to disclose	
Warren Windram, MS, DPM, FACFAS, DABFAS, CWS	warrenwindram@gmail.com	I/We have nothing to disclose	
Nishit Vora DPM, MPH, FACPM, AACFAS	nvora3@gmail.com	I/We have nothing to disclose	
Allyne Andrade, DPM	Allynebandrade1@gmail.com	I/We have nothing to disclose	

TitleBilateral total ankle and total talus replacement: case report– a four-year follow-up

Submit Date10/07/2024

Correspondent

Last Name: LikewiseFull Name: LaurenEmail: laurenlikewise@gmail.comPractice/Company/Residency Program: Virginia Mason Franciscan Health

Authors

Author 1: Lauren A. Likewise, DPMAuthor 2: Samuel D. Caine, DPMAuthor 3: Lindsey R. Hjelm, DPM, FACFASAuthor 4: Ryan J. Stone, DPM, AACFASAuthor 5: Byron L. Hutchinson, DPM, FACFASAuthor 6: Author 7: Author 8:

PurposeTo demonstrate a unique case of bilateral total ankle total talus replacement (TATTR). This case highlights design principles of creating a bilateral custom talus replacement without a native talus blueprint, while including intermediate-term outcomes.

Methodology

Procedures68-year-old male presents with bilateral painful talar AVN following prior high energy trauma and subsequent ORIF. Due to the nature of bilateral injury, preoperative planning was complicated by lack of native anatomy. Digital positioning and reconstruction using reference anatomy was utilized to create implant shape, fitted with native corresponding anatomy, and paired to articulate with tibial tray and polyethylene insert from specified total ankle replacement. Right-sided implant was mirrored and utilized as a guide for the left before undergoing staged bilateral TATTR. Patient underwent bilateral staged medial malleolus hardware removal with prophylactic hook plating prior to TATTR implantation, consisting of tibial tray and cobalt-chromium subtalar-constrained talar implant.

ResultsAfter 36 months, radiographs reveal no evidence of implant subsidence. AOFAS Ankle-Hindfoot score is 75/100 with mean VAS of 1/10. Ankle range of motion revealed 12-15° dorsiflexion and 25°of plantarflexion bilaterally. Subjectively, the patient reports no remarkable limitations and continues to exercise on a stationary bike, while able to hike 4 miles on uneven terrain.

DiscussionsThis unique case of bilateral TATTR implantation with intermediate follow-up outcome data shows promising functional and radiographic results, especially considering the inability to customize the implant to normal native anatomy. More intermediate-long term investigation is needed to determine survivorship of custom TATTR.

FormatCase Study

Case Rpt Followup48

Student Club

ClassificationRearfoot and Ankle Reconstruction

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lauren A. Likewise, DPM	laurenlikewise@gmail.com	Hold more than a 2% financial interest (including stocks) in any organizations(s)	Virginia Mason Franciscan Health
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Federal Way
Samuel D. Caine, DPM	Samuelcaine20@gmail.com	I/We have nothing to disclose	
Lindsey R. Hjelm, DPM, FACFAS	lindseyhjelm@gmail.com	I/We have nothing to disclose	
Ryan J. Stone, DPM, AACFAS	ryan.stone177@gmail.com	I/We have nothing to disclose	
Byron L. Hutchinson, DPM, FACFAS	hutchmeded@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Paragon 28/Orthofix Consultant. There was no funding provided for this study.

Title

Short-Term Outcomes of Combined Total Ankle-Constrained Total Talus Replacements: A Case Series Evaluation

Submit Date

10/03/2024

Correspondent

Last Name: Kayal

Full Name: Emma R. Kayal, DPM, AACFAS

Practice/Company/Residency Program: Rocky Mountain Reconstructive Foot and Ankle Fellowship

Email: Rmreconfellowship@gmail.com

Authors

Author 1: Emma R. Kayal, DPM, AACFAS

Author 2: Thomas Arena, DPM, AACFAS

Author 3: Alan Ng, DPM, FAFAS

Author 4: David Hahn, MD

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

As total ankle arthroplasties (TAA) become more prevalent, there is an increased necessity for revision alternatives. Currently there is no consensus for unconstrained total talus replacements (TTR) versus combined TAA with constrained TTR. This case series aims to evaluate the clinical outcomes of combined TAA with constrained TTR.

Methodology

Procedures

Four cases highlight complex ankle pathologies involving talar AVN, failed TAA, and post-traumatic nonunion. Patients initially treated with unconstrained TTR or TAA experienced complications such as implant loosening, pain, and joint degeneration. Revision procedures using TAA with constrained TTR provided pain relief, improved stability, and limb salvage. Surgical outcomes depend on the severity of the initial injury, the choice of implant, and timely interventions.

Results

We reviewed the medical records of 4 patients who underwent TAA with constrained TTRs at our institution between 2021 and 2024. Patient demographics, preoperative diagnoses, and postoperative follow-up data were collected. Mean follow-up was 14.5 months and mean age was 35. All cases demonstrated patient satisfaction and return to activities after combined TTA with constrained TTR.

Discussions

Combined TAA with constrained TTR is an effective surgical option for patients with end-stage ankle pathology, providing improvements in pain relief and function. Further studies with larger patient cohorts and long-term follow-up are needed to establish durability and success of these implants. This case series uncovers the increase revision and complications with unconstrained TTR in 2 patients. As TTRs become more prevalent, it would be advantageous to compare revision rates and durability with unconstrained versus constrained total ankle-total talus replacements.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Emma R. Kayal, DPM, AACFAS	emnator06@gmail.com	I/We have nothing to disclose	
Thomas Arena, DPM, AACFAS	tom.c.arena@gmail.com	I/We have nothing to disclose	
Alan Ng, DPM, FAFAS	alan.ng@occ-ortho.com	Consultant/Advisor/Speaker (List all affiliations)	Stryker Foot and Ankle/ Sports Medicine, Restore 3D, Orthosolutions, Medline Unite, Organogenesis, Anika Orthopedics, Lifenet, Sinaptic, and Paragon 28/Additive Orthopedics
David Hahn, MD	dbhawg@gmail.com	I/We have nothing to disclose	

TitleFungal Osteomyelitis of a Distal Phalanx: A Case Report

Submit Date10/14/2024

CorrespondentLast Name: RobinsonFull Name: Bethany, M, Robinson, B.S. Email: bmrobinson0409@gmail.comPractice/Company/Residency Program: Midwestern University

AuthorsAuthor 1: Bethany, M, Robinson, B.S. Author 2: Jacob, A, Paul, B.S. Author 3: Mattie, M, Krause, B.S. Author 4: Janna, M, Kroleski, DPM, FACFAS Author 5: Author 6: Author 7: Author 8:

PurposeFungal osteomyelitis is a rare disease, and the published literature is minimal. Treatment of fungal osteomyelitis is not common, therefore understanding proper diagnosis and treatment is key. The primary aim of this case study is to review the presentation, diagnosis and treatment of a rare disease.

Methodology

Procedures71-year-old female with a medical history of type two diabetes, peripheral neuropathy and a chronic smoker initially presented with an infected ingrown toenail. A partial matrixectomy was performed. At her follow-up appointment, she had developed a worsening infection and a wound which tracked to bone, and she was hospitalized for fever and chills. A follow-up MRI revealed osteomyelitis of the distal phalanx. Patient underwent an incision and drainage in the OR with debridement down to bone of the right distal phalanx. A fishmouth incision was made longer in the plantar aspect. The surgical pathology report included degenerative changes of the bone and soft tissue. The patient was successfully treated with oral antifungal therapy and distal amputation of the hallux.

ResultsRight distal hallux amputation with confirmation of osteomyelitis of rare fungal infection, Candida. Patient successfully healed after amputation and has not had recurrence at 44 months post-op.

DiscussionsIngrown nail procedures infection rates have been reported at 15.3% for surgical matrixectomy and 2.9-5.6% for chemical matrixectomy with phenol. The rate of fungal osteomyelitis infections has steadily increased due to the growing number of immunocompromised and immunosuppressed patients. Treatments range from antifungal medication to surgery. Diagnosis can be made by ELISA, PCR, GMS stain, and cultures.

FormatCase StudyCase Rpt Followup26Student ClubWound Care/Infectious DiseasesClassificationLevel IV

Authors/Financial Disclosures			
Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Bethany, M, Robinson, B.S.	bethany.robinson@midwestern.edu	I/We have nothing to disclose	
Jacob, A, Paul, B.S.	jacob.paul@midwestern.edu	I/We have nothing to disclose	
Mattie, M, Krause, B.S.	mmattie.krause@midwestern.edu	I/We have nothing to disclose	
Janna, M, Kroleski, DPM, FACFAS	jkrole@midwestern.edu	I/We have nothing to disclose	

Title

Endoscopic Repair of Interstitial Plantar Fascia Ligament Tears: A Novel Technique

Submit Date

10/09/2024

Correspondent

Last Name:Verdoni

Full Name:Tyler J. Verdoni, DPM, AACFAS

Practice/Company/Residency Program:

Email:tyler.verdoni@gmail.com

Florida Orthopedic Foot and Ankle Center (FLOFAC)

Authors

Author 1:Tyler J. Verdoni, DPM, AACFAS

Author 2:James M. Cottom, DPM, FACFAS

Author 3:Jay S. Badell, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To describe a novel procedure on endoscopic repair of interstitial plantar fascial tears

Methodology

Procedures

4 patients were identified with interstitial plantar fascial tears who failed conservative therapy. They were brought into the operating room. Endoscopic plantar fascial portals were created in standard fashion. The thick hypertrophic scar tissue overlying the plantar fascia was debrided utilizing an arthroscopic shaver. The tear was identified and primarily repaired utilizing a meniscal repair system. Patients were placed into a CAM boot and allowed to weight bear in the boot for 4 weeks. They began physical therapy then and placed into a plantar fascial brace for 6 weeks and regular sneakers. They were also offered custom orthotics once they were placed back into sneakers. They were followed until 1 year post surgery to monitor progression.

Results

At least 12 months of follow up was recorded for 4 patients. Each patient who underwent direct operative repair returned to normal sneakers in 4 weeks after surgery with a brace and without a brace 6 weeks after that. All patients were able to ambulate without pain and without recurrent plantar fasciitis at final follow up (1 year).

Discussions

Direct endoscopic repair of the plantar fascial allows for complete return to function and activity without having to sacrifice the plantar fascia through resection. This novel procedure addresses heel pain secondary to interstitial plantar fascia tearing, which is under reported and often missed on heel pain work ups. We hope that this novel technique is utilized for foot and ankle providers who encounter interstitial plantar fascial tears.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Tyler J. Verdoni, DPM, AACFAS	tyler.verdoni@gmail.com	I/We have nothing to disclose	
James M. Cottom, DPM, FACFAS	jamescottom300@hotmail.com	I/We have nothing to disclose	
Jay S. Badell, DPM, FACFAS	jaybadell@gmail.com	I/We have nothing to disclose	

TitleBulk Allograft for Malunited Talus Fracture in Pediatric Patient

Submit Date10/12/2024

Correspondent

Last Name: Mason

Full Name: Avery, J, Mason, DPM, AACFASEmail: amasondpm@gmail.com

Practice/Company/Residency Program: Nebraska Foot & Ankle Reconstructvie Surgery Fellowship

Authors

Author 1: Avery, J, Mason, DPM, AACFASAuthor 2: David, E, Waters, DPM, FACFAS

Author 3:Author 4:

Author 5:Author 6:

Author 7:Author 8:

PurposeSurgical correction of malunited pediatric talus fracture utilizing bulk allograft.

Methodology

ProceduresMalunion of talus fractures in pediatric patients presents a challenging clinical scenario, often leading to long-term complications such as chronic pain and impaired mobility. Surgical intervention is necessary to restore function and address associated deformities. We report the case of a 15-year-old female who sustained a talus fracture treated surgically at an outside facility. Two years post-injury, she presented with persistent pain and restricted range of motion. Imaging revealed malunion with significant central impaction and joint incongruence. After thorough evaluation, the patient underwent surgical intervention involving medial malleolus takedown with excision of the malunited fracture site and implantation of bulk allograft to restore anatomy and stability. The procedure was performed under general anesthesia, with intraoperative fluoroscopy confirming proper placement.

ResultsPostoperatively, the patient was monitored for 15 months. Radiographic analysis demonstrated successful integration of the allograft and restoration of talar alignment, with no signs of osteonecrosis. The patient reported resolution of pain and returned to normal activities.

DiscussionsThis case illustrates the effective use of bulk allograft in the management of malunited talus fractures in pediatric patients. Early intervention and careful surgical planning can lead to favorable functional outcomes and restoration of quality of life. Further studies are warranted to explore long-term implications and optimize treatment strategies

FormatCase Study

Case Rpt Followup16

Student Club

ClassificationRearfoot and Ankle Reconstruction

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Avery, J, Mason, DPM, AACFAS	amasondpm@gmail.com	I/We have nothing to disclose	
David, E, Waters, DPM, FACFAS	drwaters@prfootandankle.com	Consultant/Advisor/Speaker (List all affiliations)	Paragon 28

Title

Multiplanar Osteotomy for Equinovarus Malunion of Tibiotalar Joint: A Case Study

Submit Date

10/12/2024

Correspondent

Last Name: Mason

Full Name: Avery, J, Mason, DPM, AACFAS

Practice/Company/Residency Program:

Email: amasondpm@gmail.com

Nebraska Foot and Ankle Reconstructive Surgery Fellowship

Authors

Author 1: Avery, J, Mason, DPM, AACFAS

Author 2: David, E, Waters, DPM, FACFAS

Author 3: Ashley, L, Anderson PA-C

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Surgical correction of equinovarus malunion of tibiotalar joint using a multiplanar osteotomy resulting in decrease of symptoms and union of tibiotalar joint in rectus position.

Methodology

Procedures

Malunion after ankle fusion can lead to significant functional impairment, pain, and deformity, particularly in equinovarus deformities. Traditional correction methods may not adequately address the complex bony and soft tissue imbalances present in these cases. This study investigates the efficacy of a multiplanar osteotomy technique for correcting malunited equinovarus ankle fusions. We report the case of a 47-year-old male with a history of ankle fusion who presented with a malunion of the tibiotalar joint resulting in a significant equinovarus deformity, causing chronic pain and impaired mobility. Preoperative imaging revealed notable angular deformities and joint misalignment. The patient underwent a multiplanar osteotomy of the tibia and talus, strategically designed to address the deformity by correcting both the coronal and sagittal plane alignments. Post-surgical assessments included radiographic evaluations.

Results

Patient had a decrease in pain and increase in mobility following surgical correction and union was observed across the tibiotalar joint with rectus position.

Discussions

Multiplanar osteotomy presents a viable surgical option for correcting malunited equinovarus ankle fusions. This case illustrates the effectiveness of multiplanar osteotomy in managing malunited equinovarus ankle fusion. The technique not only corrected the deformity but also restored function, underscoring its potential as a viable surgical option in similar cases. Further research is needed to validate these findings and optimize treatment protocols for ankle malunion.

Format

Case Study

Case Rpt Followup

24

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Avery, J, Mason, DPM, AACFAS	amasondpm@gmail.com	I/We have nothing to disclose	
David, E, Waters, DPM, FACFAS	drwaters@prfootandankle.com	Consultant/Advisor/Speaker (List all affiliations)	Paragon 28
Ashley, L, Anderson PA-C	aanderson@prfootandankle.com	I/We have nothing to disclose	

Title

Flexor Digitorum Accessorius Longus Muscle contributing to Tarsal Tunnel Syndrome with concurrent Posterior tibial Tendon Dysfunction

Submit Date

10/12/2024

Correspondent

Last Name: Mason

Full Name: Avery, J, Mason, DPM, AACFAS

Email: amasondpm@gmail.com

Practice/Company/Residency Program: Nebraska Foot and Ankle Reconstructive Surgery Fellowship

Authors

Author 1: Avery, J, Mason, DPM, AACFAS

Author 2: David, E, Waters, DPM, FAFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Surgical treatment of rare flexor digitorum accessorius longus muscle (FDAL) causing the patient to experience tarsal tunnel syndrome (TTS) and concurrent PTTD.

Methodology

Procedures

TTS is characterized by compression of the posterior tibial nerve as it traverses the tarsal tunnel, leading to pain, numbness, and weakness in the foot. A rare case of FDAL muscle contributing to TTS, was identified with concurrent PTTD-further exacerbating the patient's symptoms. The FDAL may lead to increased tension and abnormal anatomical positioning within the tarsal tunnel. Case Study: Patient presented with TTS symptoms as well as PTTD given pes planus deformity. Imaging studies revealed hypertrophy of the FDAL and signs of posterior tibial tendon insufficiency. Surgical exploration confirmed the presence of the FDAL, which was compressing the posterior tibial nerve within the tarsal tunnel. The patient underwent surgical decompression, including resection of the hypertrophied FDAL and a medial displaced calcaneal osteotomy and gastrocnemius recession. Postoperative assessments indicated significant improvement in symptoms and functional recovery.

Results

The patient had complete resolution of pain after removing the FDAL and reconstructing their flatfoot deformity.

Discussions

This case highlights the role of the FDAL in TTS, particularly in conjunction with PTTD. Clinicians should consider anatomical variations of the FDAL when evaluating patients with TTS symptoms. Surgical intervention targeting both the FDAL and the posterior tibial tendon can lead to favorable outcomes, underscoring the importance of a comprehensive approach to management. Further studies are needed to explore the prevalence of FDAL in TTS and its implications for treatment strategies.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Avery, J, Mason, DPM, AACFAS	amasondpm@gmail.com	I/We have nothing to disclose	
David, E, Waters, DPM, FAFAS	drwaters@prfootandankle.com	Consultant/Advisor/Speaker (List all affiliations)	Paragon 28

Title

Novel Use of Dorsal Skin Flaps for Transmetatarsal Amputation Closure in an Immunocompromised Patient Post-Septic Shock Following a Dog Bite

Submit Date

10/14/2024

Correspondent

Last Name: Dang

Full Name: Thanh Dang

Practice/Company/Residency Program:

Email: tinhhdang1403@gmail.com

Inspira Health Network

Authors

Author 1: Thanh Dang

Author 2: Naheen Shariff

Author 3: Saad Noman

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

A patient presenting with bilateral foot gangrene and extensive plantar skin necrosis secondary to Capnocytophaga bacteremia underwent bilateral transmetatarsal amputations, achieving successful closure through the innovative use of dorsal skin flaps and intrinsic muscle support.

Methodology

Procedures

A 70-year-old male with a history of non-Hodgkin lymphoma and splenectomy presented with bilateral foot gangrene and extensive plantar skin necrosis, secondary to Capnocytophaga bacteremia following a dog bite. He initially underwent a transmetatarsal amputation (TMA) of the left foot, which was closed using a dorsal skin flap, connective tissue matrix injection, and percutaneous Achilles tendon lengthening. Three weeks later, a similar TMA procedure was performed on the right foot using the same techniques.

Results

At three months postoperatively, the dorsal flaps healed well, and the patient progressed to full weight-bearing with TMA fillers in bilateral shoes. He tolerated shoe modifications and maintained balance without complications. The patient is now scheduled for a six-month follow-up for high-risk foot care.

Discussions

Dorsal skin flaps are generally not the first choice for TMA closure due to concerns about inadequate neurovascular supply and limited soft tissue coverage. In this case, although bilateral below-the-knee amputations were initially recommended, a podiatric consultation allowed for a limb-salvage strategy. The extensive plantar necrosis complicated the wound closure, prompting the innovative use of intrinsic plantar muscles along with dorsal skin flaps for successful primary closure of the TMA in this immunocompromised patient.

Format

Case Study

Case Rpt Followup

18

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Thanh Dang	tinhhdang1403@gmail.com	I/We have nothing to disclose	
Naheen Shariff	naheen.shariff1@gmail.com	I/We have nothing to disclose	
Saad Noman	saadn150@gmail.com	I/We have nothing to disclose	

TitleA Paradigm Shift: Unilateral Mini External Fixation and Arthrodiastasis for Innovative Treatment of Calcaneal Fractures with Rafting Screws

Submit Date10/14/2024

Correspondent

Last Name: WarciakFull Name: David Warciak, DPMEmail: sjhdavid.warciak@gmail.comPractice/Company/Residency Program: Ascension St. Joseph Chicago

Authors

Author 1: David Warciak, DPMAuthor 2: Lauren Simon, DPMAuthor 3: Remmy Owor, DPMAuthor 4: Hany Shahin, DPMAuthor 5: Narendra Rajnikant Patel, DPM, FACFASAuthor 6: Author 7: Author 8:

PurposeWe describe a case series utilizing mini external fixation for arthrodiastasis and rafting screws as an effective technique for treating calcaneal fractures and improving their outcomes.

Methodology

ProceduresWe retrospectively evaluated charts of patients that underwent calcaneal fracture repairs with external fixation and rafting screws between January 2020 - October 2023. We recorded time from injury until surgery, time with external fixator, time until weight bearing, complications, and length of follow up. Three patients underwent open reduction with combined internal and external fixation via mini external fixator for arthrodiastasis and rafting screws for treatment of closed calcaneal fractures. All three patients presented with posterior facet depression with varus deformity.

ResultsAll three patients healed successfully following our treatment protocol. Mini external fixators were removed on average after 6.3 weeks. Weight bearing began on average 7.7 weeks after the primary procedure. Average follow up time was 17.7 months. There were no significant complications noted at final follow up time.

DiscussionsCalcaneal fracture treatment utilizing the combination of mini external fixation for arthrodiastasis and rafting screws yields favorable results as patients are able to weight bear earlier and ambulate with less pain. This technique is superior when compared to traditional techniques due to the unique usage of arthrodiastasis and rafting screw fixation. Usage of rafting screws allows for more stable fixation of subtalar fracture fragments. In combination with a mini rail, there is no requirement for plate fixation. Patients may also perform earlier ankle range of motion exercises to prevent scar tissue impingement as cast immobilization is not necessary.

FormatCase Study

Case Rpt Followup18

Student Club

ClassificationTrauma

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
David Warciak, DPM	sjhdavid.warciak@gmail.com	I/We have nothing to disclose	
Lauren Simon, DPM	sjhlauren.simon@gmail.com	I/We have nothing to disclose	
Remmy Owor, DPM	sjhremmy.owor@gmail.com	I/We have nothing to disclose	
Hany Shahin, DPM	sjhhany.shahin@gmail.com	I/We have nothing to disclose	
Narendra Rajnikant Patel, DPM, FACFAS	npatel@baringtonortho.com	Consultant/Advisor/Speaker (List all affiliations)	Stryker

Title

Amnion Injection: Alternative Treatment for Delayed Union?

Submit Date

10/01/2024

Correspondent

Last Name: Reddy

Full Name: Apeksha Reddy, DPM, MPH

Practice/Company/Residency Program:

Email: areddy@barry.edu

HCA Florida Mercy Hospital

Authors

Author 1: Apeksha Reddy, DPM, MPH

Author 2: Alexander Nguyen, DPM

Author 3: Daniel Stewart, AACFAS, FAAPSM, DABPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Avulsion fractures of the fifth metatarsal are challenging to manage nonoperatively, often prone to poor healing due to limited blood supply at the base. These injuries, typically caused by ankle inversion, can be mistaken for sprains without radiographs. When conservative treatment fails, amnion injections - commonly used for tissue injuries - may be considered, though research on their use for delayed fracture healing is limited. This case study follows a patient's avulsion fracture of the fifth metatarsal, from initial injury through delayed union to successful healing.

Methodology

N/A

Procedures

A 51-year-old female presented with pain in the left fifth metatarsal after rolling her ankle. X-rays showed a fifth metatarsal base fracture, and she was advised to be non-weight bearing in a CAM boot and use Tylenol and Voltaren. At two weeks, minimal improvement led to adding Vitamin C, D, and a bone stimulator. At the 3 month mark, delayed union was confirmed via ultrasound. The patient chose an amnion particulate injection, administered under ultrasound guidance. Follow-ups showed increased callus formation and symptom improvement. At 2.5 months following amnion injection, x-rays showed significant healing, and she was able to walk without pain.

Results

After the amnion injection, follow-ups showed increased callus formation, symptom improvement, and by 2.5 months, x-rays revealed significant healing with no discomfort during ambulation.

Discussions

Amnion membrane has shown excellent results in treating soft tissue pathologies, supported by numerous studies. With further clinical trials, it has the potential to be an effective option for non-union fractures.

Format

Case Study

Case Rpt Followup

24

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Apeksha Reddy, DPM, MPH	areddy@barry.edu	I/We have nothing to disclose	
Alexander Nguyen, DPM	anguyen@barry.edu	I/We have nothing to disclose	
Daniel Stewart, AACFAS, FAAPSM, DABPM	dstewart@barry.edu	I/We have nothing to disclose	

TitleFibular Allograft Intramedullary Nail: A Case Series

Submit Date10/06/2024

CorrespondentLast Name: MadulapallyFull Name: LahariEmail: laharimadulapally@gmail.comPractice/Company/Residency Program:Foot & Ankle Specialists of Ohio

AuthorsAuthor 1: Lahari Madulapally, DPM, AACFASAuthor 2: James Hayes, DPM, AACFASAuthor 3: Rachel Ascheman, DPMAuthor 4: Stephen J Frania, DPM, FAFASAuthor 5:Author 6:Author 7:Author 8:

PurposeDiabetic neuropathy with the onset of Charcot neuroarthropathy often leads to significant deformities and complications. During acute Charcot, the risk of ulceration and infection is significantly elevated. Proper offloading of the ulcerative area and a plantigrade foot are crucial for limb preservation. Current interventions, such as intramedullary (IM) nails and midfoot beaming, can have high rates of infection and hardware failure due to shifting of bone and hardware. The purpose is to present seven patients who underwent a novel limb salvage procedure involving a fibular allograft intramedullary nail instead of a standard metal intramedullary nail

Methodology

ProceduresThe multi-staged treatment included excision of chronic wounds with talectomy, use of autologous bone graft, and application of external fixation to initially correct the deformity. Once stable and free from wounds and infection, an allograft fibula was shaped to a similar length and diameter of a standard IM nail. The tibia was reamed, and the fibula allograft was inserted in the same fashion as a standard IM nail. Approximately six weeks later, the external fixation was removed, and patients were allowed to weight bear in a patellar tendon-bearing brace (PTB) or CROW boot.

ResultsOf the seven patients, six are currently ambulating with bracing, while one patient developed an infection in the proximal tibia, resulting in an above-the-knee amputation.

DiscussionsThis novel approach demonstrates promising results in limb salvage for patients with diabetic neuropathy and Charcot neuroarthropathy, offering a potential alternative to traditional hardware-intensive interventions such as intramedullary nails and midfoot beaming.

FormatCase StudyCase Rpt Followup12Student ClubClassificationRearfoot and Ankle ReconstructionLevel of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lahari Madulapally, DPM, AACFAS	laharimadulapally@gmail.com	I/We have nothing to disclose	
James Hayes, DPM, AACFAS	jhayesdpm@gmail.com	I/We have nothing to disclose	
Rachel Ascheman, DPM	rachel.ascheman19@gmail.com	I/We have nothing to disclose	
Stephen J Frania, DPM, FAFAS	stevefrania@gmail.com	I/We have nothing to disclose	

Title

Application of a Custom 3D Printed Fibular Implant for a Non Union of a Weber C Fracture

Submit Date

10/02/2024

Correspondent

Last Name:Eljaua

Full Name:Sahjar A Eljaua, DPM, PGY-3

Practice/Company/Residency Program:

Email:sahjar.eljaua@corewellhealth.org

Corewell Health Hospital- Wayne

Authors

Author 1:Lawrence Fallat, DPM, FACFAS

Author 2:

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The distal one third of the fibula is the most common site for a nonunion. Hypertrophic nonunion is caused by instability in the fracture and is found to be more symptomatic and painful. For nonunions and other deformities, 3D implant technology allows for design flexibility and permits production of personalized surgical products that are conformed to the patient's needs, as well as provide greater mechanical stability. This case documents that a custom 3D fibular implant can be utilized as a successful functional surgical treatment option to resolve a symptomatic nonunion of a Weber C fracture.

Methodology

Procedures

A 45-year-old male underwent resection of the chronic nonunion of the fibula with insertion of a custom 3D implant in the fibula and stabilization of tibiofibular syndesmosis, after failing insertion of a femoral autograft as well as a bone stimulator. Radiographs and CT scans of the left ankle showed a complete nonunion of the fracture site at the distal 1/3 of the diaphysis of the fibula as well as shortening of the fibula.

Results

Currently the patient is weight bearing in supportive shoes with 0/10 pain using the VAS.

Discussions

Standard treatment algorithm for a painful and malaligned non union proposes using grafting with ORIF. Many patients exist who fail conventional grafting. Custom 3D implants are a viable treatment option compared to autografts. 3D printing has evolved and has become a promising technology for the medical industry including the foot and ankle surgical field to successfully manage a variety of deformities including non unions.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:Lawrence Fallat, DPM, FACFAS

Email:lawrence.fallat@corewellhealth.org

Disclosure(s) selected:I/We have nothing to disclose

Disclosed Organisation(s):

Title

Tibial Cancellous Interpositional Autograft in First Metatarsophalangeal Joint Implant Arthroplasty Takedown and Conversion to Distraction Arthrodesis: A Case Series

Submit Date

10/14/2024

Correspondent

Last Name:Patel

Full Name: Dhruv S. Patel, DPM

Practice/Company/Residency Program:

Email: dhruvspatel7196@gmail.com

Katherine Shaw Bethea Hospital

Authors

Author 1: Dhruv S. Patel, DPM

Author 2: Roshni Patel, DPM

Author 3: James Whelan, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Arthrodesis of the first metatarsophalangeal joint (MTPJ) is a valuable option for patients with failed MTPJ arthroplasty. This case study presents a successful technique for converting failed arthroplasty to distraction arthrodesis using cancellous tibial interposition autograft. While previous research has explored calcaneal and iliac crest autografts, the use of cancellous tibial autograft in this context has not been documented.

Methodology

Procedures

MTPJ arthroplasty is associated with high complication rates and variable outcomes. Implant failure often leads to significant osseous defects, contributing to nonunion rates as high as 16.5%. Thus, effective revision techniques are crucial for restoring metatarsal length and ensuring stable arthrodesis. We report two successful cases of MTPJ distraction arthrodesis following arthroplasty failure.

Results

Cancellous tibial autograft was harvested approximately 2 cm proximal to the ankle joint to restore length, followed by stabilization with a dorsal bridge plate, achieving a 100% fusion rate. Both cases demonstrated successful union at the 1st MTPJ, with length restored and proper alignment maintained.

Discussions

The findings from Kindred et al. and Lowey et al. support the efficacy of autografts similar in quality, with both achieving 100% fusion, reinforcing that cancellous tibial autograft can be a reliable alternative in revision surgeries. Our technique effectively mitigated the risks of nonunion seen with structural grafts and shows promising results for distraction arthrodesis after failed MTPJ arthroplasty. We recommend this approach for patients requiring revision, as it provides excellent clinical outcomes and addresses significant osseous defects effectively.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Dhruv S. Patel, DPM	dhruvspatel7196@gmail.com	I/We have nothing to disclose	
Roshni Patel, DPM	roshnip218@gmail.com	I/We have nothing to disclose	
James Whelan, DPM, FACFAS	jim.h.whelan@gmail.com	I/We have nothing to disclose	

Title

Overcoming the "Deathstar": A Case Report on Tibiototalcaneal Arthrodesis with Custom 3D Printed Talar Cage Implant and Intramedullary Nailing

Submit Date

10/03/2024

Correspondent

Last Name: Kayal

Full Name: Emma R. Kayal, DPM, AACFAS

Email: Rmreconfellowship@gmail.com

Practice/Company/Residency Program: Rocky Mountain Reconstructive Foot and Ankle Fellowship

Authors

Author 1: Emma R. Kayal, DPM, AACFAS

Author 2: Thomas Arena, DPM, AACFAS

Author 3: Alan Ng, DPM, FAFAS

Author 4: Jared Michalson, MD

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

We present the successful functional outcomes of a 37-year-old male who underwent left tibiototalcaneal arthrodesis with a custom 3D printed titanium talar implant (a.k.a. "Deathstar") and intramedullary nailing for talar avascular necrosis. This case aims to demonstrate the efficacy and revision alternative of custom 3D implants in complex ankle and hindfoot reconstructions, emphasizing their role in limb salvage and functional restoration.

Methodology

Procedures

We present the case of a 37-year-old male with a significant past medical history for left open extruded talus 3 years prior who underwent multiple surgeries to provide a functional limb as a result from talar AVN and infection. In a last effort to preserve the limb, he underwent a left tibiototalcaneal arthrodesis with custom 3D titanium talar implant and intramedullary nailing for the management of advanced post-traumatic arthritis and talar AVN.

Results

Our results showed the patient experienced significant pain relief and functional improvement postoperatively but developed hardware-related complications requiring intramedullary nail exchange 11 months after the initial procedure. 4 months following the nail exchange and 20 months since the primary surgery, the patient demonstrates excellent functional recovery. He ambulates in regular footwear, has returned to recreational hiking, and reports no significant pain.

Discussions

This case highlights the success of a custom 3D talar implant with intramedullary nailing in restoring function and quality of life in a young patient with complex hindfoot pathology. The overall clinical outcome was favorable, demonstrating timely intervention and appropriate revision surgery with custom 3D implantation can lead to pain control and functional results.

Format

Case Study

Case Rpt Followup

20

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Emma R. Kayal, DPM, AACFAS	emnator06@gmail.com	I/We have nothing to disclose	
Thomas Arena, DPM, AACFAS	tom.c.arena@gmail.com	I/We have nothing to disclose	
Alan Ng, DPM, FAFAS	alan.ng@occ-ortho.com	Consultant/Advisor/Speaker (List all affiliations)	Stryker Foot and Ankle/ Sports Medicine, Restore 3D, Orthosolutions, Medline Unite, Organogenesis, Anika Orthopedics, Lifenet, Sinaptic, and Paragon 28/Additive Orthopedics
Jared Michalson, MD	jared.michalson@occ-ortho.com	I/We have nothing to disclose	

TitleCrossing Screw Fixation in First Proximal Phalanx Fracture Nonunion: A Case Report

Submit Date10/04/2024

Correspondent

Last Name:WroblewskiFull Name:Alec R. Wroblewski, DPMEmail:awroble11@gmail.comPractice/Company/Residency Program:Atrium Health Wake Forest Baptist

Authors

Author 1:Alec R. Wroblewski, DPMAuthor 2:Brennan K. Reardon, DPMAuthor 3:Nicholas S. Powers, DPM, FACFASAuthor 4:Author 5:Author 6:Author 7:Author 8:

PurposePedal phalangeal fractures are common, however literature is lacking with regards to reported treatment options of nonunion, specifically in the hallux proximal phalanx. This is probably because most phalangeal fractures are non-displaced/minimally displaced, and conservative management is suitable for adequate healing and return of function. This case study reports on a single fixation technique to hopefully contribute to the paucity in current literature regarding phalangeal nonunion.

Methodology

ProceduresThis first proximal phalanx nonunion initially presented to the clinic following a traumatic injury and emergency room visit with radiographic analysis revealing a closed, mildly displaced first proximal phalanx fracture. Initial conservative treatment failed, no radiographic progression noted, nonunion confirmed via 3.5 month CT scan. Patient was treated operatively with open reduction and internal fixation with two 2.5 mm headless crossing screws, bone graft and bone stimulator.

ResultsRadiographic union was noted at 3 month follow up via post-operative CT scan. Patient reported complete relief of pain. No hardware failure or clinical complications were experienced in the post-operative period.

DiscussionsDespite how common digital fractures are, the occurrence of nonunion is rare or under-reported, leaving a paucity in literature regarding current treatment techniques. Similar cases of nonunion in literature have found success with dorsal plate fixation (including use of small facial plates), cross-pin fixation, and screw fixation with and without bone grafting. Open reduction internal fixation with the use of two crossing 2.5 mm headless screws appears to be a viable option in a case of nonunion of a closed, first proximal phalanx fracture.

FormatCase Study

Case Rpt Followup16

Student Club

ClassificationTrauma

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Alec R. Wroblewski, DPM	awroble11@gmail.com	I/We have nothing to disclose	
Brennan K. Reardon, DPM	bkreardo@wakehealth.edu	I/We have nothing to disclose	
Nicholas S. Powers, DPM, FACFAS	nspowers@wakehealth.edu	I/We have nothing to disclose	

Title

A Rare Case of Angioleiomyoma Presenting as Heel Pain in the Foot: A Case Report

Submit Date

10/05/2024

Correspondent

Last Name:Wroblewski

Full Name:Alec R. Wroblewski, DPM

Practice/Company/Residency Program:

Email:awroble11@gmail.com

Atrium Health Wake Forest Baptist

Authors

Author 1:Alec R. Wroblewski, DPM

Author 2:Devon J. Niewohner, DPM

Author 3:John P. Bonvillian, DPM, FACFAS

Author 4:Hayden M. Bush, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Angioleiomyoma is a benign soft tissue tumor that can commonly occur in the lower extremities, however occurrence is rare in the foot. There's only a handful of documented cases in literature regarding occurrence in the foot. This rarity and lack of literature regarding varying clinical presentation can contribute to missed and/or delayed diagnoses, often prolonging treatment and surgery for the patient.

Methodology

Procedures

Angioleiomyomas are benign tumors arising from smooth muscle cells of vascular structures. Their clinical presentation is mild or often asymptomatic, making clinical diagnosis challenging without close tissue/histopathological examination. This case of an angioleiomyoma presented to the clinic as persistent posterior-lateral heel pain with initial differentials including Achilles tendonitis and Haglund's deformity. After having failed most conservative measures, advanced imaging (MRI) revealed a suspicious lesion to the posterior-lateral heel concerning for a benign vs malignant etiology.

Results

Excisional biopsy revealed a benign appearing spindle-cell neoplasm with interspersed thick-walled vessels. No mitotic activity or necrosis was identified. The tumor was positive for SMA with weak positivity for desmin on immunohistochemistry. The vascular endothelium was positive for ERG. Findings were consistent with angioleiomyoma. Post-operative course was uneventful and patient reported complete relief of her pain upon surgical excision.

Discussions

The clinical presentation of soft tissue tumors in the lower extremity can vary leading to frequent missed or delayed diagnoses. Current literature would benefit from such case reports to better understand the pathology and improve diagnostic timing and accuracy.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Alec R. Wroblewski, DPM	awroble11@gmail.com	I/We have nothing to disclose	
Devon J. Niewohner, DPM	dniewohn@wakehealth.edu	I/We have nothing to disclose	
John P. Bonvillian, DPM, FACFAS	jpbonvil@wakehealth.edu	I/We have nothing to disclose	
Hayden M. Bush, DPM	hbush@wakehealth.edu	I/We have nothing to disclose	

Title

Giant Cell Tumor of the Tibia - Case Study Highlighting Limb Salvage and the Importance of Early Diagnosis and Treatment

Submit Date

10/04/2024

Correspondent

Last Name:Williams

Full Name:Aspen

Practice/Company/Residency Program:

Email:aspenjawilliams@gmail.com

Long Island Jewish Forest Hills at Northwell Health

Authors

Author 1:Aspen Williams, DPM

Author 2:Paul Rayward, DPM

Author 3:Marco Basone, DPM

Author 4:Robert J. Stabile, DPM. FAFAS.

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Giant Cell Tumors are benign osseous tumors, but possess the potential for aggressive expansion, destruction of surrounding tissue, and malignant transformation. Prompt diagnosis and treatment are integral in patient limb salvage and return to daily activities. Thus, it is essential to understand the appropriate interdisciplinary treatment approach, and what surgical considerations can be made to salvage a patient’s extremity.

Methodology

Procedures

A 37 year old male presented with left lower leg pain and a palpable osseous prominence at the level of the distal medial tibia. The patient denied any history of trauma or any precipitating incident. Xray demonstrated a metaphyseal lesion of the distal tibia. Subsequent MRI and CT suggested an expansile Giant Cell Tumor of the distal tibia. Biopsy was taken and confirmed diagnosis.

Results

Prompt diagnosis and treatment of Giant Cell Tumor via surgical resection, chemical cauterization with phenol, iliac crest autograft, and external fixation in conjunction with pharmacological treatment and oncology referral, resulted in successful removal of tumor without recurrence and the salvage of the patient’s lower extremity.

Discussions

Although considered a benign tumor, Giant Cell Tumors can expand aggressively and have the potential for malignant transformation. Following diagnosis with advanced imaging and biopsy, an interdisciplinary treatment plan consisting of surgical resection, chemical-cautery with phenol, electrocautery, external fixation, and possible pharmacological adjunctive therapy should be utilized. Often, these lesions can be notably expansile; therefore, resection can result in large osseous and soft tissue defects that require extensive reconstructive surgery in order to return the patient to function.

Format

Case Study

Case Rpt Followup

26

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Aspen Williams, DPM	aspenjawilliams@gmail.com	I/We have nothing to disclose	
Paul Rayward, DPM	prayward@northwell.edu	I/We have nothing to disclose	
Marco Basone, DPM	mbasone2@northwell.edu	I/We have nothing to disclose	
Robert J. Stabile, DPM. FAFAS.	rstabile@numc.edu	I/We have nothing to disclose	

Title

Long Term Follow-Up of Titanium Truss Utilization for Salvage of Failed Lapidus Arthrodesis: A Case Series

Submit Date

10/06/2024

Correspondent

Last Name: Brandt

Full Name: Mary, R, Brandt, DPM, AACFAS

Email: mrbrandt9@gmail.com

Practice/Company/Residency Program: West Penn Hospital Foot & Ankle Institute

Authors

Author 1: Madison, K, Burandt, DPM

Author 2: Mary, R, Brandt, DPM, AACFAS

Author 3: Alan, R, Catanzariti, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

A lapidus arthrodesis is a successful and predictable operation for correction of hallux valgus. However, nonunion remains a common complication. There are multiple technical challenges and surgical considerations to perform a revision arthrodesis. Nonviable bone must be resected resulting in shortening of the first ray. Our study encompasses the long-term success of titanium trusses in revision lapidus and the technical challenges this salvage procedure entails.

Methodology

Procedures

This case study presents three patients who underwent revision lapidus arthrodesis with use of prefabricated titanium trusses secondary to painful nonunion and significant first ray shortening. Preoperative CT scans confirmed nonunion of the fusion site. Each hardware construct varied depending on adequate surrounding bone following hardware removal.

Results

Each patient is now between 30-36 months status post revision lapidus arthrodesis. Postoperative radiographs demonstrated successful fusion with restoration of the sagittal plane, first ray length, and metatarsal parabola. No complications occurred regarding the structural integrity. Each patient returned to shoe gear by four months with pain free ambulation.

Discussions

While standard of care may be bone grafting with arthrodesis, autogenous bone grafts have been found to disintegrate and resorb whereas titanium wedges offer mechanical strength. While custom trusses are beneficial for specialized cases, prefabricated trusses can be easily accessible for surgeons. Other studies have proven success in first ray stability, radiographic union, and patient satisfaction; however, the follow-up in these studies was less than a year. Our study presents multiple cases with long-term follow-up and the application of prefabricated trusses in first ray reconstruction.

Format

Case Study

Case Rpt Followup

36

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Madison, K, Burandt, DPM	madison.burandt12@gmail.com	I/We have nothing to disclose	
Mary, R, Brandt, DPM, AACFAS	mrbrandt9@gmail.com	I/We have nothing to disclose	
Alan, R, Catanzariti, DPM, FACFAS	Alan.Catanzariti@ahn.org	I/We have nothing to disclose	

Title

A Rare Case of Idiopathic Distal Tibial Avascular Necrosis: Surgical Management and Outcome

Submit Date

10/14/2024

Correspondent

Last Name: Bhalala

Full Name: Yashkumar

Practice/Company/Residency Program:

Email: ybhalala@kent.edu

Corewell Health Hospital - Wayne, MI

Authors

Author 1: Yashkumar Anilkumar Bhalala DPM

Author 2: Lawrence Fallat DPM FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Avascular necrosis (AVN) of the distal tibia is a rare condition with limited documentation in medical literature on exact mechanism of AVN, but in nontraumatic cases, it is thought to result from vascular compromise, bone death, or impaired bone repair.

Methodology

Procedures

A 39-year-old female presented to our clinic complaining of 6-month history of right ankle pain and edema without any history of trauma. Physical exam was significant for localized, moderate ankle edema with tenderness to touch. There was no neurovascular impairment. She has no history of tobacco or recent corticosteroid use. Radiographs demonstrated radiolucency across distal tibia. An MRI was obtained that revealed AVN to the distal tibial medullary canal. Patient was non-weightbearing in a CAM boot with no significant pain reduction over the next month. Patient underwent surgical intervention that included cortical windowing and curettage, along with decompression and bone grafting and fixation of the cortical window. We believe that this technique would provide satisfactory support to the joint line, prevent collapse, and reduce the risk of ankle osteoarthritis and complications.

Results

At 13 months post-surgery, the patient has remained pain-free in the ankle and weight-bearing in shoes. Radiographs showed bone consolidation and maintained ankle alignment.

Discussions

Distal tibial AVN is a rare and challenging condition to diagnose and manage, with limited literature available to guide treatment. Surgical techniques such as cortical windowing and curettage, along with decompression and bone grafting, show promise for early-stage disease, while more advanced cases may require joint fusion or replacement.

Format

Case Study

Case Rpt Followup

13

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Yashkumar Anilkumar Bhalala DPM	ybhalala@kent.edu	I/We have nothing to disclose	
Lawrence Fallat DPM FACFAS	ybhalala@kent.edu	I/We have nothing to disclose	

Title

Closed Reduction and Percutaneous Stabilization of a Rare, Isolated Cuboid Fracture-Dislocation: A Case Report

Submit Date

10/06/2024

Correspondent

Last Name: Korwek

Full Name: Zachary

Practice/Company/Residency Program:

Email: zachary.korwek@yale.edu

Yale New Haven Hospital

Authors

Author 1: Zachary Korwek

Author 2: Arij Rashid, DPM

Author 3: Timothy P Cheung, DPM, PhD, CPT

Author 4: David Caminear, DPM, FACFAS

Author 5: Peter Blume, DPM, FACFAS

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this case report is to evaluate a closed reduction and percutaneous stabilization approach to a rare, isolated cuboid fracture-dislocation.

Methodology

Procedures

Cuboid fracture-dislocations rarely occur in isolation. Few cases are reported in the podiatric literature, all recommended open reduction with internal or external fixation. This case reports the successful closed reduction and percutaneous stabilization of an isolated cuboid fracture-dislocation in a 30 year old male.

Results

A 30 year old male with no significant medical history presented to the ED after suffering an injury to the left foot during a softball game. XR and CT revealed a plantar-medial dislocation of the cuboid. Surgical intervention was performed within 24 hours. Under general anesthesia, axial distraction of the 4th and 5th TMT joints with simultaneous supero-lateral force applied plantarly was successful in close reducing the cuboid. Two smooth k-wires were driven across the 4th and 5th TMT joints into the cuboid for stabilization. The patient remained non-weight bearing and k-wires were removed 1 month post-operatively. One year post-op, the patient reports minimal pain to the CC joint that is well tolerated with orthotics and accommodative sneakers.

Discussions

To our knowledge, this is the first report in the podiatric literature of a closed reduction and percutaneous stabilization of an isolated cuboid fracture-dislocation. This case report refutes the prior assumption that isolated cuboid fracture-dislocations should be treated with open reduction. Although rare, this case highlights the importance of considering closed reduction with percutaneous stabilization under general anesthesia.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Zachary Korwek	zachary.korwek@yale.edu	I/We have nothing to disclose	
Arij Rashid, DPM	arij.rashid@yale.edu	I/We have nothing to disclose	
Timothy P Cheung, DPM, PhD, CPT	timothy.cheung@yale.edu	I/We have nothing to disclose	
David Caminear, DPM, FACFAS	david.caminear@ynhh.org	Consultant/Advisor/Speaker (List all affiliations)	GEO
Peter Blume, DPM, FACFAS	peterb@ctfootandanklesurgery.com	Consultant/Advisor/Speaker (List all affiliations)	GEO, Vilex

Title

Pedal Partition: Anatomical Insights into the Bipartite Talus

Submit Date

10/14/2024

Correspondent

Last Name: Leaman

Full Name: Michael P. Leaman, DPM

Practice/Company/Residency Program:

Email: drmpleaman@gmail.com

HCA Florida Northwest

Authors

Author 1: Michael P. Leaman, DPM

Author 2: Justin R. Vilaseca, DPM

Author 3: Jonathan A. Yazhari, DPM

Author 4: Alan A. MacGill, DPM, FACFAS

Author 5: Carlo A. Messina, DPM, FACFAS

Author 6:

Author 7:

Author 8:

Purpose

This case presentation and literature review highlight the variations and complexity in the rare cases of bipartite talus while contributing insights into diagnostic protocols, treatment strategies, and optimization of patient outcomes.

Methodology

N/A

Procedures

21F with a chief complaint of left ankle pain with accompanied edema and difficulty ambulating for several years. Incidence of past trauma consisting of a significant hyper-plantarflexion injury of her left ankle as a child. Concern for a chronic fracture of the posterior talar body vs an anomaly of the talus consistent with a bipartite talus was raised. Due to the malalignment and chronicity of the suspected fracture, surgical intervention was recommended. Zwier et al. proposed that treatment strategies range from conservative to surgical options including excision and fixation dependent on fragment size, joint involvement, and joint quality. Rose et al. suggested internal fixation with bone grafting for fragments larger than 20%, while excision is viable for smaller fragments to preserve joint function.

Results

Patient underwent surgical intervention consisting of excision of the bipartite talus with no adjacent fusions. Postoperative imaging demonstrates complete excision of the bipartite talus with maintained congruency of the tibiotalar and subtalar joints.

Discussions

The infrequently encountered bipartite talus represents a rare but clinically significant anatomical anomaly with diverse presentations and diagnostic challenges. Surgical intervention may be warranted with exhaustion of conservative measures, and the treatment must be individually tailored utilizing provided treatment algorithms as guidance to optimize management and outcomes.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Michael P. Leaman, DPM	drmpleaman@gmail.com	I/We have nothing to disclose	
Justin R. Vilaseca, DPM	jvilasecadpm@gmail.com	I/We have nothing to disclose	
Jonathan A. Yazhari, DPM	jyazharidpm@gmail.com	I/We have nothing to disclose	
Alan A. MacGill, DPM, FACFAS	alanmacgill@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Arthrex, ConMed
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	ACFAS, HCA Florida Northwest
Carlo A. Messina, DPM, FACFAS	cmacna@yahoo.com	I/We have nothing to disclose	

TitleAchilles Bone Block Allograft: An Alternate Reconstructive Option for Failed Achilles Tendon Repairs

Submit Date10/13/2024

CorrespondentLast Name: Lewis
Full Name: Deana L. Lewis, DPM, AACFASEmail: dlewis63@kent.edu
Practice/Company/Residency Program:Foot and Ankle Specialists of Central Ohio

AuthorsAuthor 1: Deana L. Lewis, DPM, AACFASAuthor 2: Varsha Atuluru, DPM, AACFAS
Author 3: Daniel B. Logan, DPM, FACFASAuthor 4:
Author 5:Author 6:
Author 7:Author 8:

PurposeThe purpose of this study is to highlight another surgical option for patients with chronic or neglected achilles ruptures or those who have failed all other reconstructive surgical treatment options.

Methodology

ProceduresOur goal is to present three successful cases utilizing an achilles bone block allograft which showed promising results in all three cases with high rates of incorporation and functional recovery. Our aim is to add to the sparsely available research and case reports utilizing this reconstructive surgical option and the pivotal role it may play in foot and ankle reconstructive procedures.

ResultsIn this study, we present three successful cases utilizing an achilles bone block allograft which showed promising results in all three cases with high rates of incorporation and functional recovery at the time of follow up.

DiscussionsTreatment for chronic or neglected achilles ruptures can be a complex and challenging condition to treat. There are various reconstructive treatment options for large defects in the achilles that are performed and have also been reported in literature including but not limited to, V-Y tendon lengthening, gastrocnemius turndown flap, and flexor hallucis longus (FHL) tendon transfer. When this procedure fails, remaining treatment options are limited. The use of achilles bone block allografts has emerged as a significant advancement in reconstructive foot and ankle surgery for addressing complex and significant achilles defects as well as those with substantial bone loss. Moreover, the use of an allograft can reduce the need for an autograft, thereby minimizing donor site morbidity and associated complications.

FormatCase Study

Case Rpt Followup12

Student Club

ClassificationRearfoot and Ankle Reconstruction

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Deana L. Lewis, DPM, AACFAS	dlewis63@kent.edu	I/We have nothing to disclose	
Varsha Atuluru, DPM, AACFAS	varshaatuluru@gmail.com	I/We have nothing to disclose	
Daniel B. Logan, DPM, FACFAS	dlogan@fasco.health	I/We have nothing to disclose	

Title

Human Allogeneic Bone Screw in a Comminuted Hawkins III Talar Neck Fracture: A Case Report

Submit Date

10/09/2024

Correspondent

Last Name: Huetter

Full Name: Konstanze K Huetter, MD

Email: konstanze.huetter@medunigraz.at

Practice/Company/Residency Program: Medical University of Graz, Austria

Authors

Author 1: Konstanze K Huetter, MD

Author 2: Patrick Holweg, MD, PhD

Author 3: Martin Ormig, MD

Author 4: Viktor Labmayr, MD

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Talar neck fractures are complex injuries, and when accompanied by bone loss or comminution, they pose challenges for achieving stable fixation and anatomical reconstruction. This case report highlights the use of a human allogeneic cortical bone screw as a novel method for bridging lateral comminution at the talar neck, providing structural support and promoting osteointegration.

Methodology

Procedures

A 20-year-old male sustained a left ankle injury from a fall during bouldering, resulting in a comminuted talar neck fracture and dislocation of the subtalar and tibiotalar joints. Urgent surgical intervention involved open reduction and internal fixation using a two-incision technique. Intraoperative findings after stabilizing the medial key fragment revealed a significant lateral bony defect. A commercially available allogeneic cortical screw derived from human donor bone was utilized to bridge and stabilize the lateral talar neck.

Results

At 3 months, CT confirmed fracture healing, and the patient initiated full weight-bearing despite residual swelling. At 6 months, the AOFAS score was 85/100 and the FAAM score was 69/84, with no significant swelling or pain. By one year, the patient presented full weight-bearing with occasional pain, resulting in an AOFAS score of 88/100 and a FAAM score of 79/84, with CT confirming integration of the allogeneic bone screw. At 2 years, the patient reported a pain-free range of motion with full activity participation, with AOFAS and FAAM scores at 100/100 and 84/84, respectively.

Discussions

The successful application of this technique illustrates the potential of human allogeneic cortical bone screws for stabilizing and bridging defects in talar neck fractures.

Format

Case Study

Case Rpt Followup

24

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Konstanze K Huetter, MD	konstanze.huetter@medunigraz.at	I/We have nothing to disclose	
Patrick Holweg, MD, PhD	p.holweg@medunigraz.at	Consultant/Advisor/Speaker (List all affiliations)	Shark Screw® Instructor
Martin Ormig, MD	Martin.Ormig@uniklinikum.kages.at	Consultant/Advisor/Speaker (List all affiliations)	Shark Screw® Instructor
Viktor Labmayr, MD	viktor.labmayr@medunigraz.at	I/We have nothing to disclose	
	viktor.labmayr@medunigraz.at	I/We have nothing to disclose	

Title

Minimally Invasive Percutaneous Fixation for Pediatric Talar Neck Fracture: A Case Report

Submit Date

10/14/2024

Correspondent

Last Name: Mansager

Full Name: Sarah A. Mansager, DPM

Practice/Company/Residency Program:

Email: samansager@carilionclinic.org

Carilion Clinic Foot & Ankle Surgery and Research Fellowship

Authors

Author 1: Samuel A. Straus, DPM, AACFAS

Author 2: Sarah A. Mansager, DPM

Author 3: Kelly A. Kugach, DPM, AACFAS

Author 4: John R. Clements, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Pediatric talar neck fractures are rare injuries with unique anatomical characteristics. Various surgical approaches have been described, but selection of technique is dependent on fracture pattern, degree of displacement, and surgeon experience and/or preference. This report discusses successful treatment of a pediatric talar neck fracture using a minimally invasive percutaneous fixation technique.

Methodology

Procedures

11-year-old female sustained a comminuted displaced talar neck fracture with extension into the sinus tarsi secondary to an ATV accident. The talar head was noted to be displaced medially, approximately 1-1.5 cm, in relation to the talar body. Temporary K-wires were placed as manual joysticks to anatomically reduce the talar head. Definitive percutaneous fixation with two crossing 0.062 K-wires was performed to maintain reduction. Postoperatively, the patient was immobilized and enrolled in a structured rehabilitation protocol. Serial postoperative radiographs were obtained throughout clinical follow up.

Results

Percutaneous fixation was removed at 6 weeks. Complete osseous consolidation of the talus fracture was noted at 14 weeks. At 12 months, the talar neck was completely healed, anatomic position was well maintained, and there were no signs of avascular necrosis radiographically. At final follow-up, the patient was ambulating without pain and she had resumed all pre-injury physical activities.

Discussions

This case highlights the efficacy of minimally invasive techniques in managing complex pediatric talar neck fractures. Proper treatment of these injuries requires a thorough workup to help guide surgical interventions. Further research into minimally invasive surgical techniques in pediatric fracture care is crucial to developing standardized treatment protocols that can improve patient outcomes.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Samuel A. Straus, DPM, AACFAS	sstrausdpm@gmail.com	I/We have nothing to disclose	
Sarah A. Mansager, DPM	samansager@carilionclinic.org	I/We have nothing to disclose	
Kelly A. Kugach, DPM, AACFAS	kkugach@carilionclinic.org	I/We have nothing to disclose	
John R. Clements, DPM, FACFAS	jrclements@carilionclinic.org	Consultant/Advisor/Speaker (List all affiliations)	Stryker
		Member of a medical publication or editorial governing board	Editor in Chief of Foot & Ankle Specialist

Title

AN EVASIVE FUNGUS: RARE CASES OF DISSEMINATED ANGIOINVASIVE FUNGAL INFECTION IN THE LOWER EXTREMITY

Submit Date

10/11/2024

Correspondent

Last Name: Momoh

Full Name: Hamidat

Practice/Company/Residency Program:

Email: momohh@penmedicine.upenn.edu

Penn Presbyterian Medical Center

Authors

Author 1: Hamidat Momoh DPM

Author 2: John Campbell DPM

Author 3: Rita-Anne Falconio DPM

Author 4: Brett Chatman DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study is to describe the clinical presentation and surgical management of this rare fatal disease and to review treatment recommendations based on the current literature.

Methodology

Procedures

Disseminated angioinvasive fungal infection is a rare but aggressive fungal infection. These fungal infections are often fatal with most cases occurring in patients who are immunocompromised with risk factors such as diabetes, organ transplantation, HIV/AIDS, etc. It is a significant source of morbidity and mortality requiring prompt diagnosis and early treatment but, in most cases, will require urgent surgical intervention. Here, we have identified two cases of fatal disseminated fungus with characteristic organ involvement, clinical presentation, and pathology findings in immunosuppressed hosts. Tissue biopsy confirmed obliterated blood vessels in the deep dermis and multiple hyphae with septation and acute angle branching in the vessel wall consistent with angioinvasive fungal infection.

Results

Although there is no standard recommendation on surgical intervention for angioinvasive fungal infection, one patient underwent surgical debridement, which subsequently resulted in an urgent proximal limb amputation due to rapid invasion. The other patient benefited from early diagnosis with aggressive surgical excision of bone and soft tissue, with confirmed clear margins. Both patients required multiple antifungal therapy.

Discussions

This illustrates aggressive surgical debridement for angioinvasive fungal infection to be an effective method of source control along with systemic antifungal therapy. Early recognition, histopathology, culture, and immediate administration of antifungal treatment/surgical intervention as needed, are key to improving clinical outcomes for patients with angioinvasive infection.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Hamidat Momoh DPM	hamidat.momoh@penmedicine.upenn.edu	I/We have nothing to disclose	
John Campbell DPM	john.campbell1@penmedicine.upenn.edu	I/We have nothing to disclose	
Rita-Anne Falconio DPM	Rita-anne.falconio@penmedicine.upenn.edu	I/We have nothing to disclose	
Brett Chatman DPM, FACFAS	brett.chatman@penmedicine.upenn.edu	I/We have nothing to disclose	

Title

A Rare Case of Methotrexate Induced Epstein-Barr Virus - Positive Diffuse Large B-Cell Lymphoma In The Lower Extremity

Submit Date

10/14/2024

Correspondent

Last Name: Park

Full Name: Diana T. Park, DPM/PGY3

Email: drdianapark@gmail.com

Practice/Company/Residency Program: Kaiser Foundation Hospital

Authors

Author 1: Diana T. Park, DPM, PGY3

Author 2: Elizabeth E. Gajardo-Stitt, MS4

Author 3: Kelly J. Wallin, DPM

Author 4: Daniel K. Lee, DPM, PhD, FACFAS

Author 5: Tanya J. Singleton, DPM

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this case study is to illustrate a rare occurrence and clinical presentation of Methotrexate Iatrogenic induced Epstein-Barr Virus-positive Diffuse large B-cell lymphoma (EBV-DLBCL) due to potential for immunosuppressive medication-induced malignant lower extremity masses.

Methodology

Procedures

A 93-year-old African American female with Rheumatoid arthritis on chronic immunosuppressive Methotrexate, presented to multiple ER visits with a painful posterior-medial ankle mass. Prior studies demonstrated that more than 11,000 genes are regulated upon EBV, driving naïve B cells into a germinal center-like differentiation, leading to immortalized, proliferating cells resembling plasmablasts and early plasma cells. Thus, EBV efficiently infects resting human B lymphocytes and induces their continuous proliferation in vitro, miming certain aspects of EBV’s oncogenic potential in vivo. There is evidence that EBV hijacks the intrinsic B-cell activation program, which may explain the downregulation of CD20 in this case.

Results

MRI imaging revealed a necrotic soft tissue mass versus abscess. Surgical excision was performed with permanent pathology specimen collected. NIH pathology reported iatrogenic immunodeficiency -associated lymphoproliferative disorder consistent with EBV positive DLBCL. Patient was referred to oncology for chemotherapy and serial PET scans. No further local resection was recommended.

Discussions

Given the patient's history of Methotrexate therapy, the findings align with iatrogenic immunodeficiency-associated lymphoproliferative disorder consistent with EBV positive DLBCL. This rare case underscores the importance of heightened suspicion for malignancies in immunocompromised patients on immunosuppressive medications who present with painful soft tissue masses.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Diana T. Park, DPM, PGY3	drdianapark@gmail.com	I/We have nothing to disclose	
Elizabeth E. Gajardo-Stitt, MS4	elizabethgajardostitt@gmail.com	I/We have nothing to disclose	
Kelly J. Wallin, DPM	kelly.j.wallin@kp.org	I/We have nothing to disclose	
Daniel K. Lee, DPM, PhD, FACFAS	daniel.k.lee@kp.org	I/We have nothing to disclose	
Tanya J. Singleton, DPM	tanya.j.singleton@kp.org	I/We have nothing to disclose	

Title

Interpositional arthroplasty using Acellular Dermal Allograft for Lesser Metatarsophalangeal Joint Osteoarthritis

Submit Date

10/14/2024

Correspondent

Last Name: Kanu

Full Name: Aliou

Practice/Company/Residency Program:

Email: alieukanu@gmail.com

Inspira Health Network

Authors

Author 1: Aliou Kanu, DPM

Author 2: Saad Noman, DPM

Author 3: Benjamin Marder, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Acellular dermal matrix (ADM) allografts are human dermal collagen matrix that serve as biological scaffolds providing a structural framework for tissue regeneration. The matrix provides a scaffold for host cell repopulation and revascularization allowing the ability to convert into host tissue. ADM has been used successfully in the foot and ankle for interpositional arthroplasty due to its versatility and reliability. Interpositional arthroplasty is an alternative to arthrodesis for joints of the foot and ankle as it diminishes the stress applied to the surrounding joints by allowing continued motion at the arthroplasty site. We present favorable outcomes from a patient that is 2 years postoperatively from interpositional arthroplasty using acellular dermal tissue matrix for lesser metatarsophalangeal osteoarthritis.

Methodology

Procedures

Standard dorsal longitudinal incision over the second metatarsophalangeal joint used. Resection of loose hypertrophic bone fragment using sagittal saw. Bone tunnel through proximal phalanx made. Suture wire passer through a drill hole in the proximal phalanx with passage of EDB tendon. Second bone tunnel created using drill. Allograft laid over 2nd metatarsal head and fiberwire threaded with free needle through the bone tunnel from plantar to dorsal. Suture tie of graft in place.

Results

2 years post operatively, the patient was ultimately pleased with her post-op outcomes, and continued pain free activity and ROM with continued use of custom molded orthoses.

Discussions

Interpositional arthroplasty using ADM is a viable alternative to arthrodesis given joint mobility is preserved and there is limited damage to intrinsic muscles involved.

Format

Case Study

Case Rpt Followup

24

Student Club

Forefoot Reconstruction

Classification

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Aliou Kanu, DPM	alieukanu@gmail.com	I/We have nothing to disclose	
Saad Noman, DPM	saadn150@gmail.com	I/We have nothing to disclose	
Benjamin Marder, DPM, FACFAS	benjamin.marder@gmail.com	I/We have nothing to disclose	

Title

Short-Term Outcomes of TTC Arthrodesis with 3D-Printed Custom Cage for Treatment of Peri-Talar Defects.

Submit Date

10/09/2024

Correspondent

Last Name: Likewise

Full Name: Lauren A. Likewise, DPM

Practice/Company/Residency Program: Virginia Mason Franciscan Health

Email: laurenlikewise@gmail.com

Authors

Author 1: Lauren A. Likewise, DPM

Author 2: Joshua T. Smith, DPM

Author 3: Thomas O. Lancaster, DPM

Author 4: Ryan J. Stone, DPM, AACFAS

Author 5: Zachary Z. Stanfield, DPM, FACFAS

Author 6: Byron L. Hutchinson, DPM, FACFAS

Author 7:

Author 8:

Purpose

To demonstrate successful utilization of tibiototalcaneal (TTC) arthrodesis with 3D-printed custom cage implantation for peri-talar defects, while also including short-term outcome measures.

Methodology

Procedures

Retrospective review of four patients (average age 46.3 years, average follow-up 19.3 months) who underwent TTC arthrodesis with a custom 3D-printed cage by two senior authors. All patients had talar pathology contributing to a significant peri-talar defect: one with residual clubfoot, two with talar avascular necrosis (one due to total ankle subsidence and the other from a malunited talar fracture), and one with tuberculosis-induced ankle arthritis. Post-operatively, all patients were clinically evaluated, pain and functional outcome scores documented, and evidence for osseous incorporation of the cage was evaluated on radiographs.

Results

All radiographs reveal evidence of ankle and subtalar joint fusion with osseous incorporation of the cage. AOFAS Ankle-Hindfoot score is 64/100 with mean VAS of 1.75/10. Subjectively, all patients can ambulate with a plantigrade foot, and 3 of the 4 patients were satisfied with their procedure and would recommend it to someone with similar pathology. None of the patients have had implant revision or failure. One patient continues to have persistent pain with suboptimal functional scores.

Discussions

This small case series with short-term follow-up data shows promising radiographic and functional outcomes proving that TTC fusion with custom cage is a viable salvage treatment option. More intermediate- to long-term investigation is needed to determine survivorship of TTC fusion with custom 3D-printed implants.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lauren A. Likewise, DPM	laurenlikewise@gmail.com	I/We have nothing to disclose	
Joshua T. Smith, DPM	jtsmith3912@gmail.com	I/We have nothing to disclose	
Thomas O. Lancaster, DPM	Thomas.O.Lancaster@gmail.com	I/We have nothing to disclose	
Ryan J. Stone, DPM, AACFAS	ryan.stone177@gmail.com	I/We have nothing to disclose	
Zachary Z. Stanfield, DPM, FACFAS	zach.stanfield@gmail.com	I/We have nothing to disclose	
Byron L. Hutchinson, DPM, FACFAS	hutchmeded@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Paragon 28/Orthofix consultant. There was no funding provided for this study

Title

Custom Implant Tibiototalcaneal Arthrodesis with Single-Screw Dynamic Fixation in a Neuropathic Population: A Multi-Institutional Case Series

Submit Date

10/08/2024

Correspondent

Last Name:Kavanaugh

Full Name:Marian

Practice/Company/Residency Program:

Email:kavanaughmarian@gmail.com

West Virginia University & University of Pittsburgh Medical Center

Authors

Author 1:Marian, R, Kavanaugh, AACFAS

Author 2:Mary, R, Brandt, AACFAS

Author 3:Emily, A, Zink, DPM

Author 4:Sriya, S, Babu, DPM, AACFAS

Author 5:Patrick, R, Burns, DPM, FAFAS

Author 6:

Author 7:

Author 8:

Purpose

Tibiototalcaneal arthrodesis is an important salvage method for patients with complex hindfoot problems, including Charcot. This case series evaluated the results of a a single screw, dynamic retrograde intramedullary nail for fixation with patient specific custom implants in a high risk, neuropathic patient population

Methodology

Procedures

A sequential series of 10 tibiototalcaneal arthrodeses in 10 patients done by one surgeon were evaluated from two institutions. The underlying diagnosis of the included patients was diabetes with peripheral neuropathy. All included patients underwent staged salvage procedure with an external fixator to maintain alignment and provide stability. The final procedure included a patient specific custom implant to obtain the TTC fusion. A single, dynamic screw was utilized for proximal fixation in the final procedure. Impaction of the nail relative to the intramedullary canal and complications were assessed.

Results

Fusion was assessed from a retrospective chart and radiograph review. Cortical hypertrophy on the tip of the nail or around the proximal interlocking screw was noted to determine dynamization. Average impaction of the dynamic nail was 6.16 mm over an average of 30 months. Cortical hypertrophy was evident in 8 of 10 feet at the tip of the rod or the proximal locking screw. There were no stress fractures. 4 of the 10 feet experienced diffuse pretibial pain for a period of less than 6 weeks.

Discussions

The dynamically-locked retrograde intramedullary nail worked well in this series, with a fusion rate of 88%. There is no literature highlighting fusion rates with custom implants in neuropathic patients. This technique and implant design offers the potential for more reproducible outcomes

Format

Case Study

Case Rpt Followup

30

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Marian, R, Kavanaugh, AACFAS	kavanaughmarian@gmail.com	I/We have nothing to disclose	
Mary, R, Brandt, AACFAS	mrbrandt9@gmail.com	I/We have nothing to disclose	
Emily, A, Zink, DPM	Emily.zinkk@gmail.com	I/We have nothing to disclose	
Sriya, S, Babu, DPM, AACFAS	sriyababudpm@gmail.com	I/We have nothing to disclose	
Patrick, R, Burns, DPM, FAFAS	Patrick.burns1@wvumedicine.org	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Education Committee Chair, APMA
		Member of a medical publication or editorial governing board	Associate editor JAPMA, surgical section

Title

Advancing Limb Salvage in Neuropathic Patients: Patient-Specific Custom Implants for High-Risk Cases – A Multi-Institutional Case Series

Submit Date

10/08/2024

Correspondent

Last Name: Brandt

Full Name: Mary, R, Brandt, DPM, AACFAS

Practice/Company/Residency Program:

Email: mrbrandt9@gmail.com

West Virginia University & University of Pittsburgh Medical Center

Authors

Author 1: Mary, R, Brandt, DPM, AACFAS

Author 2: Marian, R, Kavanaugh, DPM, AACFAS

Author 3: Emily, A, Zink, DPM

Author 4: Sriya, D, Babu, DPM, AACFAS

Author 5: Patrick, R, Burns, DPM, FAFAS

Author 6:

Author 7:

Author 8:

Purpose

Charcot neuropathy presents unique challenges in limb salvage due to progressive bone destruction, deformity, and mechanical instability leading to high risk of amputation. The ultimate goal is to achieve a braceable, ambulatory foot for improved patient mobility. This case series highlights surgical technique, design rationale and outcome of staged tibiototalcanal arthrodesis with a custom 3D implant in the treatment of Charcot neuropathy.

Methodology

Procedures

We present 10 diabetic, neuropathic patients who were found to have active Charcot that led to hindfoot deformity with secondary ulcerations. Each patient underwent a partial talectomy with application of external fixator followed by TTC arthrodesis with a custom implant and intramedullary nail. Each implant was designed to have a flat proximal portion that allows for increased bone contact, while the distal spherical portion allows the surgeon to properly align the fusion.

Results

Successful healing of any ulcerations was achieved with use of external fixator prior to implantation of internal hardware. Follow-up averaged thirty months, and each patient has maintained excellent clinical and radiographic position with 100% fusion rate on plain radiographs.

Discussions

Talectomy is favorable in cases of severe deformity; however, tibiototalcanal arthrodesis can lead to limb length discrepancy. While the use of structural bone grafts provides a lower cost option, it is limited by the amount required and has shown to have slow graft incorporation and risk for delayed collapse. This study highlights the effectiveness of a staged surgical technique with integration of a patient specific implant for reproducible outcomes that are applicable in management of Charcot neuropathy.

Format

Case Study

Case Rpt Followup

30

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Mary, R, Brandt, DPM, AACFAS	mrbrandt9@gmail.com	I/We have nothing to disclose	
Marian, R, Kavanaugh, DPM, AACFAS	kavanaughmarian@gmail.com	I/We have nothing to disclose	
Emily, A, Zink, DPM	emily.zinkk@gmail.com	I/We have nothing to disclose	
Sriya, D, Babu, DPM, AACFAS	sriyababudpm@gmail.com	I/We have nothing to disclose	
Patrick, R, Burns, DPM, FAFAS	patrick.burns1@wvumedicine.org	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s) Member of a medical publication or editorial governing board	Education Committee Chair, APMA Associate Editor JAPMA, Surgical Section

Title

A Rare Encounter: Synovial Sarcoma in a 21-Year-Old Male

Submit Date

10/08/2024

Correspondent

Last Name:Brandt

Full Name:Mary, R, Brandt, DPM, AACFAS

Practice/Company/Residency Program:West Virginia University Wheeling Hospital Foot & Ankle

Email:mrbrandt9@gmail.com

Authors

Author 1:Mary, R, Brandt, DPM, AACFAS

Author 2:Mary, R, Kavanaugh, DPM, AACFAS

Author 3:Sriya, A, Babu, DPM, AACFAS

Author 4:Crystal-Dawn L. Bradshaw, DPM, AACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Synovial sarcoma remains rare, consisting of 8-10% of all soft tissue tumors. It is not uncommon for synovial sarcoma to be misdiagnosed in the foot and ankle, where benign soft tissue lesions are more prevalent. We present a rare case of a painful medial instep mass on a 21-year-old male.

Methodology

Procedures

The patient presented with an ongoing painful mass to the medial midfoot. Prior treatments consisted of intra-articular steroid injections with no relief. An MRI was performed that demonstrated an increase in signal on T1; however no significant mass was identified. The patient was taken to the OR and a 2 cm by 1 cm lobulated mass was excised.

Results

Pathology was positive for monophasic synovial sarcoma. The patient was referred to oncology and a tumor board recommended re-excision. The patient was taken back to the OR by the orthopedic oncology team and re-excision of a 6 cm by 3.5 cm sarcoma bed with wound vac placement was performed. Margins were negative and plastic surgery performed a 12 x 10 cm dorsalis pedis perforator flap. Advanced imaging has been performed routinely and remains negative for metastasis.

Discussions

A periarticular mass in a youth patient with non-mechanical pain should alert a physician to pursue further imaging. Five-year survival rates for synovial sarcoma range from 59-75% and tumor size does have a prognostic value. With its unique presentation, it is important as surgeons to recognize this and avoid inappropriate interventions. Surgical excision with occasional radiation therapy is the mainstay treatment but having a multidisciplinary team is crucial.

Format

Case Study

Case Rpt Followup

16

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Mary, R, Brandt, DPM, AACFAS	mrbrandt9@gmail.com	I/We have nothing to disclose	
Mary, R, Kavanaugh, DPM, AACFAS	kavanaughmarian@gmail.com	I/We have nothing to disclose	
Sriya, A, Babu, DPM, AACFAS	sriyababudpm@gmail.com	I/We have nothing to disclose	
Crystal-Dawn L. Bradshaw, DPM, AACFAS	crystal.bradshaw@wvumedicine.org	I/We have nothing to disclose	

Title

Revisiting Failed 1st MTPJ Arthroplasty: How Patient-Specific Custom Implants Offer Solutions and Functional Outcomes

Submit Date

10/08/2024

Correspondent

Last Name:Kavanaugh

Full Name:Marian

Practice/Company/Residency Program:

Email:kavanaughmarian@gmail.com

West Virginia University

Authors

Author 1:Marian, R, Kavanaugh, DPM, AACFAS

Author 2:Mary, R, Brandt, DPM, AACFAS

Author 3:Sriya, S, Babu, DPM, AACFAS

Author 4:Mark, H, Hofbauer, DPM, FAFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The primary objective of this case is to evaluate the complications associated with failed first metatarsophalangeal joint (MTPJ) arthroplasty and to explore the effectiveness of a patient-specific custom implant as a solution for addressing these challenges. This study evaluates patients functional status pre and post operatively when implementing a patient-specific custom implant designed to tailor the treatment to the individual’s anatomy, improving precision and outcomes.

Methodology

Procedures

In this study, we aimed to describe a case study of revision first metatarsophalangeal joint fusion with a three-dimensional (3-D) printed implant for an osseous deficit after a failed total silastic implant arthroplasty. Patient's functional status and AOFAS scores were evaluated pre and post operatively.

Results

Patient had a minimum follow up of 16 months. Patient was able to return to protected weight bearing at the 6 mark, and returned to regular shoe wear at 4 months. Her preoperative and postoperative AOFAS scores were 39 and 82, respectively. At her 1 year follow up, she was noted to have pain free ambulation. Serial post operative radiographs determined osseous union at 4 months.

Discussions

Failed 1st MTPJ arthroplasties present a unique set of clinical complications, including joint instability, pain, and loss of function, which can significantly affect a patient's mobility and quality of life. In addition, failure rates for first metatarsophalangeal joint implant arthroplasties have been noted to be upward of 72% at 3 years and often leave a large osseous deficit. Custom 3-D-printed implants for first metatarsophalangeal joint revision can provide an opportunity for improved outcomes and healing.

Format

Case Study

Case Rpt Followup

16

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Marian, R, Kavanaugh, DPM, AACFAS	kavanaughmarian@gmail.com	I/We have nothing to disclose	
Mary, R, Brandt, DPM, AACFAS	mrbrandt9@gmail.com	I/We have nothing to disclose	
Sriya, S, Babu, DPM, AACFAS	sriyababudpm@gmail.com	I/We have nothing to disclose	
Mark, H, Hofbauer, DPM, FAFAS	hofdude30@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Stryker, Enovis, Trimed

Title

Rare Case of Intersection syndrome of the foot and ankle

Submit Date

10/08/2024

Correspondent

Last Name: Meyer

Full Name: Cameron, Austin, Meyer DPM, AACFAS

Practice/Company/Residency Program: Orthopedic Foot and Ankle Center

Email: cam.a.meyer@gmail.com

Authors

Author 1: Cameron, Austin, Meyer DPM AACFAS

Author 2: Jae Yoon Kim, DPM, AACFAS

Author 3: Orlando Martinez, DPM

Author 4: Patrick E. Bull, DO, FAOAO

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purposes of this case report are to add to the limited literature on this rare type of foot tenosynovitis, to propose an explanation regarding the condition’s etiology, and to describe a novel surgical treatment technique.

Methodology

Procedures

Described in the wrist in 1841 by Alfred Armand Louis Marie Velpeau and later coined by James H. Dobyns in 1978; forearm intersection syndrome has a low reported prevalence of 0.2 ~ 0.37%. A complex connection system in the foot is at the “master knot” of Henry. We present an 18 year old female patient presented to the outpatient foot and ankle clinic with a complaint of chronic sports participation related plantar right foot and posteromedial ankle pain. After failure of conservative treatment measures for six months, the diagnosis was suggested following a high resolution foot ultrasound exam showing extensive FHL tenosynovitis. Ultrasound guided corticosteroid injections failed to provide lasting symptom relief; therefore, a surgical treatment strategy was proposed.

Results

A tendon stripper was passed retrograde along the FHL through an incision at the hallux deep flexion crease to release the interconnection between the FHL and FDL at the Knot of Henry. Six weeks following surgery, the patient was able to return to full sports participation with no symptoms.

Discussions

Foot intersection syndrome is a rare diagnosis with few documented cases. Numerous FHL to FDL interconnection patterns have been described. We propose a surgical technique for resistant cases with use of a tendon stripper. Future work should evaluate if there's a correlation with the type of intersection and clinical presentation.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Biomechanics and Anatomy

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Cameron, Austin, Meyer DPM AACFAS	cam.a.meyer@gmail.com	I/We have nothing to disclose	
Jae Yoon Kim, DPM, AACFAS	jaeyoon.kim1210@gmail.com	I/We have nothing to disclose	
Orlando Martinez, DPM	ojmutsa2014@gmail.com	I/We have nothing to disclose	
Patrick E. Bull, DO, FAOAO	patrickbull2@gmail.com	I/We have nothing to disclose	

TitleRare Digital Nerve Schwannoma Causing Ulceration of the Fourth Toe

Submit Date10/13/2024

Correspondent

Last Name:ClorFull Name:Zackary J. Clor DPM, MHAEmail:zack_clor@yahoo.comPractice/Company/Residency Program:Ascension Macomb Oakland Hospital

Authors

Author 1:Zackary J. Clor DPM, MHAAuthor 2:Christopher J. Womac DPMAuthor 3:Tariq K. Elagamy DPMAuthor 4:Erik C. Kissel DPMAuthor 5:Author 6:Author 7:Author 8:

PurposeThis case study presents the first reported ulceration of a toe secondary to a rare digital nerve Schwannoma.

Methodology

ProceduresSchwannomas are a benign neoplasm of the Schwann cells within the myelin sheath of peripheral nerves and make up about 5% of all soft tissue tumors. 12% of all Schwannomas occur in the foot and ankle. Digital schwannomas are infrequently reported and there are no current reports of an ulcerated digital nerve schwannoma in the feet. The patient described in this case was a 27-year-old female with past medical history of anemia who presented with an infected ulceration to the right foot fourth toe secondary to an underlying soft tissue mass. Following resolution of infection with oral antibiotics, it was determined that resection of the mass would be necessary for closure of the skin which was augmented with V-Y skin plasty.

ResultsPathology revealed a benign spindle cell neoplasm which was S100 positive and SMA negative, consistent with Schwannoma with focal necrosis and ulceration of skin surface. At 1 year of follow-up, the patient was noted to have retained function and sensation as well as cosmetic closure of the toe.

DiscussionsSchwannomas are benign neoplasm of Schwann cells in peripheral nerves and rarely occur in the foot and ankle. There is currently no literature of an ulceration secondary to a digital nerve Schwannoma. V-Y skin plasty was used successfully to close an ulceration secondary to digital nerve Schwannoma in a 27-year-old female and provide retention of function as well as cosmetic closure.

FormatCase Study

Case Rpt Followup12

Student Club

ClassificationSoft Tissue/Tumor

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Zackary J. Clor DPM, MHA	zackary.clor@gmail.com	I/We have nothing to disclose	
Christopher J. Womac DPM	cwomac1@hfhhs.org	I/We have nothing to disclose	
Tariq K. Elagamy DPM	tariq.elagamy@footandanklesemi.com	I/We have nothing to disclose	
Erik C. Kissel DPM	erik.kissel@footandanklesemi.com	I/We have nothing to disclose	

Title

AITFL Augmentation for Management of Syndesmotic Disruption

Submit Date

10/15/2024

Correspondent

Last Name: Kirshner

Full Name: Noah A Kirshner, DPM

Practice/Company/Residency Program:

Email: nakirshner@gmail.com

Premier Orthopaedic and Sports Medicine Foot and Ankle Surgery Fellowship

Authors

Author 1: Spencer J. Monaco, DPM, FACFAS

Author 2: Noah A. Kirshner, DPM

Author 3: Tavin B. Morgan, DPM

Author 4: Amanda R. Liere

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

There is limited reporting on the use of AITFL augmentation for syndesmosis repair, and even sparser data on specific outcome measures following these procedures. We report on average time to weight bearing following syndesmosis repair with and without AITFL augmentation.

Methodology

Procedures

Recent literature has addressed the biomechanical contributions from each ligament within the syndesmosis, the nature of fractures which produce AITFL disruption, and evaluated the etiology of malreduction and poor outcomes following fracture repair with syndesmosis involvement. There is sparse reporting on the impact of AITFL augmentation on time to weight bearing following operative intervention. The senior author's medical records were reviewed from 2017-2023 using appropriate CPT codes. Static fixation and trimalleolar ankle fractures were excluded.

Results

A total of 22 patients were included in this study. Mean age was 39.8, there were 16 females and 6 males. Average transition to weight bearing in walking boot was ~25 days for AITFL group, 34 days for no augment group. 56 days to weight bearing in regular shoes for AITFL group, 54 days for AITFL group.

Discussions

We report on our use of AITFL augmentation for syndesmotic injury based on intraoperative observation of residual instability following dynamic fixation with suture button. We compared average time to weight bearing in surgical walking boot as well as regular shoe gear in patients who received suture button alone versus suture button with AITFL augmentation. We observed similar time to weight bearing across our patient population. However based on our observations, we feel further study on functional outcomes is warranted.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Spencer J. Monaco, DPM, FACFAS	smonaco25@gmail.com	I/We have nothing to disclose	
Noah A. Kirshner, DPM	nakirshner@gmail.com	I/We have nothing to disclose	
Tavin B. Morgan, DPM	tavinbmorgan@gmail.com	I/We have nothing to disclose	
Amanda R. Liere	aressliere2@gmail.com	I/We have nothing to disclose	

Title

CASE REVIEW: RARE SYNOVIAL CHONDROMATOSIS IN 14 YEAR-OLD MALE

Submit Date

10/11/2024

Correspondent

Last Name: Donovan

Full Name: Jacqueline, K, Donovan, FACFAS DPM

Email: jacquelinekdonovan@gmail.com

Practice/Company/Residency Program: Erie Foot and Ankle Center

Authors

Author 1: Jacqueline K. Donovan, FACFAS, DPM

Author 2: Nicholas Butler, AACFAS, DPM

Author 3: Richard Park

Author 4: Diaeddine Madi, DPM PGY-I

Author 5: Arihant Seth, MS-IV

Author 6:

Author 7:

Author 8:

Purpose

Synovial chondromatosis, a benign condition characterized by the formation of cartilaginous nodules within synovial joints, is uncommon in pediatric patients and particularly rare in the ankle joint.

Methodology

Procedures

A 14-year-old male presented with a two-month history of progressive left ankle pain and decreased range of motion without prior trauma. Clinical examination revealed palpable loose body and limited ankle mobility. Radiographic imaging demonstrated a radio-opaque loose body within the tibiotalar joint, while MRI confirmed synovial proliferation with intra-articular bodies measuring 1.5 x 1.5 cm. After failed conservative management, the patient underwent open ankle arthrotomy and synovectomy.

Results

The cartilaginous loose body was removed, and histopathological examination confirmed the diagnosis of synovial chondromatosis. The patient achieved full weight-bearing status at six weeks post-operation under the guidance of a physical therapist. At three months follow-up, the patient demonstrated improved range of motion and had returned to sports activities without issues. No recurrence was noted on follow-up imaging.

Discussions

A comprehensive review of literature reveals limited reported cases of ankle SC in pediatric patients. The etiology remains unclear, though trauma and inflammatory conditions have been suggested as potential triggers. Traditional treatment approaches include surgical synovectomy and removal of loose bodies, with arthroscopic techniques becoming increasingly prevalent in recent years. This investigation aims to contribute to the limited body of literature on pediatric synovial chondromatosis of the ankle joint. By documenting the successful diagnosis, surgical management, and post-operative outcomes, we provide valuable insights for clinicians encountering similar cases in young patients.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jacqueline K. Donovan, FACFAS, DPM	jacquelinekdonovan@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Consultant for Stryker
Nicholas Butler, AACFAS, DPM	nbutler5@kent.edu	I/We have nothing to disclose	
Richard Park	woorampark71395@gmail.com	I/We have nothing to disclose	
Diaeddine Madi, DPM PGY-I	dmadi@kent.edu	I/We have nothing to disclose	
Arihant Seth, MS-IV	aseth3@kent.edu	I/We have nothing to disclose	

Title

Novel fixation technique for hallux interphalangeal arthrodesis using a 7-0 intramedullary screw: A case series

Submit Date

10/09/2024

Correspondent

Last Name: Fontana

Full Name: Cara L Fontana, DPM, PGY-2

Practice/Company/Residency Program:

Email: fontanacara@gmail.com

Katherine Shaw Bethea Hospital

Authors

Author 1: Cara L Fontana, DPM, PGY-2

Author 2: Natalie A Magda, DPM, PGY-1

Author 3: Michael D Corcoran, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Hallux interphalangeal joint (HIPJ) arthrodesis is commonly performed by podiatric surgeons. While there are multiple fixation options, arthrodesis is commonly performed with single-screw fixation. However, in literature there is no gold standard for recommended screw size. This five-patient case series describes the surgical technique used to perform HIPJ arthrodesis using a 7-0 intramedullary screw.

Methodology

Procedures

Five patients undergoing elective HIPJ arthrodesis with 7-0 intramedullary screw fixation performed by a single podiatric physician at one institution. Radiographic and patient-reported clinical outcomes presented. All patients underwent a HIPJ arthrodesis with the insertion of a 7-0 headless cannulated compression screw. In all cases, joint preparation was adequately performed and appropriate fixation positioning was confirmed using fluoroscopy.

Results

Four of five patients had no complications and beginning signs of radiographic union at 6 weeks post-operatively. All of these patients have had no complaints of pain or hardware irritation at 6 weeks post-operatively. One patient, one month post-operatively, had a trauma to the surgical site causing dislocation of the hallux, exposed hardware, and resulting in amputation.

Discussions

Up to this point, no research has been performed to determine the gold standard size for HIPJ arthrodesis fixation using intramedullary screws. At 15 month follow up, aside from one patient who underwent trauma, all patients have had successful outcomes. There have been no incidences of nonunion, hardware irritation, pain, or need for further surgical intervention. This case series describes a successful alternative surgical fixation technique for HIPJ arthrodesis.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Cara L Fontana, DPM, PGY-2	fontanacara@gmail.com	I/We have nothing to disclose	
Natalie A Magda, DPM, PGY-1	nataliemagda0@gmail.com	I/We have nothing to disclose	
Michael D Corcoran, DPM	corcoranm@gmail.com	I/We have nothing to disclose	

Title

DVT Incidence Following Administration of Segmental Compression Device following elective ambulatory foot and ankle surgery

Submit Date

10/09/2024

Correspondent

Last Name: Schwab

Full Name: Anthony

Practice/Company/Residency Program:

Email: anthonyjschwab7@gmail.com

Inova Fairfax Medical Campus

Authors

Author 1: Anthony J Schwab, DPM, MS

Author 2: Sara Hammond, DPM

Author 3: Roland Ramdass, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Existing guidelines for SCD use are consensus-based, derived mainly from surgical patients by comparing the effects of SCDs with anticoagulation versus anticoagulation alone. The few studies analyzing the use of SCDs in elective orthopedic surgery did not produce statically significant results. Kwak et al. compared 233 patients who had undergone primary total hip arthroplasty with and 146 patients without application of IPC all to find SCDs were not associated with decreased VTE incidence.

Methodology

Procedures

A total of 100 patients undergoing elective foot and ankle surgery by a single surgeon at two centers were retrospectively reviewed and placed into two cohorts: patients who received SCDs (n=50) and those that did not (n=50). Patients were included in the study if they underwent elective ambulatory foot and ankle surgery. Patients were excluded if they had undergone surgical intervention requiring inpatient admission or if they had history of DVT or coagulopathy. A retrospective chart review was then conducted to determine the incidence of DVT at one year follow-up.

Results

All 100 patients were included in our retrospective review. At final follow-up, none of the patients in the SCD group nor the non SCD group had a DVT post-operatively. Our retrospective review showed no statistically significant difference in the incidence of DVT in patients who received SCDs and those who did not.

Discussions

We hope this study can add to the current body of literature to suggest that post operative oral prophylaxis is sufficient alone in the prevention of DVTs without the use of SCDs.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Epidemiology/Population Study

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Anthony J Schwab, DPM, MS	anthonyjschwab7@gmail.com	I/We have nothing to disclose	
Sara Hammond, DPM	prysisaraelizabeth@gmail.com	I/We have nothing to disclose	
Roland Ramdass, DPM, FACFAS	rsrdpm@gmail.com	I/We have nothing to disclose	

Title

Intramedullary Fibular Nails and Plate Fixation: A Case Series in Fibular Fracture

Submit Date

10/15/2024

Correspondent

Last Name: Brown

Full Name: Malachi

Practice/Company/Residency Program:

Email: malachi.brown@mymail.barry.edu

Barry University School of Podiatric Medicine

Authors

Author 1: Malachi

Author 2: Madison Carroll, BS

Author 3: Imani Graham, BA

Author 4: Muskaan Khan, BS

Author 5: Kayla Wand, BS

Author 6: Daniel Stewart, DPM

Author 7:

Author 8:

Purpose

The purpose of this case series is to evaluate non-traditional surgical methods, such as intramedullary fibular nails, when treating ankle traumas, such as fibular fractures in patient populations.

Methodology

Procedures

Three female patients who presented with distal fibular fractures are included in this series. Two patients underwent IMF nails and one patient underwent an ORIF with a fibular plate. There are several surgical techniques and are dependent on the severity of injury, patient condition and physician preference. While plate fixation with or without an interfragmentary compression screw is commonly employed, intramedullary nail fixation has recently presented significant advantages, including reduced surgical dissection, improved soft-tissue handling, and decreased hardware prominence.

Results

Postoperative protocols for all patients included a non-weight bearing status in a posterior splint for 4 to 6 weeks to promote healing. All patients were prescribed physical therapy and at home stretching and strengthening exercises. Overall, all patients healed well and were successfully discharged from postoperative status.

Discussions

Distal fibular fractures affect ankle stability, often managed with plate and screw fixation (ORIF) or intramedullary (IM) nails. ORIF is the gold standard for unstable fractures, offering stability, but may cause more soft tissue trauma. IM nails are less invasive, reducing tissue disruption and hardware irritation, making them ideal for poor bone quality. In this case series, both methods resulted in restricted ankle motion but no pain. However, access to physical therapy was limited by economic barriers, highlighting the need for improved rehabilitation support. Future research should focus on long-term outcomes and functional recovery.

Format

Case Study

Case Rpt Followup

12

Student Club

Rearfoot and Ankle Reconstruction

Classification

Level IV

Level of Evidence

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Malachi	malachi.brown@mymail.barry.edu	I/We have nothing to disclose	
Madison Carroll, BS	madison.carroll@mymail.barry.edu	I/We have nothing to disclose	
Imani Graham, BA	imani.graham@mymail.barry.edu	I/We have nothing to disclose	
Muskaan Khan, BS	muskaan.khan@mymail.barry.edu	I/We have nothing to disclose	
Kayla Wand, BS	kayla.wand@mymail.barry.edu	I/We have nothing to disclose	
Daniel Stewart, DPM	dstewart@barry.edu	I/We have nothing to disclose	

Title

Technique for Tibialis Anterior Tendon Rupture Repair With Retained Hardware At The First Metatarsocuneiform Joint

Submit Date

10/14/2024

Correspondent

Last Name: Warner

Full Name: Rachel, M, Warner, DPM, AACFAS

Practice/Company/Residency Program:

Email: warnrac@gmail.com

South Central Pennsylvania Reconstructive Foot and Ankle Fellowship

Authors

Author 1: Rachel Warner, DPM, AACFAS

Author 2: Samuel, B, Clellen, DPM, AACFAS

Author 3: Michael, B, Younes, DPM, D.ABFAS, FACFAS, MBA

Author 4: Jennifer, L, Mulhern, DPM, D.ABFAS, FACFAS, ABPM

Author 5: Sonam, T, Ruit, DPM, D.ABFAS, FACFAS

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this case study is to guide surgical management of tibialis anterior (TA) rupture with retained hardware present from previous first metatarsocuneiform joint (MCJ) arthrodesis.

Methodology

Procedures

TA tendon rupture is a rare injury that can occur from acute trauma or chronic degeneration. Rupture of the TA tendon has a detrimental outcome on a patient's gait and functionality. There are no clear guidelines for treatment of TA tendon ruptures in the literature. Often, surgical treatment includes: end-to-end anastomosis, extensor hallucis longus transfer, or use of tendon allograft. In the setting of retained hardware, planned surgical repair requires adjustment. The purpose of this case study is to discuss operative treatment of TA tendon rupture with hardware present from previous first MCJ arthrodesis.

Results

We describe a novel technique where the TA tendon is secondarily repaired with a semitendinosus allograft and transferred into the navicular. The patient had an uneventful postoperative recovery and went on to full activity with deformity correction and pain relief.

Discussions

The management of TA tendon rupture has not been adequately addressed in the literature. Current surgical recommendations describe tendon transfer into the medial cuneiform. Management of TA tendon rupture complicated by retained hardware has yet to be described. We describe a novel technique to repair the TA tendon rupture in the setting of hardware from previous first MCJ arthrodesis with use of a semitendinosus graft and tendon transfer into the navicular. This technique eliminates the need for hardware removal while maintaining a successful outcome.

Format

Case Study

Case Rpt Followup

14

Student Club

Rearfoot and Ankle Reconstruction

Classification

Level IV

Level of Evidence

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Rachel Warner, DPM, AACFAS	warnrac@gmail.com	I/We have nothing to disclose	
Samuel, B, Clellen, DPM, AACFAS	samclellen@gmail.com	I/We have nothing to disclose	
Michael, B, Younes, DPM, D.ABFAS, FACFAS, MBA	younes.mike@gmail.com	I/We have nothing to disclose	
Jennifer, L, Mulhern, DPM, D.ABFAS, FACFAS, ABPM	jlmulhern@gmail.com	I/We have nothing to disclose	
Sonam, T, Ruit, DPM, D.ABFAS, FACFAS	srut01@gmail.com	I/We have nothing to disclose	

Title

Extramammary Myofibroblastoman in the Foot of a Male Patient: a case report

Submit Date

10/10/2024

Correspondent

Last Name: Volodina

Full Name: Kseniya, Volodina, PGY2

Practice/Company/Residency Program:

Email: kseniya.volodina@hmhn.org

HMH Jersey Shore University Medical Center

Authors

Author 1: Kseniya, Volodina, DPM

Author 2: James, Sullivan, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Extramammary myofibroblastoma is an uncommon benign tumor that can develop in soft tissues outside the breast, particularly in men. It is a spindle cell tumor that mimics the appearance of a breast lesion. This case highlights a distinctive clinical and histological presentation of a rare, benign spindle cell neoplasm discovered in the foot of a male patient.

Methodology

Procedures

A 74-year-old male with a medical history of obesity, thyroid cancer, hypertension, and elevated cholesterol presented to our clinic with a several-year history of a tender, gradually enlarging subcutaneous mass on the dorsal aspect of the right midfoot. On examination, the mass was skin-colored, well-defined, and mobile.

Results

The patient underwent excision, which revealed a superficial, 5.5 x 3.0 x 2.8 cm ovoid, lobulated, pale gray-tan rubbery mass with a smooth surface, partially covered by a thin layer of off-white translucent fibromembranous tissue, embedded within the extensor tendons. Immunohistochemical analysis showed weak estrogen receptor expression, with rare nuclei expressing the progesterone receptor. There was also positive expression of vimentin and CD34. The final diagnosis was spindle cell proliferation, most consistent with mammary-type myofibroblastoma, ultimately classified as a benign spindle cell neoplasm, consistent with extramammary myofibroblastoma.

Discussions

This case represents a rare clinical and histologic presentation of an extramammary myofibroblastoma located on the dorsal midfoot. These benign tumors are effectively treated with excision and have a low risk of recurrence.

Format

Case Study

Case Rpt Followup

24

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kseniya, Volodina, DPM	ksevolodina@protonmail.com	I/We have nothing to disclose	
James, Sullivan, DPM	james.sullivan@hmhn.org	I/We have nothing to disclose	

Title

Use of Medial Femoral Condyle (MFC) Flap in Lower Extremity Trauma Patient: a case review

Submit Date

10/10/2024

Correspondent

Last Name: Volodina

Full Name: Volodina,Kseniya,PGY2

Practice/Company/Residency Program:

Email: kseniya.volodina@hmhn.org

HMH Jersey Shore University Medical Center

Authors

Author 1: Kseniya,Volodina,DPM

Author 2: Justin, Fleming, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Avascular necrosis or persistent nonunion can occur when the vascular supply to bone is compromised, as seen in high-risk areas like the talus, which has a naturally tenuous blood supply. This case highlights the challenges of managing talar neck fractures, especially with the risk of hardware failure and non-union. The successful use of an medial femoral condyle flap, combined with revised fixation, demonstrates the effectiveness of a multidisciplinary approach in preserving talar function.

Methodology

Procedures

53 yo female without a significant past medical history who was a restrained driver in high speed MVA presented with poly-trauma and closed talar neck fracture.

Results

The displaced talar neck fracture was initially managed with preliminary intra-operative pin fixation, plates/screws were placed. However, at 9 months post-operatively, there was hardware failure and subtotal aseptic non-union without collapse. In the revision surgery, the plastic surgery team collaborated with podiatry by providing a medial femoral condyle flap and hardware revision.

Discussions

At 9 months following the revision surgery, the patient achieved an appropriate union with talar preservation. The patient's ankle and subtalar motion was consistent with their primary talar neck injury, and the only notable symptom was stiffness, demonstrating that the medial femoral condyle (MFC) flap can be an effective treatment option for talar AVN and non-union. The success of the MFC flap in restoring vascularity and promoting bone healing suggests it could be a valuable tool in similar cases, particularly for patients treated at Level 1 trauma centers.

Format

Case Study

Case Rpt Followup

13

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kseniya,Volodina,DPM	kseniya.volodina@hmhn.org	I/We have nothing to disclose	
Justin, Fleming, DPM	Flemingjmak@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Arthrex

Title

Reverse Sural Flap for Wound Dehiscence of Total Ankle Replacement: A Case Study

Submit Date

10/15/2024

Correspondent

Last Name:Shakespeare

Full Name:Sydney N Shakespeare, DPM

Practice/Company/Residency Program:

Email:sshakesdpm@gmail.com

Orthopedic Institute Brielle Orthopedics

Authors

Author 1:Sydney N Shakespeare, DPM

Author 2:Shane Hollawell, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To record a successful example of a reverse sural flap for treatment of wound dehiscence after a total ankle replacement.

Methodology

Procedures

This is the case of a 67 year old female who underwent total ankle replacement for post-traumatic arthritis. She subsequently developed a wound dehiscence and deep tissue infection requiring picc line and multiple attempts at wound coverage, ultimately requiring a reverse sural flap.

Results

The patient was successfully healed at 8 months post operatively. At one year of follow up, she has pain-free ankle range of motion and enjoys walking five miles daily.

Discussions

This case represents one successful incident of reverse sural flap for coverage of a wound dehiscence after total ankle replacement. Although this patient did not experience any significant complications, about a quarter of reverse sural flaps do result in complications. These complication rates appear to be favorable to those of many alternative options, such as free flaps which are higher up the reconstructive ladder and contraindicated by many common comorbid conditions. Limited high quality studies exist regarding coverage of TAR wound dehiscence. This leaves many opportunities for further research. There is robust literature surrounding the reverse sural flap, though few of them discuss their utility for wound dehiscence after TAR. Several articles exist which discuss the use of various flaps for this problem, though these are mostly of low power and level of evidence. The reverse sural flap seems to be a good option for coverage of a total ankle replacement after wound dehiscence.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Sydney N Shakespeare, DPM	sshakesdpm@gmail.com	I/We have nothing to disclose	
Shane Hollawell, DPM	shollawell@oibortho.com	I/We have nothing to disclose	

TitleManagement of Severe Bilateral Syndromal Clubfoot in an Infant with Rare Acampomelic Campomelic Dysplasia: A Case Report

Submit Date10/10/2024

CorrespondentLast Name: HuetterFull Name: Konstanze K. Huetter, MDEmail: konstanze.huetter@medunigraz.atPractice/Company/Residency Program: Medical University of Graz, Austria

AuthorsAuthor 1: Konstanze K. Huetter, MDAuthor 2: Shruti A. Patel, DPM, MS, DABPM, AACFASAuthor 3: Tanja Kraus, MDAuthor 4: Author 5: Author 6: Author 7: Author 8:

PurposeAcampomelic Campomelic Dysplasia (ACD) is a rare genetic disorder affecting bone and cartilage development, often resulting in neonatal mortality. This report discusses the management of severe bilateral clubfoot in a male infant diagnosed with ACD.

Methodology

ProceduresCampomelic Dysplasia (CD) is characterized by bent long bones, foot deformities, hip dysplasia, and respiratory issues. Genetic testing confirmed CD through a de novo heterozygous mutation in the SOX-9 gene. Radiographs showed no long bone bowing, indicative of the acampomelic subtype, which occurs in approximately 10% of cases. At birth, the infant presented with severe bilateral clubfoot and developmental dysplasia of the hip (DDH). He required an emergency tracheotomy for respiratory distress due to laryngomalacia and a three-month ICU stay for stabilization. Afterward, weekly Ponseti casting was initiated for eight weeks, followed by bilateral percutaneous Achilles tenotomies, achieving 20 degrees of ankle dorsiflexion. A Dennis Brown Bar maintained the correction, while a Tübingen splint addressed hip dysplasia.

ResultsThe initial Pirani score was 6. After three months of casting, it improved to 3 bilaterally, allowing for tenotomies. By six months, the score further improved to 0.5, indicating near-normal correction.

DiscussionsThis case illustrates the effectiveness of Ponseti casting and Achilles tenotomies in managing severe syndromal clubfoot in an infant with ACD. Early intervention yielded positive outcomes, highlighting the need for further research and awareness of this rare disorder associated with high infant mortality.

FormatCase Study

Case Rpt Followup12

Student Club

ClassificationRearfoot and Ankle Reconstruction

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Konstanze K. Huetter, MD	konstanze.huetter@medunigraz.at	I/We have nothing to disclose	
Shruti A. Patel, DPM, MS, DABPM, AACFAS	spatel718@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Arthrex®
Tanja Kraus, MD	tanja.kraus@medunigraz.at	I/We have nothing to disclose	

Title

The Use of a Novel Metal Alloy for Plate Fixation For First Metatarsophalangeal Joint Fusion

Submit Date

10/11/2024

Correspondent

Last Name: Martucci

Full Name: John

Practice/Company/Residency Program:

Email: john.martucci@upperlinehealth.com

Upperline Health

Authors

Author 1: John A. Martucci, DPM FACFAS

Author 2: Thomas Fusco, DPM FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

First metatarsophalangeal joint fusion is a common surgical treatment for end-stage arthritis of the joint. Titanium, cobalt-chrome, and stainless remain the most common implantable metals in orthopedic surgery. A novel metal alloy – Molybdenum-Rhenium (MoRe®) – has been developed and used in spine surgery given its increased fatigue strength and superior biocompatibility since 2019. The clinical outcomes data of the use of this metal alloy in foot and ankle trauma and reconstructive surgery are limited, thus we present our findings after a common procedure performed by foot and ankle surgeons — the first metatarsophalangeal joint fusion.

Methodology

Procedures

n/a

Results

Included in this study are 19 patients ranging from 43-79 years of age who were evaluated up to 15.2 months after surgery with an average follow up of 4.1 months (Range: 1.0-15.2 Months). Of the 19 cases presented, there were no wound dehiscences and no hardware removals due to hardware reactions or painful hardware. Radiographic fusion of the site was observed at the last clinic visit for each patient and patients were discharged with follow-up as needed.

Discussions

A variety of materials and constructs are used by surgeons to stabilize a fusion site. In this series, we showcase a novel metal alloy in foot and ankle surgery. There were no cases of wound dehiscence or hardware explantation due to reaction to the alloy or painful hardware. Fusion was observed for all patients at last clinic follow-up.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
John A. Martucci, DPM FACFAS	john.a.martucci@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	MiRus LLC; AROA Biosurgery
Thomas Fusco, DPM FACFAS	tomfusco@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	MiRus LLC; Biotissue; Biopoly LLC; Kuros Biosciences; Voom Medical Devices

Title

Deep Peroneal Nerve Neurectomy Viable Alternative to Arthrodesis for Midfoot Arthritis

Submit Date

10/11/2024

Correspondent

Last Name: Brikho

Full Name: Marcell

Practice/Company/Residency Program:

Email: mbrikho1@hfhs.org

Henry Ford Wyandotte

Authors

Author 1: Marcell Brikho, DPM

Author 2: Anna Martin, DPM

Author 3: Nicole M Brouyette, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Midfoot arthrodesis is currently the standard surgical approach for chronic midfoot arthritis following failure of conservative measures. However, due to the extent of the surgery and recovery time many patients do not wish to pursue this option. Recent literature has described deep peroneal nerve neurectomy as a viable treatment option for midfoot arthritis.

Methodology

Procedures

The case presented is of a 70-year-old female who failed years of conservative treatment including: steroid injections, orthotics, and shoe gear modification. The patient was offered midfoot arthrodesis, however she declined. An ultrasound guided injection of the deep peroneal nerve was given which provided 80 % relief to determine if patient was a viable candidate for deep peroneal nerve neurectomy. Pre-operatively ultrasound guidance was utilized to identify the deep peroneal nerve 5 cm proximal to the ankle joint. A linear incision was made overlying the nerve. Blunt dissection was carried down until the deep peroneal nerve was visualized. The nerve was identified dorsolateral to the anterior tibial artery. The nerve was freed from surrounding structures, transected and a Axoguard nerve cap was applied to the distal end of the nerve. Neuromyodesis into the extensor hallucis longus muscle was then performed.

Results

The patient elected to undergo a deep peroneal nerve neurectomy and is now 15 months post-operative without any reported complications. She reports 100% resolution of symptoms.

Discussions

This case suggests that deep peroneal nerve neurectomy can be a viable treatment option for chronic midfoot arthritis for patients who are not candidates or are unwilling to undergo midfoot arthrodesis.

Format

Case Study

Case Rpt Followup

15

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Marcell Brikho, DPM	mbrikho1@hfhs.org	I/We have nothing to disclose	
Anna Martin, DPM	amarti40@hfhs.org	I/We have nothing to disclose	
		Consultant/Advisor/Speaker (List all affiliations)	Paragon 28
Nicole M Brouyette, DPM, FACFAS	nbrouye1@hfhs.org	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	ACFAS Great Lakes Vice President, ACFAS committee member- Education and scientific affairs, CPME resident review committee

Title

Titanium Truss Application in Reconstructive Surgery for Failed First MTP Arthroplasty & Arthrodesis

Submit Date

10/11/2024

Correspondent

Last Name: Brandt

Full Name: Mary, R, Brandt, DPM, AACFAS

Practice/Company/Residency Program:

Email: mrbrandt9@gmail.com

West Penn Hospital Foot & Ankle Institute

Authors

Author 1: Madison, K, Burandt, DPM

Author 2: Mary, R, Brandt, DPM, AACFAS

Author 3: Alan, R, Catanzariti, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This study is a retrospective review of 3 patients, with a minimum of one year follow-up, who underwent revision 1st MTP arthrodesis with a prefabricated titanium truss (PFTT) as an alternative method of restoring length.

Methodology

Procedures

This study presents 3 patients who underwent revision 1st MTP arthrodesis with a PFTT as a salvage operation for failed implant or nonunion following arthrodesis. Minimum follow up was one year.

Results

Radiographs demonstrate successful consolidation with restoration of the sagittal plane, first ray length and metatarsal parabola. Each patient returned to regular footwear by 4 months with pain free ambulation and accurate alignment confirmed on weight-bearing radiographs.

Discussions

Avascular necrosis, bone resection from prior surgery, and other causes of bone loss and shortening, often require a structural graft to restore length and preserve 1st ray weight-bearing. Revision arthrodesis with a PFTT is a reasonable alternative to a structural bone graft, providing superior strength, maintenance of correction, avoidance of bone graft harvest, and avoidance of collapse associated with structural autogenous and allograft bone.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Madison, K, Burandt, DPM	madison.burandt12@gmail.com	I/We have nothing to disclose	
Mary, R, Brandt, DPM, AACFAS	mrbrandt9@gmail.com	I/We have nothing to disclose	
Alan, R, Catanzariti, DPM, FACFAS	alan.catanzariti@ahn.org	I/We have nothing to disclose	

Title

A Two-Stage Approach to Treatment of Overcorrected Clubfoot Deformity: A Case Report

Submit Date

10/11/2024

Correspondent

Last Name: Kellmyer

Full Name: Alyssa, N, Kellmyer, DPM

Email: tuk51310@temple.edu

Practice/Company/Residency Program: Jefferson Health New Jersey

Authors

Author 1: Alyssa, N, Kellmyer, DPM

Author 2: Sarah, L, Ayvazov, DPM

Author 3: Margaret, G, Schadegg, DPM

Author 4: Ryan, K, Andrews, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To demonstrate a novel two-stage approach to address overcorrected clubfoot deformity in a 29-year-old patient.

Methodology

Procedures

Overcorrected clubfoot is a historically difficult deformity to treat and consists of a complex flatfoot with flat-top talus, hindfoot valgus, and dorsal navicular dislocation. A variety of procedures are described including supramalleolar osteotomies, calcaneal slide procedures, and arthrodesis. A single patient with severe bilateral flatfoot deformity secondary to clubfoot overcorrection was followed for one year. The patient underwent a left lower extremity two-stage correction with hardware removal, tendo-Achilles lengthening, and application of a Hexapod with transition to pantalar arthrodesis with internal fixation.

Results

Radiographic angles including the calcaneal inclination, talar declination, lateral talocalcaneal, and Meary's were noted to be 11.6, 1.78, 9.58 and 12.92 degrees pre-operatively and 15.23, 18.02, 30.12, and 1.08 post-operatively, respectively. All four pre-operative angles were found to be abnormal. Three of the four angles were within normal range after surgical intervention. The AOFAS Ankle-Hindfoot Scale was assessed pre-operatively, inter-operatively, post-operatively at one month, and post-operatively at four months was noted to be 5, 25, 45, and 62 respectively. At one year post-operatively, the patient expresses no limitations and is planning for surgical correction of the contralateral limb.

Discussions

Given the severity of the soft tissue contractures, external fixation was utilized for plastic deformation and ligamentotaxis to achieve a rectus, plantigrade foot with favorable outcomes. A two-stage approach consisting of gradual correction via external fixation and subsequent internal fixation can be a useful procedural approach for patients with overcorrected talipes equinovarus.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Alyssa, N, Kellmyer, DPM	tuk51310@temple.edu	I/We have nothing to disclose	
Sarah, L, Ayvazov, DPM	sarah.ayvazov@gmail.com	I/We have nothing to disclose	
Margaret, G, Schadegg, DPM	margaret.schadegg@jefferson.edu	I/We have nothing to disclose	
Ryan, K, Andrews, DPM	rkandrews87@gmail.com	I/We have nothing to disclose	

Title

Surgical Management of a Distal Tibia Bone Defect Using a Custom 3D-Printed Tibial Cage: A Case Report

Submit Date

10/12/2024

Correspondent

Last Name: Kayal

Full Name: Emma R. Kayal, DPM, AACFAS

Email: Rmreconfellowship@gmail.com

Practice/Company/Residency Program: Rocky Mountain Reconstructive Foot and Ankle Fellowship

Authors

Author 1: Emma R. Kayal, DPM, AACFAS

Author 2: Thomas Arena, DPM, AACFAS

Author 3: Alan Ng, DPM, FACFAS

Author 4: David Hahn, MD

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Distal tibial bone defects, often resulting from trauma, infection, or tumor resection, pose significant challenges in reconstructive surgery due to their complex anatomy and weight-bearing function. This case study aims to add to the growing body of literature by demonstrating successful integration of bone into a custom 3D-printed distal tibia implant, thus offering a novel solution for complex ankle reconstruction and limb salvage.

Methodology

Procedures

We report the case of a 65-year-old female with a severe left distal tibial bone deficit following a high-energy pilon fracture. The fracture failed after multiple surgeries resulting in significant structural bone loss and nonunion at the distal tibia with ankle degeneration. At 1 year follow up since initial surgery, a custom 3D-printed titanium tibial cage was designed to fill the defect and provide structural stability. The implant was combined with autologous bone graft and intramedullary nailing for tibiotibioalcaneal arthrodesis.

Results

At 22 months follow-up since the initial surgery and 10 months follow up since the tibiotibioalcaneal arthrodesis with custom 3D implantation, radiographic evidence confirmed successful osseointegration of the implant without signs of infection, loosening, or subsidence. The patient experienced significant pain relief and was able to bear weight progressively.

Discussions

This case highlights the successful use of a custom 3D-printed titanium tibial cage for reconstruction of a complex distal tibia bone deficit. The patient-specific design provided excellent defect filling and mechanical stability, promoting bone integration. This demonstrates a promising alternative for managing large bone defects and potentially improving outcomes for limb salvage surgery.

Format

Case Study

Case Rpt Followup

22

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Emma R. Kayal, DPM, AACFAS	emnator06@gmail.com	I/We have nothing to disclose	
Thomas Arena, DPM, AACFAS	tom.c.arena@gmail.com	I/We have nothing to disclose	
Alan Ng, DPM, FACFAS	alan.ng@occ-ortho.com	Consultant/Advisor/Speaker (List all affiliations)	Stryker Foot and Ankle/ Sports Medicine, Restore 3D, Orthosolutions, Medline Unite, Organogenesis, Anika Orthopedics, Lifenet, Sinaptic, and Paragon 28/Additive Orthopedics
David Hahn, MD	dbhawg@gmail.com	I/We have nothing to disclose	

Title

Vertical Talus in a Pediatric Patient: A Detailed Case Report

Submit Date

10/14/2024

Correspondent

Last Name: Lucitt

Full Name: Sonali, R, Lucitt, DPM, MA

Email: sonali.sukumar@bswhealth.org

Practice/Company/Residency Program: Baylor Scott & White Health

Authors

Author 1: Sonali R. Lucitt, DPM, MA

Author 2: Dy Chin, DPM, MS

Author 3: Patrick M. Robinson, DPM, MS

Author 4: Richard N. Goad, DPM, MA (Bioethics)

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case report investigates the efficacy of the Dobbs' protocol for treating vertical talus in a pediatric patient. Vertical talus is a rare pediatric deformity and literature has shown good treatment outcomes with Dobbs' protocol.

Methodology

Procedures

This case study details a 4 week old male who was seen in the pediatric podiatry clinic with bilateral foot deformity, initially diagnosed as calcaneovalgus. During the course of close follow-up, serial radiographs, and consultation with Dr. Matt Dobbs, a pediatric orthopedic surgeon, the diagnosis had changed to vertical talus. Dr. Dobbs has written an article detailing his own method of treating vertical talus utilizing the reverse Ponseti casting method followed by percutaneous talonavicular joint pinning and an Achilles tenotomy. Other literature has stated the effectiveness of using the Dobbs' method of treatment of vertical talus in pediatric patient population and its usefulness of a minimally invasive technique in order to correct a severe congenital deformity.

Results

Once the diagnosis of vertical talus was made, this infant underwent the Dobbs' protocol which included weekly serial casting using the reverse Ponseti casting method followed by percutaneous talonavicular pinning and Achilles tenotomy. The patient has been followed post-operatively and has been doing well.

Discussions

The uniqueness of the case is related to Dr. Goad personally presenting this case to Dr. Dobbs regarding this infant patient and utilizing the treatment methods that Dr. Dobbs had recommended as the diagnosis of vertical talus was confirmed. Literature has showed favorable outcomes with regards to the efficacy of Dobbs' protocol.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Sonali R. Lucitt, DPM, MA	sonali.sukumar@bswhealth.org	I/We have nothing to disclose	
Dy Chin, DPM, MS	dy.chin@bshwhealth.org	I/We have nothing to disclose	
Patrick M. Robinson, DPM, MS	patrick.robinson1@bswhealth.org	I/We have nothing to disclose	
Richard N. Goad, DPM, MA (Bioethics)	richard.goad@bswhealth.org	I/We have nothing to disclose	

Title

Adipofascial Perforator Flap For Chronic Nonhealing Anterolateral Ankle Ulceration

Submit Date

10/14/2024

Correspondent

Last Name: Misocky

Full Name: James J. Misocky, DPM

Practice/Company/Residency Program:

Email: james_misocky@trihealth.com

TriHealth - Bethesda North Hospital

Authors

Author 1: James J. Misocky, DPM

Author 2: Logan D. Birch, DPM

Author 3: Dominic A. Rizzo, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Lower extremity wounds are a very common pathology treated by foot and ankle surgeons. Large wounds can be difficult to achieve closure with. Adipofascial perforator flaps composed of subcutaneous fat and deep fascia can provide durable coverage of large wounds.

Methodology

Procedures

CH is a 66 y/o female with a PHM of OA and HTN with an anterolateral ankle wound that was previously managed for approximately 2 years by another provider. The wound was approximately 6.0 cm x 2.0 cm x 0.3 cm. Of note, the patient had a positive anterior drawer test on exam and an excessive amount of inversion was appreciated at the ankle joint. She underwent an incision and drainage with multiple bone biopsies (all negative for OM). Three weeks later, underwent a lateral ankle stabilization procedure with an adipofascial perforator flap, bilayer graft application, and application of an external fixator. Four weeks later, the fixator was removed, the wound was debrided, and another graft was applied over the wound. 12 weeks later, the Achilles tendon was lengthened. The patient was then seen for subsequent in-office amniotic grafting and achieved complete epithelization approximately 5 months after the initial adipofascial graft procedure.

Results

The patient's wound was completely epithelized 5 months after flap procedure was performed.

Discussions

Soft-tissue reconstruction of the leg should be durable, aesthetically acceptable and have minimal donor-site morbidity. Adipofascial tissue of the leg raised as perforator flap can have wide applications to provide durable cover for soft-tissue defect of the leg and minimal donor-site morbidity.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
James J. Misocky, DPM	james_misocky@trihealth.com	I/We have nothing to disclose	
Logan D. Birch, DPM	logan.d.birch@gmail.com	I/We have nothing to disclose	
Dominic A. Rizzo, DPM, FACFAS	rizzodpm@gmail.com	I/We have nothing to disclose	

TitleBeyond the Joint: A Case of Lymphoma Mimicking Gout

Submit Date10/12/2024

Correspondent

Last Name: MiggantzFull Name: Sydney H. MiggantzEmail: smiggant@kent.eduPractice/Company/Residency Program: Mercy Health

Authors

Author 1: Sydne H. Miggantz, DPMAuthor 2: Angelika Sheiman, DPMAuthor 3: Gary J. Most, DPM, FACFASAuthor 4: Author 5: Author 6: Author 7: Author 8:

PurposeThe purpose of this case study is to highlight the need for comprehensive diagnostic evaluation when standard treatment regimens fail to ensure that rare but malignant conditions are not overlooked.

Methodology

ProceduresThis case depicts the importance of persistent diagnostic evaluation when a patient fails to respond to standard treatment protocols. In this case study, the patient presented with skin changes, associated erythema and edema of the right second and third digits, and elevated uric acid, initially diagnosed as gout. Due to ongoing symptoms unresponsive to IV antibiotics and gout medications, an MRI was obtained and was found to be unimpressive for any underlying infectious etiology. Patient was eventually taken to OR for amputation of the second and third digits for worsening of pain and symptoms. The intra-operative specimens were sent to Pathology for further evaluation and was eventually revealed to be malignant T cell lymphoma. Once this diagnosis was made, patient was referred to Oncology team.

ResultsAfter failed conservative treatment consisting of antibiotics and standard gout medications, the decision was made to proceed with second and third digital amputations. A diagnosis of malignant T cell lymphoma was revealed from the histological report of the intra-operative specimens obtained.

DiscussionsWhen a patient presents with painful erythematous dactylitis, Podiatrist's formulate a list of common differential diagnoses. If routine treatments for suspected diagnoses do not improve symptoms, advanced imaging, laboratory workup, and surgical intervention with comprehensive cultures and biopsies is warranted. Podiatrists must always remain suspicious for malignancy.

FormatCase StudyCase Rpt Followup13

Student ClubSoft Tissue/Tumor

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Sydne H. Miggantz, DPM	smiggant@kent.edu	I/We have nothing to disclose	
Angelika Sheiman, DPM	smiggant@kent.edu	I/We have nothing to disclose	
Gary J. Most, DPM, FACFAS	smiggant@kent.edu	I/We have nothing to disclose	

Title	Flexor Digitorum Longus to Peroneal Tendon Transfers - A Mini Case Study and Technique Guide			
Submit Date	10/13/2024			
Correspondent	Last Name:	Prasad		
	Full Name:	Shalvi Prasad, DPM, PGY III	Email:	shalviprasad16@gmail.com
	Practice/Company/Residency Program:		DVA – New Mexico Veterans Affairs Health Care System & Kaiser Foundation Hospital	
Authors	Author 1:	Shalvi Prasad, DPM, PGY III	Author 2:	Anish Sharma, DPM, PGY I
	Author 3:	Ian Burtenshaw, DPM	Author 4:	Chad Seidenstricker, DPM, FACFAS
	Author 5:		Author 6:	
	Author 7:		Author 8:	
Purpose	The transfer of flexor digitorum longus (FDL) to peroneal tendons is a rare and novel procedure, not well-known in foot and ankle surgery. In patients with significant ankle pain and instability, this tendon transfer can allow patients to have a decrease in pain and regain stability while ambulating. Current treatment includes bracing, physical therapy and reconstruction of lateral ankle ligaments with rearfoot osteotomies. Understanding the surgical technique and varying clinical presentations is pivotal for effective management and enhanced patient outcomes. This case series highlights cases of FDL tendon transfers to peroneal tendons with at least 1 year of follow up.			
Methodology				
Procedures	In our study, 2 patients experienced substantial pain relief and restored ankle stability after undergoing FDL-to-peroneal tendon transfers. This technique aligns with results reported in literature. Sherman (2019) demonstrated similar outcomes, showing improved functional stability following transfers in patients with peroneal tendinopathy. Seybold (2016) reported successful outcomes in patients with peroneal tendon tears treated with lateral transfer of FDL or flexor hallucis longus, noting reduced pain and improved ankle function. Borton (1998) documented favorable results in cases of transverse rupture of peroneal tendons, with FDL transfers achieving pain reduction and functional recovery.			
Results	Both patients had partial or complete rupture of both peroneal tendons and, 1 year postoperatively, reported no pain and increased eversion strength.			
Discussions	Our findings support current research, emphasizing the importance of ensuring 5/5 muscle strength in the FDL prior to surgery. This novel approach provides a viable surgical option for patients who have exhausted conservative measures.			
Format	Case Study			
Case Rpt Followup	12			
Student Club				
Classification	Rearfoot and Ankle Reconstruction			
Level of Evidence	Level IV			
Authors/Financial Disclosures				
Full Name:	Email:	Disclosure(s) selected:		Disclosed Organisation(s):
Shalvi Prasad, DPM, PGY III	shalviprasad16@gmail.com	I/We have nothing to disclose		
Anish Sharma, DPM, PGY I	anishsharmacontact@gmail.com	I/We have nothing to disclose		
Ian Burtenshaw, DPM	burtenshawim@nmortho.net	I/We have nothing to disclose		
Chad Seidenstricker, DPM, FACFAS	seidenstrickercl@nmortho.net	I/We have nothing to disclose		

Title

A Rare Case of West Nile Virus Causing Ascending Lower Extremity Paralysis Mimicking Guillain Barre Syndrome

Submit Date

10/13/2024

Correspondent

Last Name:Prasad

Full Name:Shalvi Prasad, DPM, PGYIII

Practice/Company/Residency Program:

Email:shalviprasad16@gmail.com

DVA–New Mexico Veterans Affairs Health Care System & Kaiser Foundation Hospital

Authors

Author 1:Shalvi Prasad, DPM, PGYIII

Author 2:Atish Kumar, OMSIII

Author 3:Mohamed Abdelgilil, DPM, PGYI

Author 4:Michael Elliott, MD

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This study explores the diagnostic challenges in distinguishing neuroinvasive West Nile Virus (WNV) from other neurological conditions, particularly Guillain-Barré Syndrome (GBS), in patients presenting with progressive lower extremity weakness. We aim to highlight the importance of considering viral etiologies, such as WNV, when addressing cases of sudden limb paralysis and neuropathic pain in foot and ankle pathology.

Methodology

Procedures

A 61-year-old female presented with progressive lower extremity weakness and inability to walk, initially thought to be GBS due to her recent history of viral infection and ascending motor deficits. However, serological testing confirmed WNV. According to Habarugira et al. (2020), WNV can present with severe neurological symptoms, including acute flaccid paralysis, mimicking conditions like GBS. Beshai et al. (2020) also describe cases where WNV has been misdiagnosed as GBS, emphasizing the overlap in clinical presentations between the two conditions.

Results

Positive WNV serology confirmed the diagnosis of neuroinvasive WNV, with no mechanical or autoimmune causes identified. The patient's motor deficits improved with IV immunoglobulin (IVIG) therapy and supportive care. Physical therapy helped her regain partial mobility, though some residual weakness remained.

Discussions

This case highlights the importance of considering neuroinvasive WNV in patients presenting with acute lower extremity weakness and neuropathic pain, especially when classical signs of GBS are absent. Early differentiation of viral infections from mechanical or autoimmune causes in foot and ankle conditions can lead to timely and appropriate management, preventing long-term complications.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Shalvi Prasad, DPM, PGYIII	shalviprasad16@gmail.com	I/We have nothing to disclose	
Atish Kumar, OMSIII	atish.a.kumar29@gmail.com	I/We have nothing to disclose	
Mohamed Abdelgilil, DPM, PGYI	dr.moeag@gmail.com	I/We have nothing to disclose	
Michael Elliott, MD	atish.a.kumar29@gmail.com	I/We have nothing to disclose	

Title

Reactive salmonella arthritis in bilateral foot and ankle joints following salmonella gastroenteritis in patient with multiple sclerosis

Submit Date

10/12/2024

Correspondent

Last Name:Palazzi

Full Name:Gina M Palazzi, DPM, AACFASEmail:gpalazzi22@gmail.com

Practice/Company/Residency Program:Foot and Ankle Physicians of Ohio

Authors

Author 1:Gina M Palazzi, DPM, AACFASAuthor 2:Melissa Foster, DPM, AACFAS

Author 3:Elizabeth Hewitt, DPM, FACFASAuthor 4:

Author 5:Author 6:

Author 7:Author 8:

Purpose

Reactive arthritis (ReA) has been a common occurrence following gastrointestinal infection. This case study demonstrates a patient with severe bilateral foot and ankle pain following a bout of salmonella gastroenteritis. Reiter’s typically consists of the triad of arthritis, urethritis, and conjunctivitis, but in this case, the arthritis prevailed.

Methodology

Procedures

Patient presented to emergency department (ED) initially with bilateral excruciating foot and ankle pain. Patient had a confirmed diagnosis of Salmonella gastroenteritis a few days prior. Following an extensive workup, patient was diagnosed with ReA and given ciprofloxacin, a prednisone taper and naproxen. Patient was progressing well following discharge, but reappointed to ED after having prednisone de-escalated. Patient continues to progress in outpatient setting but needs a multidisciplinary approach in order to combat her symptoms.

Results

Patient continues to have arthritic pain after initial presentation and follows with rheumatology, ortho spine, physical therapy and podiatry in order to keep disease at bay.

Discussions

The literature notes variable presentations of ReA and successful treatment modalities. In this case, patient has been followed in outpatient setting for over a year with only minimal improvement. This case is unique in the fact that patient also has multiple sclerosis, which may be a reason why ReA has persisted so long after initial inoculation.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Gina M Palazzi, DPM, AACFAS	gpalazzi22@gmail.com	I/We have nothing to disclose	
Melissa Foster, DPM, AACFAS	gpalazzi22@gmail.com	I/We have nothing to disclose	
Elizabeth Hewitt, DPM, FACFAS	gpalazzi22@gmail.com	I/We have nothing to disclose	

Title

Heel pain - do we employ advanced imaging sooner to rule out uncommon differential diagnoses?

Submit Date

10/12/2024

Correspondent

Last Name:Palazzi

Full Name:Gina M Palazzi, DPM, AACFAS

Practice/Company/Residency Program:

Email:gpalazzi22@gmail.com

Foot and Ankle Physicians of Ohio

Authors

Author 1:Gina M Palazzi, DPM, AACFAS

Author 2:Melissa Foster, DPM, AACFAS

Author 3:Elizabeth Hewitt, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Plantar fasciitis is the most common differential diagnosis when a patient presents with heel pain. In most cases, a conservative treatment plan ensues with only a preliminary weight bearing radiograph taken at first office visit. A variety of methods exist within the first few month period but further imaging usually isn't done until after a few months. Although relatively uncommon, heel pain thought to be plantar fasciitis could be a schwannoma as seen in this case study. The question begs whether to get advanced imaging earlier to create a more robust list of differential diagnoses.

Methodology

Procedures

Patient had been seen by another provider for plantar fasciitis and had a tarsal tunnel and plantar fascia release. An MRI without contrast was done, as the patient continued to have heel pain following release. A secondary MRI with contrast was obtained, indicating a probable schwannoma. After surgical intervention, soft tissue mass was removed and confirmed as schwannoma. Patient went on to heal uneventfully and persist without prior heel pain.

Results

Patient went on to heal from the secondary surgery uneventfully and no longer persists with heel pain.

Discussions

Plantar fasciitis is one of the most common reasons that patients present clinically as podiatrists. Most often, basic imaging is conducted initially and advanced imaging usually isn't warranted until the patient requires surgical intervention. Schwannoma is not a common differential diagnosis that comes to mind with associated heel pain. This begs the question: should we start conducting advanced imaging sooner to rule out these other somewhat rare differentials?

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Gina M Palazzi, DPM, AACFAS	gpalazzi22@gmail.com	I/We have nothing to disclose	
Melissa Foster, DPM, AACFAS	gpalazzi22@gmail.com	I/We have nothing to disclose	
Elizabeth Hewitt, DPM, FACFAS	gpalazzi22@gmail.com	I/We have nothing to disclose	

Title

Analysis of Interpositional Arthroplasties as a Joint Sparing Primary Procedure When Compared with First Metatarsal Phalangeal Joint Fusions - A Single Center Preliminary 12 Year Longitudinal Study

Submit Date

10/15/2024

Correspondent

Last Name:Prasad

Full Name:Shalvi Prasad, DPM

Practice/Company/Residency Program:

Email:shalviprasad16@gmail.com

DVA New Mexico Veterans Affairs Health Care System & Kaiser Foundation Hospital

Authors

Author 1:Shalvi Prasad, DPM

Author 2:Andrew Ferguson, DPM

Author 3:Anish Sharma, DPM

Author 4:Soran Azizi, DPM

Author 5:Matthew Cobb, DPM, FACFAS

Author 6:Zachary Haas, DPM, FACFAS

Author 7:

Author 8:

Purpose

This study compares the effectiveness of interpositional arthroplasty (IPA) using acellular dermal matrix versus first metatarsal phalangeal joint (MTPJ) fusion in treating hallux rigidus (HR), based on pre-operative Coughlin and Shurnas (CS) scores. The aim is to determine if there is a difference in patient satisfaction between the two procedures and if CS scores can predict better satisfaction outcomes.

Methodology

Procedures

HR is characterized by pain and limited motion in the first MTPJ. Gould et al. identified HR as a common foot issue in America. Butler et al. discussed IPA's role as a joint-sparing option, with Berlet et al. showing positive outcomes using regenerative tissue matrices for advanced HR. Donegan, as well as Scheurer et al., reported long-term success with MTPJ fusion, particularly in severe cases. In this study, 67 patients underwent IPA and 122 underwent MTPJ fusion. Pre- and postoperative outcomes were assessed using VAS, FAOS, and FFI scores, with HR severity graded by CS scores.

Results

A total of 26 IPA and 12 MTPJ fusion patients were able to be contacted. Four IPA patients later required fusion. There was no statistically significant difference in patient satisfaction between IPA and MTPJ fusion when comparing CS scores.

Discussions

IPA appears to be a viable joint-sparing alternative, offering no significant difference in satisfaction or functional improvement compared to MTPJ fusion, regardless of CS scores. These findings challenge previous research suggesting better satisfaction with fusion for severe HR. Over the last 12 years, both procedures yielded comparable patient satisfaction, regardless of their preoperative CS scores.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Shalvi Prasad, DPM	shalviprasad16@gmail.com	I/We have nothing to disclose	
Andrew Ferguson, DPM	andrewferguson428@gmail.com	I/We have nothing to disclose	
Anish Sharma, DPM	anishsharmacontact@gmail.com	I/We have nothing to disclose	
Soran Azizi, DPM	sepehr.azizi1994@gmail.com	I/We have nothing to disclose	
Matthew Cobb, DPM, FACFAS	mdcobb@gmail.com	I/We have nothing to disclose	
Zachary Haas, DPM, FACFAS	drzhaas@gmail.com	I/We have nothing to disclose	

TitleComplications of Untreated Ankle Sprains: A Case of Mal-Union, Deformity, and Surgical Intervention

Submit Date10/14/2024

CorrespondentLast Name: Ocasio-Martínez
Full Name: Gabriel A. Ocasio-Martínez, B.S. Email: gabriel.ocasiomartinez@mymail.barry.edu
Practice/Company/Residency Program: Barry University School of Podiatric Medicine

AuthorsAuthor 1: Gabriel A. Ocasio-Martínez, B.S. Author 2: Mei G. Choi-Reina, B.S.
Author 3: Hajar Ouassari, B.S. Author 4: Valentina Bocanegra, B.S.
Author 5: Tawny Castañeda, B.S. Author 6: Liset Perez, DPM
Author 7: Enrique Rosario-Aloma Author 8:

PurposeThis case underscores the critical role of follow-up care in preventing complications after ankle sprain injuries. It aims to raise awareness of how initial conservative management, without subsequent monitoring, can lead to severe structural deformities and complications that require more aggressive treatment.

Methodology

ProceduresThis report presents a 47-year-old male with a neglected ankle fracture resulting from a medial ankle sprain. The patient sought initial treatment at an urgent care facility where he received initial compression therapy but didn't engage in any follow-up treatment. 5 months later, the patient presented to the emergency department with a painful ulcer at the site of the medial malleolus of the same ankle. Upon radiographic examination, mal-union of the distal fibula and severe tibiotalar subluxation were evident, causing the medial malleolus to create a pressure point at the site of the ulcer upon weightbearing. Surgical treatment involving a fibular takedown and TTC arthrodesis were deemed necessary to correct the patient's deformity.

ResultsAfter surgery, the patient was seen for follow-up for 12 months before being discharged from care pain free and with no further complications.

DiscussionsThis case highlights the need to promptly follow up with patients after initial conservative treatment, even for seemingly minor injuries like ankle sprains, to prevent the development of secondary complications such as mal-union, subluxation, and ulcer formation. It also showcases how the choice of surgical intervention, such as a fibular takedown and TTC arthrodesis, can restore function and resolve complications of neglected ankle fractures.

FormatCase Study

Case Rpt Followup12

Student Club

ClassificationRearfoot and Ankle Reconstruction

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Gabriel A. Ocasio-Martínez, B.S.	gabriel.ocasiomartinez@mymail.barry.edu	I/We have nothing to disclose	
Mei G. Choi-Reina, B.S.	meigin.choireina@mymail.barry.edu	I/We have nothing to disclose	
Hajar Ouassari, B.S.	hajar.ouassari@mymail.barry.edu	I/We have nothing to disclose	
Valentina Bocanegra, B.S.	valentina.bocanegra@mymail.barry.edu	I/We have nothing to disclose	
Tawny Castañeda, B.S.	tawny.castaneda@mymail.barry.edu	I/We have nothing to disclose	
Liset Perez, DPM	lperez@barry.edu	I/We have nothing to disclose	
Enrique Rosario-Aloma	erosarioaloma@barry.edu	I/We have nothing to disclose	

Title

A Rare Side Effect After a Common Podiatric Injection

Submit Date

10/13/2024

Correspondent

Last Name: Ramnani

Full Name: Anushka, S, Ramnani, DPM

Practice/Company/Residency Program:

Email: ramnani4@gmail.com

Crozer-Chester Medical Center

Authors

Author 1: Anushka Ramnani, DPM

Author 2: Josef Elouze, DPM

Author 3: Rhonda Cornell, DPM, FAFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Hiccups are a rare and underreported side effect of corticosteroid injections, especially in the lower extremity and foot. To our knowledge, this is the first reported case presented in podiatric literature of hiccups after a corticosteroid injection into the foot

Methodology

Procedures

A 40- year-old male presented to a podiatric office with worsening right heel pain, diagnosed as plantar fasciitis and heel spurring. During the course of treatment, the patient underwent a corticosteroid injection into the plantar fascia. He then reported severe unrelenting hiccups less than 24 hours later. At a follow-up appointment 4 weeks later, the patient received a 2nd corticosteroid injection in the same area and reported hiccups again, 24 hours later.

Results

Corticosteroid injections are a common treatment option, used often to decrease inflammation. The use of steroids may lead to indigestion, elevated blood glucose,and tendon rupture. The onset of hiccups, a much less common side effect, can range from 1-18 hours with duration ranging from 1-9 days. Triggering of the afferent pathway of the lower extremity sympathetic reflex arc may lead to this phenomenon. Volume effect due to the local anesthetic, causing the body to go into parasympathetic overdrive, may be another theory leading to patients having hiccups after local corticosteroid injections.

Discussions

Although rare, knowing this information may assist podiatric physicians in alerting the patient of this side effect, as well as assist them in knowing and possibly changing, the volume of anesthetic given in patients prone to this side effect. Further investigation is needed as pharmacologic intervention may be necessary

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Anushka Ramnani, DPM	ramnani4@gmail.com	I/We have nothing to disclose	
Josef Elouze, DPM	jocrozerpod@gmail.com	I/We have nothing to disclose	
Rhonda Cornell, DPM, FAFAS	rcornell34@gmail.com	I/We have nothing to disclose	

Title

Emphysematous Osteomyelitis of the Calcaneus: Case Study

Submit Date

10/14/2024

Correspondent

Last Name: Kiefer

Full Name: Chase, T, Kiefer

Practice/Company/Residency Program:

Email: kieferct2@upmc.edu

UPMC Mercy

Authors

Author 1: Jeffrey Manway, DPM

Author 2:

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Emphysematous osteomyelitis is very rare condition that if not appropriately treated can be a fatal condition. The purpose of this case study is to discuss early recognition on imaging modalities and the prompt treatment repsonse for this condition that is seldom seen in the foot and ankle.

Methodology

Procedures

Patient is a 57-year-old with a past medical history of Diabetes Mellitus II and Charcot who presented to the emergency department for concern of left foot infection. Imaging was obtained and Xray, MRI as well as CT demonstrated intraosseous gas of the left calcaneus. Upon literature review, only 49 cases were available with less than 10% of these cases involving the foot and ankle for emphysematous osteomyelitis.

Results

Patient ultimately underwent a below-knee amputation for the extremity for primary source control.

Discussions

Emphysematous osteomyelitis is an extremely rare condition which requires prompt recognition and utilization of multi-speciality consultation. Future studies should evaluate other potential treatment options for this dangerous and rare condition.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Diabetic Foot

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name: Jeffrey Manway, DPM

Email: kieferct2@upmc.edu

Disclosure(s) selected: I/We have nothing to disclose

Disclosed Organisation(s):

Title

Salvageable First MPJ Arthrodesis Non-Union with Permanent Antibiotic Spacer

Submit Date

10/13/2024

Correspondent

Last Name: Tescher

Full Name: Laramie A. Tescher, DPM

Practice/Company/Residency Program:

Email: laramietescher85@gmail.com

Detroit Medical Center

Authors

Author 1: Laramie A. Tescher, DPM

Author 2: Anooshay Naveed, DPM

Author 3: Raed Al-Gharib, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Purpose of study is to examine long term success of implanting a permanent antibiotic spacer as a salvage option for revision of nonunion of first MPJ arthrodesis. This is an atypical salvage attempt for first MPJ nonunion, especially with a significant bone void, therefore of interest for long term follow up and potential salvage options for similar cases with large voids.

Methodology

Procedures

Studies have shown that MPJ arthroplasty with antibiotic spacer is an option for nonunion of MPJ arthrodesis, however studies targeted at infectious non-unions. Literature regarding this topic with non-infected nonunions with bone voids of 5cm are non-existent. This case study presents a 57YOF who underwent MPJ fusion 18 months prior which subsequently lead to extreme pain and non-union. Patient would have likely benefited from ICBG with index procedure, however that was not a part of procedure. Due to pain, patient elected to proceed with salvage attempt of MPJ arthrodesis non-union. Patient underwent HWR, biopsies, and implantation of 5cm antibiotic cement spacer with vancomycin and tobramycin powder and K-wire fixation.

Results

Bone biopsy returned showing no osteomyelitis. K-wire removed 6 weeks postop. Spacer intact without rejection. Patient returned to baseline activities; pain free at one year.

Discussions

Case study demonstrates that implantation of antibiotic spacer is viable salvage option for MPJ arthrodesis nonunion with large voids. Research limited for treatment options for failed MPJ arthrodesis, therefore questions remain regarding options when MPJ arthrodesis fails with large voids. This study demonstrates that this is a successful salvage option.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Laramie A. Tescher, DPM	laramietescher85@gmail.com	I/We have nothing to disclose	
Anooshay Naveed, DPM	a.naveed1504@gmail.com	I/We have nothing to disclose	
Raed Al-Gharib, DPM	ralghari@kent.edu	I/We have nothing to disclose	

Title

Conversion of Failed Ankle Arthrodesis to Total Ankle Arthroplasty Using A Novel Custom Fibula in a Patient with Pes Cavus

Submit Date

10/13/2024

Correspondent

Last Name: Siegel

Full Name: David, M, Siegel, DPM

Email: dsiegel55@gmail.com

Practice/Company/Residency Program: INOVA Fairfax Medical Campus

Authors

Author 1: David, M, Siegel, DPM

Author 2: Anthony, J, Schwab, DPM

Author 3: Gabrielle, Uptegraph, DPM

Author 4: Richard, Derner, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Conversion of Failed Ankle Arthrodesis to Total Ankle Arthroplasty Using A Novel Custom Fibula in a Patient with Pes Cavus

Methodology

Procedures

Currently, an absent lateral malleolus is considered a contraindication to TAA, which narrows treatment options for this patient population. Previous studies have reported on lateral malleolar reconstruction using techniques such as the Milanese technique, iliac crest autograft, fibular allograft, and fibular lengthening osteotomies which all come with their own respective potential complications. Staged approach: Initial surgery consisted of a triple arthrodesis and fibular reconstruction. The second procedure was a patient specific total ankle arthroplasty three months after index procedure.

Results

At 12 month follow up patient is ambulating without pain or other complications. Radiographs demonstrate well aligned implant and fibula without evidence of migration or loosening.

Discussions

There are a multitude of situations where a patient may fit the scenario where they require a total ankle arthroplasty but are lacking a distal fibula. These include but are not limited to previously failed ankle fusion with fibular take-down, major trauma resulting in absent or shortened fibula, infection requiring fibulectomy, and tumors requiring excision. Historically, this would preclude said patient from receiving a total ankle replacement. This study adds to the surgical options for this specific patient population. Further research is needed to compare alternative techniques. Long-term follow up is needed to track survivorship.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
David, M, Siegel, DPM	dsiegel55@gmail.com	I/We have nothing to disclose	
Anthony, J, Schwab, DPM	Anthonyjschwab7@gmail.com	I/We have nothing to disclose	
Gabrielle, Uptegraph, DPM	gabriellemuptegraph@gmail.com	I/We have nothing to disclose	
Richard, Derner, DPM, FACFAS	richd87@me.com	I/We have nothing to disclose	

Title

Congenital Clubfoot Deformity in the Adult Patient with Underlying Development Delay: A Single Stage Approach

Submit Date

10/13/2024

Correspondent

Last Name: Tescher

Full Name: Laramie Ashlee Tescher Email: laramietescher85@gmail.com

Practice/Company/Residency Program: Detroit Medical Center

Authors

Author 1: Laramie A. Tescher, DPM Author 2: Anooshay Naveed, DPM

Author 3: Brian G. Kissel, DPM, MBA, FACFAS Author 4:

Author 5:

Author 6:

Author 7: Author 8:

Purpose

Although treatment for adult clubfoot deformity is typically staged, that isn't always viable based on patient population and social factors. What if there is a social component that complicates the 'standard' approach? This study aims to accommodate for social factors while correcting deformity in single staged approach.

Methodology

Procedures

Current literature shows that staged approach for adult clubfoot is standard, however there are studies that support single stage approach with promising results This is a 59YOM w/ developmental delay and clubfoot deformity – progressively worsening. Patient broke through Arizona brace, walking on lateral aspect of foot. skin breakdown occurring. Because of progression, safety was in question; guardian considered transition to group home from current independent living solely because of deformity. Underwent single stage approach including PT/FHL/FDL tenotomies, tarsal tunnel release, talar wedge osteotomy, plantar fasciotomy, TTC with nail

Results

Healed, no wounds, no HWR failure, radiographic signs of fusion. Ambulating with a brace without pain; independent living

Discussions

In literature, the standard of practice for surgical management for congenital clubfoot in adults is a staged procedure. However, factoring in a patient's lifestyle and cognitive ability is of essence when choosing which procedure will be best overall. For this patient, if all corrections were not addressed in one surgery, it likely would have been unsuccessful and led to further problems. A single approach proved to be successful. Although it may not be the standard, single stage approaches should be considered more and utilized when exploring surgical options to treat clubfoot deformities

Format

Case Study

Case Rpt Followup

30

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Laramie A. Tescher, DPM	laramietescher85@gmail.com	I/We have nothing to disclose	
Anooshay Naveed, DPM	a.naveed1504@gmail.com	I/We have nothing to disclose	
Brian G. Kissel, DPM, MBA, FACFAS	bkissel@dmc.org	I/We have nothing to disclose	

Title

Case of Monostatic Paget's Disease in the Calcaneus Treated by Primary Arthrodesis

Submit Date

10/14/2024

Correspondent

Last Name:Somma

Full Name:Jessica

Practice/Company/Residency Program:

Email:jsomma07@gmail.com

Phoenixville Hospital

Authors

Author 1:Spencer Monaco, DPM, FACFAS

Author 2:Jessica Somma, DPM PGY3

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Discuss a case of rare monostatic Paget’s Disease (MPD) to the left calcaneus in a patient who did not want pharmacologic treatment, instead opted for primary arthrodesis of the STJ.

Methodology

-

Procedures

MPD is characterized by focal areas of excessive osteoclastic & osteoblastic activity. Radiographic findings show mixed lytic/sclerotic areas, abnormal trabeculae, & cortical thickening. MPD in the calcaneus is extremely rare & accounts for less than 3% of presentations. Historically, it has an excellent response to pharmacologic therapy. With arthritic changes present, pharmacologic & surgical treatment is recommended. Research revealed no publications discussing isolated surgical treatment for MPD in the calcaneus. Linear incision was placed 1cm distal to the lateral malleolus overlying the sinus tarsi. All articular cartilage was removed from the STJ and STJ surfaces were fenestrated. A separate incision was made at the proximal aspect of the tibia; approximately 5cc of cancellous tibial bone was harvested, then placed within the STJ. The STJ was reduced, and 2 guide wires were placed through a separate incision to the plantar heel under fluoroscopic guidance spanning from the plantar aspect of the calcaneus & to the talus. Two 6.5mm cannulated screws were placed.

Results

Postoperative radiographs were obtained at weeks 1, 2, 4, 6, 8, 12, 6 months, and 1 year. Patient remained NWB for 6 weeks. At 3 months, fully ambulating in supportive footwear, with complete consolidation.

Discussions

Patient was not interested in pharmacologic treatment although research shows its effectiveness. Research recommends treating patients with biologics prior to arthrodesis. Despite this, our patient healed with no complications & is without recurrence at 1 year post-op.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Spencer Monaco, DPM, FACFAS	smonaco25@gmail.com	I/We have nothing to disclose	
Jessica Somma, DPM PGY3	jsomma07@gmail.com	I/We have nothing to disclose	

Title

Vascularized Free Fibular Tissue Transfer for Bone Block Distraction Arthrodesis of a Septic First Metatarsophalangeal Joint

Submit Date

10/14/2024

Correspondent

Last Name:Van

Full Name:Griffin, I, Van, DPM

Practice/Company/Residency Program:MedStar Health

Email:griffin.van@medstar.net

Authors

Author 1:Griffin, I, Van, DPM

Author 2:Ali, Rahnama, DPM, FACFAS

Author 3:Rajiv, P, Parikh, MD, MPHS

Author 4:Kurtis, Bertram, DPM, AACFAS

Author 5:Caitlin, S, Zarick, DPM

Author 6:

Author 7:

Author 8:

Purpose

Bone loss of the medial column can be devastating, resulting in significant alterations in gait. When possible, maintenance of medial column length preserves function. This case report details the use of vascularized fibular free tissue transfer for first ray salvage in the face of a septic first metatarsophalangeal joint.

Methodology

Procedures

Preservation of medial column bony architecture is paramount to the maintenance of normal gait. When significant bone loss is involved, amputation is commonly the standard of care. It is well established that there is an increased incidence of re-ulceration with partial first ray amputations Salvage options to manage a septic first metatarsophalangeal joint include, Keller arthroplasty, fusion with interpositional graft, cement spacer, and patient-specific implants. However, none of these options provide vascularity and structure on par with the vascularized free fibular tissue flap. While the use of vascularized free fibular flap is well established, its use in reconstruction of the first ray is limited. In this study, a single patient underwent staged reconstruction of the first ray utilizing vascularized free fibular tissue transfer for bone block distraction arthrodesis.

Results

At 16 months post-reconstruction, the patient experienced complete healing and returned to baseline ambulatory function. The patient required split-thickness skin grafting for minor delayed wound healing.

Discussions

Maintenance of the first ray is essential to progressing through normal gait. Vascularized free fibular flap not only offers the ability to preserve bony architecture, but also supplies vascularity and thus increased healing potential of the soft tissues and the fusion site.

Format

Case Study

Case Rpt Followup

16

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Griffin, I, Van, DPM	griffin.van@medstar.net	I/We have nothing to disclose	
Ali, Rahnama, DPM, FACFAS	ali.rahnamavaghefi@medstar.net	I/We have nothing to disclose	
Rajiv, P, Parikh, MD, MPHS	rajiv.p.parikh@medstar.net	I/We have nothing to disclose	
Kurtis, Bertram, DPM, AACFAS	kurtis.bertram@medstar.net	Consultant/Advisor/Speaker (List all affiliations)	Restrata
Caitlin, S, Zarick, DPM	caitlin.s.zarick@medstar.net	I/We have nothing to disclose	

Title

Understanding “Intersection Syndrome” of the Foot - Diagnosis and Treatment - A Case Report

Submit Date

10/13/2024

Correspondent

Last Name: Atuluru

Full Name: Varsha Atuluru, DPM, AACFAS

Practice/Company/Residency Program:

Email: varshaatuluru@gmail.com

Foot & Ankle Specialists of Central Ohio Foot & Ankle Surgery Fellowship

Authors

Author 1: Varsha Atuluru, DPM, AACFAS

Author 2: Deana L. Lewis, DPM, AACFAS

Author 3: Daniel B. Logan, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The Master knot of Henry (MKH) intersection syndrome is caused by repetitive friction at the junction at which the FHL and the FDL tendons crossover. This is a clinical diagnosis, although a musculoskeletal ultrasound can easily confirm it at times. It’s a commonly overlooked pathology given the rarity of this disorder and limited literature reported regarding its diagnosis and treatment. We present a case report of a patient with bilateral intersection syndrome who was diagnosed appropriately and underwent bilateral resection of the fibrous band at the MHK.

Methodology

Procedures

43F with bilateral chronic plantar foot pain for >8 years who was initially diagnosed with plantar fasciitis and not responding to treatment. MRI and high frequency US obtained bilateral feet which demonstrated thickening of the FHL at the MKH with tenosynovitis. After failed conservative measures, the patient opted for surgical treatment. She underwent bilateral FHL and FDL debridement w/ release of MKH.

Results

The preoperative symptoms for our patient subsided quickly after the surgery and after 1yr, her symptoms have resolved with only a mild ache and some limitations with certain activities. Surgical release of the MKH obtained long-term satisfactory relief of the patient's symptoms.

Discussions

Intersection syndrome at the MKH is often overlooked due to the rarity of the condition or misdiagnosis. Diagnosis of intersection syndrome is based on history and examination as well as imaging studies. Open debridement is recommended if conservative measures fail and in our patient, we have shown successful surgical outcomes for intersection syndrome.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Varsha Atuluru, DPM, AACFAS	varshaatuluru@gmail.com	I/We have nothing to disclose	
Deana L. Lewis, DPM, AACFAS	dlewis63@kent.edu	I/We have nothing to disclose	
Daniel B. Logan, DPM, FACFAS	dlogan@fasco.health	I/We have nothing to disclose	

Title

Early Outcomes of Hindfoot Charcot Reconstruction With The Use of A Constant Compression Tibiototalcaneal Nail

Submit Date

10/15/2024

Correspondent

Last Name:Patel

Full Name:Kayna, Patel, DPM, AACFAS

Practice/Company/Residency Program:

Email:kaynapatel1994@gmail.com

Michigan Advanced Foot and Ankle Reconstructive Surgery Fellowship Program

Authors

Author 1:Karl, Dunn, DPM, FACFAS

Author 2:Kayna, Patel, DPM, AACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The aim of this retrospective case series is to review the surgical outcomes following application of a constant compression tibiototalcaneal nail for treatment of hindfoot charcot deformities.

Methodology

Procedures

Goals of charcot reconstruction is to attain a stable plantigrade foot, improve weight bearing capabilities, and prevent further complications. Utilizing an intramedullary tibiototalcaneal (TTC) nail provides superior resistance against multiplanar forces across the joints in comparison to other internal fixation options. Most static nails lose compression with greater than 1mm of bone resorption. The TTC nail used in our study maintains compression across the joints with up to 8mm of bone resorption. Use of this device allows for constant postoperative non-weight bearing compression across the joints. To our knowledge this is the first report evaluating outcomes of a constant compression TTC nail in the setting of hindfoot charcot. We retrospectively reviewed five cases evaluating time to weight bearing, fusion rate and any complications as primary outcomes.

Results

Our results demonstrated 80% of patients with complete fusion. Average time to weightbearing in surgical boot was 7.3 weeks. All patients were ambulating in custom diabetic shoes, one patient requiring a double upright ankle foot orthoses. Secondary procedures were performed for prominent hardware in one case and one underwent a nonunion repair. Extraction of the IM nail was performed in one patient secondary to infection from a puncture wound.

Discussions

The present case series assesses the utility of a constant compressive IM nail allowing for decrease reulceration rate and limb loss for hindfoot charcot.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Karl, Dunn, DPM, FACFAS	kdunn7@comcast.net	Consultant/Advisor/Speaker (List all affiliations)	Paragon 28
Kayna, Patel, DPM, AACFAS	kaynapatel1994@gmail.com	I/We have nothing to disclose	

Title

Revision of a discontinued total ankle replacement with a custom 3D-printed contralateral-mirrored talus and stemmed tibial component

Submit Date

10/15/2024

Correspondent

Last Name:Patel

Full Name:Kayna, Patel, DPM, AACFAS

Practice/Company/Residency Program:

Email:kaynapatel1994@gmail.com

Michigan Advanced Foot and Ankle Reconstructive Surgery Fellowship Program

Authors

Author 1:Karl Dunn, DPM, FACFAS

Author 2:Kayna Patel, DPM, AACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Very few cases have been reported with successful conversions from pre-existing or retired total ankle replacements (TAR). When manufacturer parts are no longer available, a surgeon can be faced with a very challenging scenario to maintain a functioning limb if revision is required. Our aim is to present short-term outcomes following revision of a second generation total ankle replacement with a custom 3D-printed contralateral-mirrored talus and stemmed tibial component.

Methodology

Procedures

A 65-year-old male patient with a history of a semi-constrained TAR from greater than 20 years prior presented for evaluation due to lack of ankle motion, chronic pain, and subsidence of the tibial component of the implant. Given no replacement parts could be utilized, and almost complete subsidence and bone loss in the talus was appreciated, very few options remained for a successful revision. The authors performed a procedure which utilized a 3D-printed mirrored contralateral talus was used to replicate the appropriate size of previous anatomy before the initial ankle replacement was performed.

Results

Following the patient's revision, the patient was able to begin weight bearing in a CAM walking boot at 6 weeks, followed by full weight bearing in regular shoes at 12 weeks. The patient was able to regain mobility with minimal to no pain, and gait and function without ambulatory assistive devices with 13- month follow-up.

Discussions

The present case assesses the successful revision of a failed total ankle arthroplasty with utility of a custom 3D-printed contralateral-mirrored talus and stemmed tibial component.

Format

Case Study

Case Rpt Followup

13

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Karl Dunn, DPM, FACFAS	kdunn7@comcast.net	Consultant/Advisor/Speaker (List all affiliations)	Paragon 28
Kayna Patel, DPM, AACFAS	kaynapatel1994@gmail.com	I/We have nothing to disclose	

Title

Accessory Soleus Muscle: Unusual Cause of Calf Pain in a Young Athlete

Submit Date

10/13/2024

Correspondent

Last Name: Bernard

Full Name: Neil L Bernard, DPM

Practice/Company/Residency Program:

Email: neilbernard26@gmail.com

Mercy Health Regional Medical Center

Authors

Author 1: Neil Bernard, DPM

Author 2: Ann M Profeta, DPM

Author 3: Jordan Grossman, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To identify signs, symptoms, and treatment options (conservative and surgical) for symptomatic unilateral accessory soleus muscle.

Methodology

Procedures

19-year-old male patient who presented complaining of bilateral ankle pain for 2 years. Side-lined from collegiate track for 8 weeks. Pain during running and improved with rest. Notes numbness and feeling of a loss of circulation to right foot with aerobic exercise. Initial conservative modalities (i.e. Mobic/steroid s, CFO's, Stretching) provided moderate relief. There was hypertrophy of posterior ankle. Rheumatology was negative for polyarthralgia. MRI showed severe tenosynovitis of FHL tendon, but after MSK radiology read, accessory soleus muscle appreciated.

Results

Patient underwent excision of accessory soleus muscle with uneventful post-op course. At 6 months, the patient has returned to collegiate track without pain/complaints.

Discussions

Accessory soleus is a rare congenital anatomic variant with an incidence is 0.7% to 5.5% seen in cadaveric studies [2,5]. Although present at birth, symptoms may never appear and when they do, almost all individuals do not experience their pain until adolescence due to hypertrophy of the muscle, ischemia, or compressive neuropathy involving the tibial nerve. They relate their pain and symptoms during physical activity, particularly young athletes [5]. The accessory soleus may present as a soft tissue mass in the posterior medial aspect of the ankle, with a differential diagnosis including lipoma, ganglion, haemangioma, synovioma, and sarcoma [4,5]. Multiple authors advocate for incision biopsy or surgical exploration to confirm diagnosis and rule out malignant mass. In the symptomatic patient, a fasciotomy, debulking, or excisional biopsy is usually the treatment of choice [3].

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Biomechanics and Anatomy

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Neil Bernard, DPM	neilbernard36@gmail.com	I/We have nothing to disclose	
Ann M Profeta, DPM	aprofeta@kent.edu	I/We have nothing to disclose	
Jordan Grossman, DPM, FACFAS	j.grossman@mac.com	I/We have nothing to disclose	

Title

Novel application of tibial distraction osteogenesis for rearfoot reconstruction in the absence of the talus and calcaneus

Submit Date

10/15/2024

Correspondent

Last Name: Rutkowski

Full Name: Michael T. Rutkowski, DPM

Practice/Company/Residency Program:

Email: michael.rutkowski@mountsinai.org

Mount Sinai Beth Israel / Icahn School of Medicine at Mount Sinai

Authors

Author 1: Michael T. Rutkowski, DPM

Author 2: David Gitlin, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Distraction osteogenesis is a well studied and widely used procedure for correction of limb length discrepancies and brachymetatarsia. What is less studied, is using this technique in reconstructive surgery to restore function of a limb with missing bones. In this case study, we explore the use of distraction osteogenesis of distal tibia to restore limb function in a patient who due to unique circumstances underwent both a complete calcanectomy and talectomy.

Methodology

Procedures

In our study, a 45 year old male with history of untreated clubfoot underwent adult clubfoot correction surgery with talectomy, performed by other surgeons. He then proceeded to develop calcaneal osteomyelitis that was unable to be resolved with antibiotic therapy or surgical debridement. With the calcaneus completely infected and posing the risk of spreading infection to adjacent bones, it was decided to perform a complete calcanectomy. With the patient wishing to avoid a BKA, the surgical team attempted a novel technique of tibial distraction osteogenesis with use of external fixation to grow the tibia into the positions of the talus and calcaneus, restoring rearfoot structure.

Results

Fourteen months after external fixator removal, the patient is able to ambulate completely weightbearing in sneakers without the need any assistive devices or braces. Patient reports no complaints and is extremely satisfied he was able to preserve his entire foot instead of undergoing a BKA.

Discussions

The outcome of this study displays that tibial distraction osteogenesis for replacement of calcaneal and talar bone is a viable last resort limb salvage technique in lieu of a BKA.

Format

Case Study

Case Rpt Followup

14

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Michael T. Rutkowski, DPM	michael.rutkowski@mountsinai.org	I/We have nothing to disclose	
David Gitlin, DPM	david.gitlin@mountsinai.org	I/We have nothing to disclose	

Title

Synovial Chondromatosis: A Rare Case Report of Dorsal Dislocation of Hallux Interphalangeal Joint

Submit Date

10/13/2024

Correspondent

Last Name: Silman

Full Name: Andrew

Practice/Company/Residency Program:

Email: andrew.silman@aah.org

Advocate Christ Medical Center

Authors

Author 1: Andrew Silman, DPM

Author 2: Kelly Fahey, DPM

Author 3: Eyad Xoubi, DPM

Author 4: Darshan Nagesh DPM, MS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This case reports a patient with Synovial Chondromatosis and spontaneous hallux dislocation. It highlights clinical findings, treatment, and outcomes of initial surgical intervention with a 12-month follow-up. The rarity of SC in the interphalangeal joint (IPJ) underscores the importance of considering it in patients with monoarticular synovitis in atypical locations.

Methodology

Procedures

We report a case involving a 57-year-old female with a 7-month history of a painful mass to the medial hallux, impacting her ability to ambulate. Radiographs revealed an irregular mass within the soft tissue, while MRI indicated a lobulated mass with T1 hypointensity/T2 hyperintensity encircling the IPJ. Our literature review identified 13 cases of SC in the forefoot, with only 2 affecting the IPJ. Recurrence rate ranges from 3 to 23% due to incomplete synovectomy.

Results

The patient underwent surgical excision of the mass, biopsy, and IPJ arthroplasty with synovectomy. Intraoperative exploration revealed multiple rubbery lobulated masses within the joint capsule and erosions of the proximal phalanx head. Pathology confirmed diagnosis of SC. The patient is now pain-free with no recurrence to date.

Discussions

This case highlights the rare occurrence of SC resulting in dorsal dislocation of a pedal joint, due to attrition of IP-capsular and collateral ligaments as well as damage of the plantar plate. The scarcity of SC in the forefoot and limited literature on its treatments poses challenges in formulating recommendations for follow-up and management. This case highlights the success of surgical excision as a viable option to reduce pain, reduce risk of arthritis, and improve mobility.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Andrew Silman, DPM	andrew.silman@aah.org	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Chicago
Kelly Fahey, DPM	kelly.fahey@aah.org	I/We have nothing to disclose	
Eyad Xoubi, DPM	eyad.xoubi@aah.org	I/We have nothing to disclose	
Darshan Nagesh DPM, MS	darshan.nagesh@aah.org	I/We have nothing to disclose	

Title

Evolution of Diabetic Wound from Benign to Malignant

Submit Date

10/13/2024

Correspondent

Last Name: Parkman

Full Name: Liliya

Practice/Company/Residency Program:

Email: liliya.parkman@medstar.net

MedStar

Authors

Author 1: Liliya Parkman, DPM

Author 2: Haoning Hu, DPM

Author 3: Tiffany K. Hoh, DPM, FACFAS

Author 4: David Z. Martin, MD

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

While diabetic wounds are typically considered benign, they may undergo malignant transformation if not monitored closely. This case highlights the progression of a chronic diabetic wound to malignancy, emphasizing the need for regular surveillance and timely biopsy.

Methodology

Procedures

A 61-year-old male with type II diabetes, a history of smoking, and bilateral hand osteomyelitis initially presented with a necrotic right heel wound. Despite treatment for calcaneal osteomyelitis with IV antibiotics, wound care, and debridement over a 15-month period, the wound developed an abnormal appearance. A biopsy revealed plantar verrucous carcinoma (epithelioma cuniculatum). He was referred for further evaluation by plastic surgery and oncology.Surgical interventions included a partial calcanectomy, multiple debridements, wound excision, skin grafting, and revascularization. Conservative management consisted of IV antibiotics, Aquacel silver dressings, and negative pressure wound therapy.

Results

The patient’s wound, initially believed to be non-threatening, evolved into a malignant lesion, reinforcing the need for close monitoring of chronic wounds, even when they show signs of improvement. At 12 months follow up after excision and grafting the wound has remain closed and the patient successfully returned to normal activities.

Discussions

Chronic inflammation, oxidative stress, and persistent tissue damage contribute to the development of malignancy in diabetic wounds. This case highlights the importance of early detection and the role of biopsy in identifying pre-malignant changes. Ongoing vigilance in the management of chronic wounds is essential to prevent malignancy, and further research is necessary to understand the underlying mechanisms.

Format

Case Study

Case Rpt Followup

12

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures			
Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Liliya Parkman, DPM	liliya.parkman@medstar.net	I/We have nothing to disclose	
Haoning Hu, DPM	Haoning.hu01@gmail.com	I/We have nothing to disclose	
Tiffany K. Hoh, DPM, FACFAS	tiffany.K.Hoh@medstar.net	I/We have nothing to disclose	
David Z. Martin, MD	David.Z.Martin@medstar.net	I/We have nothing to disclose	

Title

Demographics and Seasonal Influence on Gunshot Wounds to Lower Extremity at a Level One Trauma Center

Submit Date

10/13/2024

Correspondent

Last Name: Gillenwater

Full Name: Kristine, D, Gillenwater DPM

Email: gillenh20k@gmail.com

Practice/Company/Residency Program: UF College of Health Jacksonville

Authors

Author 1: Kristine D Gillenwater, DPM

Author 2: Jason A Piraino,FACFAS

Author 3: Thomas S Roukis, PhD, FACFAS

Author 4: Divya Paramasivam, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Gun violence and firearm related injuries have been increasing in concern in the recent media. No recent correlation has been found between the time of year and type of injury, specifically in the foot and ankle. The purpose of this study was to look at demographics of gunshot wounds in the lower extremity and identify seasonal trends in a major southern urban city.

Methodology

We queried our patient database with CPT code 20103 wound exploration, and/or 28192 removal of foreign body. Along with diagnosis codes of foreign body and/or gunshot wound. We identified a total of 27 patients from January 2018 to September 2024 who sustained a GSW specially in the foot and ankle and compared race, gender, age, and date of injury.

Procedures

Results

Results included 26 males and 1 female. Age range 14-72, average of 32.3 years old. Race included 78% African American, 11% Hispanic, 7% Caucasian, 4% Asian. Seasonally, 41% occurred in the summer, 22% in the spring, 22 % in the winter, and 15% in the fall. 74% were intentional violence while 26% were accidental/self-inflicted.

Discussions

Gunshot wounds and their treatments are a common injury treated by podiatry at this Level 1 Trauma center. These trends may be of interest to local law enforcement as well as the UF emergency center.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Epidemiology/Population Study

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kristine D Gillenwater, DPM	gillenh20k@gmail.com	I/We have nothing to disclose	
Jason A Piraino,FACFAS	gillenh20k@gmail.com	I/We have nothing to disclose	
Thomas S Roukis, PhD, FACFAS	gillenh20k@gmail.com	I/We have nothing to disclose	
Divya Paramasivam, DPM	gillenh20k@gmail.com	I/We have nothing to disclose	

Title

The Influence of Sandblasted, Large grit, Acid-etched (SLA) Titanium Surface Treatment on Osteoblast and Macrophage Responses In Vitro

Submit Date

10/13/2024

Correspondent

Last Name: Sanchez

Full Name: Amayrani Sanchez

Practice/Company/Residency Program:

Email: amayrani.sanchez201@utrgv.edu

University of Texas Rio Grande Valley School of Podiatric Medicine

Authors

Author 1: Peter Elvin

Author 2: Deborah Rocha Seixas, DDS

Author 3: Krishna Rajesh Prajapati, MS

Author 4: Danieli C Rodrigues, MS, PhD

Author 5: Claudia Biguetti, DDS, MSc, PhD

Author 6:

Author 7:

Author 8:

Purpose

Charcot foot reconstruction in diabetic patients exhibit significant failure rates. Despite this, minimal investigation into implant surface treatments mitigating these failures have been done. We hypothesize that enhancing the microtopography of titanium (Ti) through SLA (sandblasted, large grit, and acid-etched) treatment may enhance cellular responses, potentially improving outcomes in these reconstructive based surgeries.

Methodology

Polished (control) and SLA-treated Ti discs were used. MC3T3 pre-osteoblasts and RAW 264.7 macrophages were cultured either on standard plate dishes (negative controls) or on Ti discs. Morphological analysis was conducted using beta-actin FITC fluorophore and DAPI staining for nuclei. Macrophages were evaluated by staining for RANK, NFATc2 nuclear translocation, and DC-STAMP. Cell viability was determined via tetrazolium compound assay with absorbance measured at 490 nm and data were analyzed using One-Way ANOVA followed by Tukey's test, with a significance level set at 0.05%.

Procedures

Results

MC3T3 cells cultured on control-Ti showed reduced viability at 77.50%, while those on SLA-treated discs reached 104.85% (p<0.05). On control Ti, both cells displayed a fibroblastic orientation, whereas a more widespread morphology was observed on SLA discs. All conditions revealed intense RANK and DC-STAMP expression in macrophages. NFATc2 predominantly resided in the cytoplasm of controls but translocated to the nucleus on SLA discs, suggesting signaling of M2 polarization and regenerative conditions.

Discussions

These results highlight the beneficial effects of SLA treated surfaces in promoting cell proliferation and activating immunomodulatory pathways. Further studies are necessary to explore the long-term impacts of these surface treatments in clinical settings.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Peter Elvin	peter.elvin01@utrgv.edu	I/We have nothing to disclose	
Deborah Rocha Seixas, DDS	deborahrocha@usp.br	I/We have nothing to disclose	
Krishna Rajesh Prajapati, MS	krishna.prajapati@utdallas.edu	I/We have nothing to disclose	
Danieli C Rodrigues, MS, PhD	danieli@utdallas.edu	I/We have nothing to disclose	
Claudia Biguetti, DDS, MSc, PhD	claudia.biguetti@utrgv.edu	I/We have nothing to disclose	

Title

Social media and product marketing influencing the field of podiatry

Submit Date

10/14/2024

Correspondent

Last Name: Hwang

Full Name: Si yeon Hwang, DPM

Practice/Company/Residency Program:

Email: shwang@mlhs.org

Bryn Mawr Hospital

Authors

Author 1: Si yeon Hwang, DPM

Author 2: Celine Guerrero, DOM

Author 3: Justin Garvin, DPM

Author 4: David Bernstein, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

In recent years, social media influencers have increasingly been employed as product endorsers, and an expanding body of academic research highlights their effectiveness as a marketing tool. This trend is evident in the field of podiatry, where influencers notably shape patient behavior. . This research aims to evaluate the extent of the impact that social media marketing has on podiatric practices.

Methodology

This research is a survey-based study that included a total of 15 participants. All respondents and their answers remained anonymous. The survey consisted of five questions in total.

Procedures

Results

A total of 86.7% of participants reported that they have encountered patients seeking specific products, including particular brands of orthotics, over-the-counter antifungal nail polish, and even specific types of surgical procedures. Additionally, 26.7% of respondents indicated that they have felt obligated or pressured to provide a product or procedure based on a patient's specific request. The majority of their patients were obtaining information from social media platforms (42.9%) and the internet (28.6%).

Discussions

The majority of respondents in this study reported encountering patients who sought specific products or particular types of surgical procedures. This trend is not surprising, considering the continued rise in global social media usage; approximately 4.55 billion people worldwide now use social media, with 400 million new users joining within the past 12 months. As technology advances, it is essential for providers to leverage social media and marketing strategies to our advantage. Nevertheless, it remains our responsibility to educate patients and ensure they receive the most appropriate care.

Format

Scientific

Case Rpt Followup

0

Student Club

Classification

Biomechanics and Anatomy

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Si yeon Hwang, DPM	shwang10@mlhs.org	I/We have nothing to disclose	
Celine Guerrero, DOM	GuerreroC@mlhs.org	I/We have nothing to disclose	
Justin Garvin, DPM	GarvinJ@mlhs.org	I/We have nothing to disclose	
David Bernstein, DPM, FACFAS	BernsteinDav@mlhs.org	I/We have nothing to disclose	

Title

Can Pre-Bone Biopsy Criteria be Numerically Optimized to Predict Calcaneal Osteomyelitis?

Submit Date

10/15/2024

Correspondent

Last Name: Krause

Full Name: Mattie, M. Krause; B.S. Email: mattie.krause@midwestern.edu

Practice/Company/Residency Program: Midwestern University

Authors

Author 1: Mattie M. Krause; B.S. Author 2: Zachary Goguen; M.S., B.S.

Author 3: John Sessions; D.P.M., PhD Author 4:

Author 5: Author 6:

Author 7: Author 8:

Purpose

Screening methods for characterizing osteomyelitis (OM) in the lower extremity have been tested extensively in effort to help expedite clinical management. Traditional methods have been used in concert to build a clinical picture of osteomyelitis presence which then directs potential surgical intervention (per IWGDF/IDSA guidelines). However, these methods are not consistent in predicting osteomyelitis presence. This study uses numerical optimization of these pre-biopsy criteria to determine if certain criteria should require heavier levels of consideration in terms of the ultimate characterization of calcaneal OM.

Methodology

48 hospitalized patients with suspected calcaneal osteomyelitis had pre-bone biopsy testing conducted, which included a combination of: blood lab testing, imaging, and clinical examination. All patients then underwent bone biopsy, being sent for both pathology and microbiology analysis. The data set was then numerically optimized using a weighted-sum method to further examine if there is a method for giving greater consideration/weight to specific pre-biopsy variables to consistently predict the presence of calcaneal osteomyelitis per path and micro results.

Procedures

Results

Numerical optimization failed to produce a set of pre-biopsy variable weights that consistently predict bone biopsy results for calcaneal osteomyelitis.

Discussions

IWGDF/IDSA guidelines recommend using the combination of a series of pre-biopsy testings to elevate the level of OM concern. This study directly challenges that recommendation by showing that no special combination of weighted variables can be consistently applied to pre-biopsy clinical data to translate into a predictable diagnosis of osteomyelitis.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Diabetic Foot

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Mattie M. Krause; B.S.	mattie.krause@midwestern.edu	I/We have nothing to disclose	
Zachary Goguen; M.S., B.S.	zachery.goguen@midwestern.edu	I/We have nothing to disclose	
John Sessions; D.P.M., PhD	jsessi@midwestern.edu	I/We have nothing to disclose	

Title

Evaluating HMGB1 as a Biomarker for Metabolic Dysregulation and Progression of Diabetes in a Mexican American Cohort

Submit Date

10/13/2024

Correspondent

Last Name:Elvin

Full Name:Peter, T, Elvin

Practice/Company/Residency Program:UTRGV-SOPM

Email:peter.elvin01@utrgv.edu

Authors

Author 1:Peter T Elvin

Author 2:Garrett Edwards

Author 3:Claudia C. Biguetti DDS, PhD

Author 4:Walid D. Fakhouri

Author 5:Craig L. Hanis

Author 6:

Author 7:

Author 8:

Purpose

This study focuses on HMGB1 to evaluate its association with the development and progression of diabetes within a Mexican American cohort of non-diabetic (ND), pre-diabetic (Pre-D), and diabetic (D) individuals.

Methodology

Data from a cohort of 40 individuals, standardized by age (61.76±11.77), BMI (32.52±7.02), and sex (58% male, 42% female) was analyzed. We assessed several immunological markers utilizing ELISA assays from buffy coats. After excluding out of range samples, the remaining 20 individuals displayed statistical significance in HMGB1. Pearson's correlation coefficient examined the relationship between HMGB1 levels and glycemic changes (HOMA-IR, HOMA-B, HOMA-IS2, and HbA1c). Statistical significance was evaluated with a significance level set at p<0.05.

Procedures

Results

A negative correlation trend between HMGB1 and HbA1c was shown, although not statistically significant (p=0.86). A positive correlation between HMGB1 levels and insulin resistance (HOMA-IR) was noted, with a correlation coefficient (R) of 0.453 (p=0.030). A negative correlation between HMGB1 levels and insulin sensitivity (HOMA-IS), as well as a positive correlation between HMGB1 levels and beta cell function (HOMA-B) was seen, having both values approaching significance with p=0.067 and p=0.071, respectively.

Discussions

Recent findings suggest an elevation in HMGB1 levels among obese individuals, highlighting its potential role in maintaining chronic inflammation within adipose tissue, which is closely associated with obesity and insulin resistance1. Our findings support the potential of HMGB1 as a biomarker for metabolic disturbances in hopes to guide future therapeutic strategies aimed at mitigating diabetes-related complications, such as diabetic foot ulcers.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Epidemiology/Population Study

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Peter T Elvin	peter.elvin01@utrgv.edu	I/We have nothing to disclose	
Garrett Edwards	garrett.edwards01@utrgv.edu	I/We have nothing to disclose	
Claudia C. Biguetti DDS, PhD	claudia.biguetti@utrgv.edu	I/We have nothing to disclose	
Walid D. Fakhouri	walid.d.fakhouri@uth.tmc.edu	I/We have nothing to disclose	
Craig L. Hanis	craig.l.hanis@uth.tmc.edu	I/We have nothing to disclose	

TitleA Comparative Analysis of Agreement Between ChatGPT and Expert Panelists on Foot and Ankle Surgery Clinical Consensus Statements

Submit Date10/13/2024

CorrespondentLast Name: Casciato
Full Name: Dominick J, Casciato DPMEmail: dominickcasciatodpm@gmail.com
Practice/Company/Residency Program:Orlando VA Medical Center

AuthorsAuthor 1: Joshua Calhoun DPMAuthor 2: Nigel Morris DPM
Author 3: Dominick J Casciato DPMAuthor 4:
Author 5:Author 6:
Author 7:Author 8:

PurposeAs artificial intelligence (AI) becomes increasingly integrated into medicine and surgery, its applications are expanding rapidly—from aiding clinical documentation to providing patient information. However, its role in medical decision-making remains uncertain. This study evaluates an AI language model's alignment with clinical consensus statements in foot and ankle surgery.

MethodologyClinical Consensus statements from the American College of Foot and Ankle Surgeons (2015-2022) were collected and rated using a Likert scale: inappropriate (1-3), neither appropriate nor inappropriate (4-6), and appropriate (7-9). Each statement was then entered into ChatGPT-4o, which was prompted to assign a similar Likert rating. The AI-generated scores were compared to the expert panel's ratings, and inter-rater analysis was performed.

Procedures

ResultsAmong 129 clinical consensus statements, the analysis revealed an agreement of 63.57%, indicating moderate agreement between the raters. Cohen's Kappa was computed at 0.23, suggesting a low level of agreement. The topics with the highest and lowest agreements between the consensus panel and ChatGPT were ankle arthritis (100%) and Achilles Tendon pathology (23%). All consensus statements were within one rating of each other except for one hallux valgus surgery statement.

DiscussionsThis study demonstrates moderate agreement between ChatGPT and clinical consensus statements in foot and ankle surgery, with variability across topics. Future studies should explore the limitations of AI in more complex cases, but this work provides a valuable first assessment of its potential and limitations in medical decision-making.

FormatScientific

Case Rpt Followup

Student Club

ClassificationEpidemiology/Population Study

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Joshua Calhoun DPM	um4life2015@gmail.com	I/We have nothing to disclose	
Nigel Morris DPM	nigelmorris11@gmail.com	I/We have nothing to disclose	
Dominick J Casciato DPM	dominickcasciatodpm@gmail.com	I/We have nothing to disclose	

Title

Diagnosing AITFL Injuries in Patients with Lateral Ankle Ligament Injuries: The Utility of MRI and Physical Exam

Submit Date

10/14/2024

Correspondent

Last Name: Chang

Full Name: Michael T.

Practice/Company/Residency Program:

Email: micchang@montefiore.org

Montefiore Medical Center

Authors

Author 1: Nicket Dedhia, MD

Author 2: Michael T. Chang, DPM

Author 3: Jun Jeon, DPM

Author 4: Jonathan Shalot, DPM

Author 5: Yi Guo, MD

Author 6: Chaiyaporn Kulsakdinun, MD

Author 7:

Author 8:

Purpose

Diagnosing syndesmotic injuries alongside lateral ankle ligament injuries is challenging and often leads to missed injuries, which can result in long-term issues like posttraumatic ankle arthritis. This study aimed to determine whether MRI interpretations by radiologists and orthopedic surgeons, along with physical exams, could predict AITFL injuries.

Methodology

This study included patients with preoperative MRIs and subsequent isolated lateral ankle ligament reconstruction. A 2.5mm or 3.0mm probe during arthroscopy assessed AITFL integrity, with injuries noted if the probe passed through the ligament. The AITFL was repaired if the probe test was positive. MRI images were evaluated by an orthopedic surgeon, while radiologists reported their own impressions of AITFL injuries. The squeeze test was also conducted as a potential indicator of injury.

Procedures

Results

48 patients with chronic lateral ankle pain underwent preoperative MRI and subsequently had lateral ankle ligament reconstruction and arthroscopy. The median time from injury to surgery was 238 days. During arthroscopy, 31 patients were diagnosed with an AITFL tear. MRI reports indicated AITFL injuries in 13 patients (27%), while orthopedic surgeons suspected 39 patients (81%) had injuries. The squeeze test was positive in 83% of patients. Among the 31 diagnosed with AITFL tears, 27 (87%) had positive MRI reads by orthopedic surgeons compared to 11 (35%) from radiologists, with a squeeze test positivity of 74%.

Discussions

In this study, the correlation between positive arthroscopic evidence of AITFL tear and orthopedic surgeon MRI interpretation was high compared to radiologist report. This highlights the need for independent image interpretation in those with recalcitrant pain after suspected lateral ankle ligament sprain to avoid a missed AITFL injury.

Format

Scientific

Case Rpt Followup

34

Student Club

Classification

Arthroscopy

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Nicket Dedhia, MD	Ndedhia@montefiore.org	I/We have nothing to disclose	
Michael T. Chang, DPM	micchang@montefiore.org	I/We have nothing to disclose	
Jun Jeon, DPM	jujeon@montefiore.org	I/We have nothing to disclose	
Jonathan Shalot, DPM	jshalot@montefiore.org	I/We have nothing to disclose	
Yi Guo, MD	yguo12@montefiore.org	I/We have nothing to disclose	
Chaiyaporn Kulsakdinun, MD	ckulsakd@montefiore.org	I/We have nothing to disclose	

Title

Mini-Arthrotomy with Combined Particulated Juvenile Allograft Cartilage and Autogenous Calcaneus Bone Graft Implantation for The Treatment of Osteochondral Lesions of the Talus: A Case Series and Technique Guide

Submit Date

10/13/2024

Correspondent

Last Name: Brown

Full Name: Joseph, R, Brown, DPM

Practice/Company/Residency Program:

Email: jrbrowndpm@gmail.com

Washington Orthopaedic Center

Authors

Author 1: Joseph, R, Brown, DPM

Author 2: John, J, Kim, DPM, AACFAS

Author 3: Michael, D, Dujela, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This study evaluates the outcomes of a mini-arthrotomy approach for the treatment of osteochondral lesions (OCLs) of the talus. This case series and technique guide aim to describe the efficacy of this method for patients with challenging talar lesions.

Methodology

A retrospective review of patients who underwent this treatment at a single institution was conducted. Eight cases were identified, with five meeting the inclusion criteria. Charts were reviewed to gather demographic and surgical data. Clinical and radiological evaluations were performed, with postoperative VAS scores recorded at final follow-up. A detailed technique guide, including intraoperative images, is provided.

Procedures

Results

Five patients, with an average follow-up of 20.2 months, were included. The average postoperative VAS score was 1.4 (range: 0-5). Average time to weightbearing was 9.9 weeks (range: 7.7-14.1 weeks). Final radiographs indicated stable grafts with no evidence of collapse. No complications or revisions were noted. Comorbidities varied and demographics included an average BMI of 32.2, one current tobacco user, and three occasional alcohol users.

Discussions

The mini-arthrotomy approach, with combined particulated juvenile allograft cartilage and autogenous bone graft, resulted in low morbidity, minimal pain, and no complications. The highest VAS score was reported in a patient diagnosed with cancer and fibromyalgia. The results suggest this is a viable treatment option for patients with OCLs of the talus.

Format

Scientific

Case Rpt Followup

20.2

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Joseph, R, Brown, DPM	jrbrowndpm@gmail.com	I/We have nothing to disclose	
John, J, Kim, DPM, AACFAS	jkim5874@gmail.com	I/We have nothing to disclose	
Michael, D, Dujela, DPM, FACFAS	michaeldujela@yahoo.com	Consultant/Advisor/Speaker (List all affiliations)	SiNaptic, Treace Medical, Paragon 28
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	ASC Comittee Chair ACFAS, ABFAS President-elect, AO North America Trauma Faculty

TitleRadiographic Union Rates and Complications of Talonavicular Arthrodesis Utilizing a Dorsal Approach: A Retrospective Cohort Study

Submit Date10/14/2024

CorrespondentLast Name: BrownFull Name: Joseph, R, DPMEmail: jrbrowndpm@gmail.comPractice/Company/Residency Program: Washington Orthopaedic Center

AuthorsAuthor 1: Joseph, R, Brown, DPMAuthor 2: John, J, Kim, DPM, AACFASAuthor 3: Michael, D, Dujela, DPM, FACFASAuthor 4: Author 5: Author 6: Author 7: Author 8:

PurposeTalonavicular (TN) joint arthrodesis is a well-established treatment for various hindfoot pathologies, though previous literature reports nonunion rates as high as 37%. Most studies have focused on different fixation techniques, but recent cadaveric research suggests that a dorsal approach provides improved joint exposure. This study aims to evaluate the radiographic union rates and clinical outcomes of TN joint arthrodesis using a dorsal approach.

MethodologyA retrospective review was conducted of patients who underwent TN arthrodesis via a dorsal approach between April 2015 and February 2020. Patients were included if they were 18 years or older and underwent a primary TN joint arthrodesis with a dorsal approach. Patient charts were reviewed for demographic and operative data. Radiographic union was confirmed by two independent reviewers.

Procedures

ResultsA total of 37 patients met the inclusion criteria. Radiographic union was achieved in 94.6% of cases at an average of 17 weeks. Complications were minimal, with two nonunions, and two superficial wound dehiscence cases. One patient required a revision surgery for nonunion, which led to solid consolidation. The average time to weightbearing was 8.4 weeks.

DiscussionsThis study demonstrated that TN arthrodesis using a dorsal approach leads to high union rates with minimal complications. The low nonunion (5.4%) and revision rates (2.7%) suggest that the dorsal approach enhances joint exposure, joint preparation and the likelihood of successful fusion. The results support the dorsal approach as a viable option for TN arthrodesis.

FormatScientific

Case Rpt Followup32.8

Student Club

ClassificationRearfoot and Ankle Reconstruction

Level of EvidenceLevel III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Joseph, R, Brown, DPM	jrbrowndpm@gmail.com	I/We have nothing to disclose	
John, J, Kim, DPM, AACFAS	jkim5874@gmail.com	I/We have nothing to disclose	
Michael, D, Dujela, DPM, FACFAS	michaeldujela@yahoo.com	Consultant/Advisor/Speaker (List all affiliations)	SiNaptic, Treace Medical, Paragon 28
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	ASC Committee Chair ACFAS, ABFAS President-elect, AO North America Trauma Faculty

Title

A Retrospective Comparison of 2 Fixation Techniques for First Metatarsophalangeal Joint Arthrodesis: A Dynamic Nitinol Staple-Plate Construct versus Dorsal Plating and Lag Screw Fixation

Submit Date

10/15/2024

Correspondent

Last Name:Shinabarger

Full Name:Andrew B

Practice/Company/Residency Program:

Email:ashinaba@lhs.org

Legacy Health

Authors

Author 1:Andrew B. Shinabarger DPM , MS, FACFAS

Author 2:Sammir M. Abueldoleh DPM

Author 3:Emory Barnes DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study is to directly compare the outcomes of two different fixation constructs for first metatarsophalangeal joint fusion: a dynamic nitinol staple plate construct versus a lag screw with dorsal locking plate.

Methodology

A retrospective review involving patients who underwent first MPJ arthrodesis with either a dynamic nitinol staple plate construct or dorsal plate with lag screw fixation at a single institution by a single surgeon between March of 2021 and September of 2023 with minimum 1 year follow-up. There were a total of 55 patients (55 feet) in this study, with 34 patients in the dynamic staple plate construct group and 21 patients in the dorsal plate with lag screw fixation group. We compared tourniquet time, time to union, and complications rates.

Procedures

Results

The dynamic staple plate group had a union rate of 100% compared to a 91% union rate for the dorsal plate with lag screw cohort. The average tourniquet time for the dynamic staple plate group was 8 minutes less. No complications in the staple group were encountered compared to 2 in the dorsal plate lag screw group.

Discussions

The results of this study show a favorable union rate, with decreased operative time, and a lower complication rate of the dynamic staple plate construct compared to a dorsal plate with lag screw construct.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Andrew B. Shinabarger DPM , MS, FACFAS	ashinaba@lhs.org	Consultant/Advisor/Speaker (List all affiliations)	Johnson and Johnson
Sammir M. Abueldoleh DPM	abueldoleh@gmail.com	I/We have nothing to disclose	
Emory Barnes DPM	ebbarnes@lhs.org	I/We have nothing to disclose	

Title

Complications Following Hallux Amputations With and Without Sesamoid Excision: A Retrospective Comparative Review

Submit Date

10/14/2024

Correspondent

Last Name:Badillo

Full Name:Karissa, J, Badillo DPM

Practice/Company/Residency Program:

Email:badillokj2@upmc.edu

UPMC Pittsburgh

Authors

Author 1:Karissa, J, Badillo DPM

Author 2:Christine, Jones, DPM

Author 3:Jeffrey, Manway, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The aim of our study is to compare the complication rates associated with hallux amputations performed at our institution, both with and without sesamoid excision.

Methodology

Patients were included if they were 18 years or older, underwent hallux amputation with or without sesamoid excision, and had a minimum follow up of 1 month. Patients were excluded if they did not meet the age or follow up criteria, were lost to follow-up, underwent multiple digital amputations, or if they obtained a hallux amputation as part of a staged procedure. Complications were defined as the need for return to the operating room and post-operative incisional dehiscence or wound that resulted in proximal amputation. Statistical analysis was performed with Python. Complication rates between the two groups were evaluated with a Fisher’s exact test and a logistic regression analysis.

Procedures

Results

62 patients were included (Sesamoid excision group = 27 | Without sesamoid excision = 35). Complication rate was significant higher in the sesamoid excision group (40.74%) compared to the group without sesamoid excision (17.14%) (p = 0.044). Patients with PAD had a statistically significant increased risk of developing complications (p = 0.007).

Discussions

Our findings suggest that the sesamoids and plantar plate do not act as a nidus for infection as we thought. We believe that the increased complications in the sesamoid excision group are due to the greater soft tissue dissection required for sesamoid excision. This study is the first to report hallux amputations involving sesamoid excision, and we believe it adds valuable insights to the existing body of literature by addressing this unexplored area.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Diabetic Foot

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Karissa, J, Badillo DPM	badillokj2@upmc.edu	I/We have nothing to disclose	
Christine, Jones, DPM	jonescn3@upmc.edu	I/We have nothing to disclose	
Jeffrey, Manway, DPM	manwayjm@upmc.edu	I/We have nothing to disclose	

Title

Surgical Options for Traumatic Lisfranc Fracture Dislocation: ORIF vs Primary Fusion

Submit Date

10/14/2024

Correspondent

Last Name: Karmaker

Full Name: Bianca Karmaker, DPM

Practice/Company/Residency Program:

Email: pateld77@rowan.edu

Podiatric Medicine and Surgery Residency with Reconstructive Rearfoot/Ankle Surg

Authors

Author 1: Farheen Iqbal, DPM

Author 2: Dev Patel,BS

Author 3: Apurva Puli, BS

Author 4: Krystal Hunter,PhD

Author 5: Pietro Gentile, BS

Author 6: Stephen Gorda, DPM

Author 7:

Author 8:

Purpose

Tarsometatarsal fracture dislocations are traumatic disruptions of the Lisfranc complex and comprise 0.2% of all fractures. They are misdiagnosed as high as 20% of the time, most commonly are treated with open reduction internal fixation (ORIF) or primary arthrodesis (PA), and require timely treatment to avoid long term sequelae. Both surgical approaches are common but controversy remains regarding which method is best practice.

Methodology

A retrospective chart review was conducted to identify patients who underwent ORIF or PA secondary to Lisfranc injuries from January 2016 to December 2023. Patients under the age of 18 years old, polytraumas, and nonsurgical patients were excluded. A total of 90 patients were identified and their injuries were classified with the Hardcastle classification. Mann Whitney U test, t-tests, and Pearson chi squared analyses were used to detect differences in outcomes. Statistical significance was set at $p < 0.05$.

Procedures

Results

Of the 90 patients who met inclusion criteria, 69 underwent ORIF and 21 underwent PA. There was no statistically significant difference in age, demographics, BMI, Hardcastle classification type, return to full weight bearing, or complications including revision surgery or infection between the two groups. The ORIF group had 33.8% undergo hardware removal, while the PA group had 19.0%. The overall complication rate for PA was 35.0% compared to 17.6% for ORIF. These differences did not meet statistical significance.

Discussions

There was no statistically significant difference in outcomes between ORIF vs PA for Lisfranc injuries, indicating that either treatment can provide similar outcomes regardless of the injury classification. Limitations of the study include the retrospective nature of the study.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Trauma

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Farheen Iqbal, DPM	iqbal-farheen@cooperhealth.edu	I/We have nothing to disclose	
Dev Patel,BS	pateld77@rowan.edu	I/We have nothing to disclose	
Apurva Puli, BS	puliap87@rowan.edu	I/We have nothing to disclose	
Krystal Hunter,PhD	iqbal-farheen@cooperhealth.edu	I/We have nothing to disclose	
Pietro Gentile, BS	gentile-pietro@cooperhealth.edu	I/We have nothing to disclose	
Stephen Gorda, DPM	gorda-stephen@cooperhealth.edu	I/We have nothing to disclose	

Title

Total Contact Casts and the Incidence of Venothromboembolisms: A Retrospective Chart Review

Submit Date

10/14/2024

Correspondent

Last Name: Cheung

Full Name: Timothy P Cheung, DPM, PhD, CPT

Practice/Company/Residency Program:

Email: timothy.cheung@yale.edu

Yale New Haven Hospital

Authors

Author 1: Timothy P Cheung, DPM, PhD, CPT

Author 2: William Stallings, DPM

Author 3: Garrett Rhoton, DPM

Author 4: Steven D Vyce, DPM, FACFAS

Author 5: Michael I Gazes, DPM, MPH, FACFAS

Author 6:

Author 7:

Author 8:

Purpose

The prevalence of diabetes in the United States is steadily increasing, leading to a rise in diabetic foot ulcers (DFU) and associated mortality rates. Treating chronic diabetic wounds presents a significant challenge for foot and ankle practitioners. Off-loading the wound is crucial in DFU management, with total contact casting (TCC) being a cornerstone of treatment. However, prolonged immobilization associated with TCC raises concerns about the risk of developing an venous thromboembolism (VTE) . This study aimed to assess the risk of VTE development in patients treated with TCC for chronic non-healing foot ulcers.

Methodology

We retrospectively analyzed 121 patients treated with TCC at a single hospital from 2018 to 2023, considering factors such as TCC applications, antiplatelet and anticoagulant usage, mobility, medical history, and predisposing factors for VTE.

Procedures

Results

There was a total of 565 TCC applications in 121 patients. 0 out of 121 patients treated with a TCC developed a VTE.

Discussions

This study examined the relationship between TCC and VTE in patients with diabetic foot ulcers. Despite the effectiveness of TCC in off-loading ulcers, the potential risk of VTE due to immobilization remains a concern. None of the 121 patients treated with TCC developed a VTE; however, further research is needed to fully assess the thrombotic risks associated with TCC. This study clarifies the risk, or lack thereof developing a VTE when formulating a treatment protocol utilizing TCC in patients with DFU.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Diabetic Foot

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Timothy P Cheung, DPM, PhD, CPT	timothy.cheung@yale.edu	I/We have nothing to disclose	
William Stallings, DPM	william.stallings@yale.edu	I/We have nothing to disclose	
Garrett Rhoton, DPM	garrett.rhoton@yale.edu	I/We have nothing to disclose	
Steven D Vyce, DPM, FACFAS	steven.vyce@yale.edu	I/We have nothing to disclose	
Michael I Gazes, DPM, MPH, FACFAS	michael.gazes@yale.edu	I/We have nothing to disclose	

Title

Comparison of Dynamic Screw Placement versus Static Screw Placement in Intramedullary Nails in Patients with Tibiototalcaneal Fusion

Submit Date

10/15/2024

Correspondent

Last Name: Tran

Full Name: Nhan, L. Tran, DPM MBS PGY2

Practice/Company/Residency Program:

Email: tran1nl@cmich.edu

Central Michigan University College of Medicine

Authors

Author 1: Mark Bullock DPM FACFAS

Author 2:

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Tibiototalcaneal (TTC) arthrodesis is a procedure that is often considered for end-stage arthritis in the ankle and subtalar joints due to various processes such as severe hindfoot deformity, Charcot neuroarthropathy, talar osteonecrosis, neuromuscular disorders, or failed ankle replacement. The purpose of this study was to compare fusion rates and time to union between dynamic screw placement and static screw placement in TTC nails. In the current literature, the dynamic group has been shown to attain a higher fusion rate and at a faster time to healing than the static group. We however hypothesized that static screw placement achieved higher fusion rate and at a faster rate than dynamic screw placement.

Methodology

All patients who underwent TTC arthrodesis with an intramedullary nail with either dynamic screw placement or static screw placement within the proximal nail who had at least 1 year follow-up. Patients were included from 8/1/2016 until present at our institution. The primary outcome was ankle joint union with secondary measure of mean time to fusion.

Procedures

Results

The dynamic TTC group had a higher non-union rate and slower time to union compared to the static TCC group. Furthermore, there was a higher incidence of hardware loosening surrounding the calcaneus in the dynamic group.

Discussions

In our study which had a high incidence of Charcot neuroarthropathy, static screw placement had a higher union rate and faster consolidation.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name: Mark Bullock DPM FACFAS

Email: markbullockdpm@gmail.com

Disclosure(s) selected: I/We have nothing to disclose

Disclosed Organisation(s):

Title

Intra-articular Calcaneal Fractures Can Be Safely and Effectively Treated with Screw-only Fixation

Submit Date

10/15/2024

Correspondent

Last Name:Page

Full Name:Trevor S. Page, DPMEmail:tspageaz@gmail.com

Practice/Company/Residency Program:Virginia Mason Franciscan Health PMSR/RRA

Authors

Author 1:Trevor S. Page, DPM

Author 2:Oliver A. Knauer, DPM

Author 3:Todd M. Chappell, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Combinations of various incisional approaches and fixation techniques have been described in literature for the treatment of intra-articular calcaneal fractures. This study analyzes the effects of patient, fracture and surgical factors on objective outcomes of intra-articular calcaneal fracture management. Incisional approach, including sinus tarsi, lateral extensile and percutaneous, and fixation construct, including open reduction internal fixation (ORIF) with screws, ORIF with plate, primary fusion with screws and primary fusion with plate were of primary interest.

Methodology

Retrospective data from a single surgeon was computed using logistic regression to identify factors contributing to delayed or nonunion, wound complications, return to activity, rate of union and return to the operating room.

Procedures

Results

Thirty-one intra-articular calcaneal fractures in 28 patients with mean follow-up of 19.3 months were included. Four (12.9%) fractures developed delayed or nonunion, 6 (19.4%) experienced incision-related wound healing complications with no cases of deep infection, and 11 (35.5%) required return to the operating room. Regression analysis revealed that both ORIF with screws and primary fusion with screws had faster return to activity compared to ORIF and fusion with plate ($P = 0.01$, $P = 0.05$, respectively). No differences were identified in rate or incidence of fracture union, wound complications, or return to operating room among the various incisional and fixation techniques.

Discussions

We conclude that screw-only fixation can be safely utilized for ORIF and primary fusion of intra-articular calcaneal fractures, irrespective of incisional approach. Desired fracture and articular exposure and soft tissue envelope quality should guide incisional approach.

Format

Scientific

Case Rpt Followup

19

Student Club

Classification

Trauma

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Trevor S. Page, DPM	tspageaz@gmail.com	I/We have nothing to disclose	
Oliver A. Knauer, DPM	oliverknauer100@gmail.com	I/We have nothing to disclose	
Todd M. Chappell, DPM, FACFAS	todd.chapps@gmail.com	I/We have nothing to disclose	

Title

Residual Metatarsal Length After Ray Amputation and their Effect on Patient-Reported Functional, and Clinical Outcomes: A Retrospective Analysis

Submit Date

10/14/2024

Correspondent

Last Name: Qadri

Full Name: Ali A. Qadri, DPM

Practice/Company/Residency Program:

Email: aliqadri631@gmail.com

Medstar Georgetown University Hospital

Authors

Author 1: Ali A. Qadri, DPM

Author 2: Craig J. Verdin, DPM

Author 3: Christopher M. Ply, BS

Author 4: Christian X. Lava, BS

Author 5: Christopher E. Attinger, MD

Author 6: Karen K. Evans, MD

Author 7: John S. Steinberg, DPM, FACFAS

Author 8: Jayson N. Atves, DPM, FACFAS

Purpose

The pedal rays are crucial for normal ambulation, and their loss through amputation can lead to poor function, reduced quality of life, and increased morbidity, evidenced by a high rate of complications. To mitigate the morbidity associated with parabolic disruption, preserving ray length has been advocated, but the quantitative effects of this preservation are unclear.

Methodology

We conducted a comparative retrospective analysis of 38 unilateral ambulatory diabetic ray amputees (20 first rays, 7 central rays, 11 fifth rays) treated at Georgetown University Hospital between June 2021 and June 2023. Outcomes were defined by complications (major and minor), limb salvage rates, and assessments of residual function and quality of life using validated patient-reported outcome measures.

Procedures

Results

The average age of participants was 67.2 ± 11.2 years, with a Charlson Comorbidity Index of 5.4 ± 2.1 . The mean follow-up duration was 24.5 months (range, 0.3-83.7). A higher incidence of minor amputations was observed in ray amputations ($p=0.00$), but major complications were not significantly different ($p=0.81$). Patient-reported outcomes indicated that functionality and quality of life for all ray amputation constructs were comparable to transmetatarsal amputation.

Discussions

Our findings challenge the notion that transmetatarsal amputation (TMA) is the gold standard for forefoot procedures. Various ray amputations, especially isolated first ray amputations, can yield comparable or superior functionality due to the preservation of key metatarsals. Despite concerns regarding complications, ray amputations do not appear to carry significantly higher risks than TMAs. Our analysis underscores the importance of patient education and informed decision-making, advocating for a focus on preserving functionality in limb salvage approaches.

Format

Scientific

Case Rpt Followup

25

Student Club

Classification

Physical Therapy/Rehabilitation

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Ali A. Qadri, DPM	aliqadri631@gmail.com	I/We have nothing to disclose	
Craig J. Verdin, DPM	cverdin@kent.edu	I/We have nothing to disclose	
Christopher M. Ply, BS	cmp334@georgetown.edu	I/We have nothing to disclose	
Christian X. Lava, BS	cmp364@georgetown.edu	I/We have nothing to disclose	
Christopher E. Attinger, MD	Christopher.Attinger@medstar.net	I/We have nothing to disclose	
Karen K. Evans, MD	Karen.K.Evans@medstar.net	I/We have nothing to disclose	
John S. Steinberg, DPM, FACFAS	John.Steinberg@medstar.ne	I/We have nothing to disclose	
Jayson N. Atves, DPM, FACFAS	Jayson.Atves@medstar.net	I/We have nothing to disclose	

Title

Retrospective Review of Double Arthrodesis With and Without Concomitant Evans Osteotomy and Residual Postoperative Deformity

Submit Date

10/14/2024

Correspondent

Last Name: Treimer

Full Name: Joshua D., DPM

Practice/Company/Residency Program:

Email: joshua.treimer.dpm@adventhealth.com

Advent Health East Orlando

Authors

Author 1: Joshua D. Treimer, DPM

Author 2: Raluca Wojciechowski, DPM

Author 3: John W. Jaeger, DPM

Author 4: Marie Mendez, DPM

Author 5: Christopher Reeves, DPM, FACFAS

Author 6: Amber Shane DPM, FACFAS

Author 7:

Author 8:

Purpose

The primary purpose of this study was to determine if performing a concomitant Evan’s osteotomy during a rearfoot fusion yielded significantly less post-operative residual deformity compared to those performed without it.

Methodology

10 patients who underwent rearfoot fusions were stratified into 2 groups: those who underwent a concomitant Evan’s osteotomy and those who did not. The pre-operative x-rays were radiographically analyzed and various angles including calcaneocuboid, Meary’s (AP + lateral), Kite’s, peritalar subluxation, and calcaneal inclination were measured and recorded. These were then compared to post-operative weightbearing x-rays with similar parameters being evaluated.

Procedures

Results

There were no statistically significant differences between groups in terms of magnitude of pre-operative deformity. There were statistically significant improvements within each respective group in terms of post-operative radiographic parameters. Talar-head uncoverage improved absolutely moreso in the Evan’s osteotomy group than the rearfoot fusion without concomitant lateral column lengthening.

Discussions

Both groups yielded significant deformity correction with no statistically significance existing between the groups post-operatively. Although there was statistically significant improvement in the calcaneocuboid abduction angle in patients without concomitant Evan’s osteotomy, they still fell outside of the normal range (0-5 degrees) unlike their counterparts who had the lateral column lengthening performed. Peritalar subluxation improved in a larger fashion within the Evan’s osteotomy group which yields potential biomechanical implications with respect to medial column strain.

Format

Scientific

Case Rpt Followup

24

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Joshua D. Treimer, DPM	joshua.treimer.dpm@adventhealth.com	I/We have nothing to disclose	
Raluca Wojciechowski, DPM	raluca926@gmail.com	I/We have nothing to disclose	
John W. Jaeger, DPM	jaeger.john.w@gmail.com	I/We have nothing to disclose	
Marie Mendez, DPM	mariemendez11@gmail.com	I/We have nothing to disclose	
Christopher Reeves, DPM, FACFAS	docreeves1@yahoo.com	I/We have nothing to disclose	
Amber Shane DPM, FACFAS	ambershanereeves@yahoo.com	I/We have nothing to disclose	

Title

Retrospective Analysis of Incidence of Vitamin D Deficiency in Ankle Fractures and Relationship to Severity of Injury

Submit Date

10/14/2024

Correspondent

Last Name: Wojciechowski

Full Name: Raluca

Practice/Company/Residency Program:

Email: raluca926@gmail.com

AdventHealth East Orlando Residency Program

Authors

Author 1: Raluca Wojciechoski, DPM

Author 2: Joshua Treimer, DPM

Author 3: John Jaeger, DPM

Author 4: Christopher Reeves, DPM, FACFAS

Author 5: Joseph Conte, DPM FCFAS

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study is to analyze the incidence of Vitamin D deficiency with ankle fractures and to determine if there is an association between hypovitaminosis D and severity of ankle fractures.

Methodology

38 patients with ankle fractures with recorded Vitamin D levels at the time of visit were selected. Hypovitaminosis was defined as vitamin D level less than 30 ng/ml and insufficiency was defined as less than 20 ng/ml. The ankle fracture severity was analyzed by Lauge Hansen classification.

Procedures

Results

From a total of 38 patients, 20 demonstrated levels less than 30 ng/ml qualifying them as vitamin D hypovitaminosis, and 6 were less than 20 ng/ml, making them vitamin D insufficient. In those vitamin D insufficiency patients, 100% had grade 4 severity with 50% PER 4 and 50% SER 4. In those 20 patients with hypovitaminosis, besides the 6 patients mentioned, an additional 8 had SER 4, with 2 PER 3 and 3 SER 2. 18 patients with sufficient vitamin D levels >30 ng/ml, 12 demonstrating SER 4, 1 PER 4, 1 SER 3, 1 PER 3, 1 SAD 1.

Discussions

100% of patients with vitamin D insufficiency had grade 4 Lauge Hansen in terms of severity. In the hypovitaminosis group there was an increase in both variety and severity of ankle fractures. In the group with sufficient vitamin D levels, there was an increase in lower grade Lauge Hansen fractures as well as increased myriad of fracture types. Although normal Vitamin D levels may not prevent incurrence of ankle fractures, they may provide osseoprotective qualities that mitigate severity of the fracture.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Raluca Wojciechoski, DPM	raluca926@gmail.com	I/We have nothing to disclose	
Joshua Treimer, DPM	Joshua.treimer@gmail.com	I/We have nothing to disclose	
John Jaeger, DPM	jaeger.john.w@gmail.com	I/We have nothing to disclose	
Christopher Reeves, DPM, FCFAS	docreeves1@yahoo.com	I/We have nothing to disclose	
Joseph Conte, DPM FCFAS	jconte7@yahoo.com	I/We have nothing to disclose	

Title

Prognostic Value of Vascular Calcifications Documented on Pre-operative Radiographs in Patients with Peripheral Arterial Disease

Submit Date

10/14/2024

Correspondent

Last Name:LeSavage

Full Name:Lindsay, K, LeSavage, DPMEmail:llesavage16@gmail.com

Practice/Company/Residency Program:Atrium Health Wake Forest Baptist

Authors

Author 1:Lindsay, K, LeSavage DPM

Author 2:Devon, J, Niewohner, DPM

Author 3:Justin, J, Waller, DPM

Author 4:Michael Jones, DPM

Author 5:Cody Blazek, DPM

Author 6:Akalya Villenthi, MS

Author 7:Matthew Goldman, MD

Author 8:

Purpose

Evaluate the relationship between vascular calcifications on pre-operative radiographs and limb-specific outcomes in patients with peripheral arterial disease undergoing index minor foot amputation (IMA).

Methodology

This was a retrospective chart review of patients who underwent non-traumatic, minor foot amputation, defined as any pedal amputation distal to Symes amputation/disarticulation, for the first time from 2012-2019, with documented PAD. PAD was defined as: ABI>1.3, notation of noncompressible vessels, ABI< 0.95, or TBI <0.70, based on arterial studies within 90 days of IMA. Exclusion criteria included history of ipsilateral amputation or traumatic amputation. 258 patients were included. Level of vascular calcification was documented (digit/metatarsal/anterior/posterior) and assessed for correlation with ABI value, Hba1c, creatinine, minor or major amputation, need for revascularization, and mortality. Wilcoxon rank sum analysis and hazard ratios were calculated for statistical analyses.

Procedures

Results

There was no statistically significant difference in outcomes of minor amputation, major amputation, and revascularization when comparing patients with and without vascular calcifications on radiographs. There is a statistically significant association between serum creatinine and vascular calcification, however no difference pertaining to Hba1c level. Although not statistically significant, patients with digital vascular calcification were noted to have reduced risk of revascularization but higher risk of amputation. In contrast, patients with ankle level calcifications have a higher risk of revascularization but reduced risk of amputation when compared to those with digital level calcification.

Discussions

Presence of vascular calcification on pre-operative radiographs may have prognostic value depending on the level of vessels effected.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Diabetic Foot

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lindsay, K, LeSavage DPM	llesavage16@gmail.com	I/We have nothing to disclose	
Devon, J, Niewohner, DPM	dniewohn@wakehealth.edu	I/We have nothing to disclose	
Justin, J, Waller, DPM	jjwaller@wakehealth.edu	I/We have nothing to disclose	
Michael Jones, DPM	michjone@wakehealth.edu	I/We have nothing to disclose	
Cody Blazek, DPM	cdblazek@wakehealth.edu	I/We have nothing to disclose	
Akalya Villenthi, MS	avillent@wakehealth.edu	I/We have nothing to disclose	
Matthew Goldman, MD	mgoldman@wakehealth.edu	I/We have nothing to disclose	

Title

Radiographic Outcomes of Medial Cuneiform Opening Wedge Osteotomy: Trabecular Titanium Wedge vs Osseous Bone Wedge for Correction of Adult Acquired Flatfoot Deformity

Submit Date

10/14/2024

Correspondent

Last Name: Fullmer

Full Name: Taylor C. Fullmer, DPM

Practice/Company/Residency Program:

Email: taylor.fullmer@gundersenhealth.org

Gundersen Health System

Authors

Author 1: Taylor C. Fullmer, DPM

Author 2: Rosie J. Thompson, DPM

Author 3: Scott C. Carrington, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

For flatfoot cases with a persistent forefoot varus component, a medial cuneiform opening wedge osteotomy (Cotton osteotomy), involving a wedge-shaped bone graft placement, is an option. This study aims to compare the radiographic outcomes of patients who after Cotton osteotomy were treated with either an osseous bone wedge or trabecular titanium wedge.

Methodology

21 patients who underwent Cotton osteotomy between 2011 and 2022 were included in the study. Patients were divided into two groups: the osseous group (n=10) and the metallic implant group (n=11). Radiographs were taken at 3 intervals: preoperative, early postoperative and final follow-up (over 1 year). Key radiographic parameters measured included the lateral talus–first metatarsal angle (Meary’s angle) and anteroposterior talocalcaneal angle (Kite’s angle). Patient demographics were also included.

Procedures

Results

Meary’s and Kite’s angle improved significantly in the immediate postoperative period in both groups (mean change: 9.3° and 17.1° respectively). However, there was loss of correction at final follow-up in both groups for both Meary’s and Kite’s angle (mean loss: 2.1° and 5.3°, respectively). The osseous group had a higher loss of correction when compared to the metallic group for both angles (mean loss: 3.2° versus 1.1° and 7.8° versus 3.1°, respectively).

Discussions

The Cotton osteotomy provided early correction of the medial arch, but many patients experienced loss of this correction at long-term follow-up. Medial column collapse was noted, despite maintained cuneiform shape and implant choice. Our results showed that Cotton osteotomy using a metallic implant produced radiographic outcomes similar to those achieved with a bone allograft.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Taylor C. Fullmer, DPM	taylor.fullmer@gundersenhealth.org	I/We have nothing to disclose	
Rosie J. Thompson, DPM	rosie.thompson@gundersenhealth.org	I/We have nothing to disclose	
Scott C. Carrington, DPM, FACFAS	sccarrin@gundersenhealth.org	I/We have nothing to disclose	

Title

A Comparison of Radiation Exposure during Minimally Invasive and Open Hallux Abductovalgus Surgery

Submit Date

10/15/2024

Correspondent

Last Name: Schwab

Full Name: Anthony

Practice/Company/Residency Program:

Email: anthonyjschwab7@gmail.com

Inova Fairfax Medical Campus

Authors

Author 1: Anthony, J. Schwab, DPM, MS

Author 2: Gregory Rose, DPM, MPH

Author 3: Sara Hammond, DPM

Author 4: Lauren Weisel, DPM

Author 5: Corine L. Creech, DPM, FACFAS

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study is to further advance our understanding of expected radiation doses through comparison of intraoperative radiation exposure in both minimally invasive and traditional open bunion surgery.

Methodology

A retrospective review was conducted at our institution to identify minimally invasive and open procedures with documented intraoperative fluoroscopy use between January 2019-June 2024. This search identified 149 consecutive minimally invasive bunion operations. Of these, 66 contained reliable intraoperative fluoroscopy data and were included in the present study for analysis. A total of 55 open distal chevron bunionectomies were identified for the open cohort. Total fluoroscopic use (in seconds) as well as radiation (cGy/cm²) was recorded.

Procedures

Results

Sixty six minimally invasive bunion procedures (48 female, 18 male) were included in this study. Average age was 51.16 (20-76) and average BMI was 27.86 (18.7-45.6). Average fluoroscopy time and total radiation was 122.47 (22.5-340.3) seconds and 24.9 cGy/cm², respectively. In comparison, 55 open distal chevron type bunionectomies were additionally reviewed. Average age in this population was 57.27 (27-80) and BMI was 29.45 (21.7-48.6). Average fluoroscopy time and radiation was 10.26 (0.74-27.5) seconds and 2.08 cGy/cm².

Discussions

Marc etc al. in 2023 reported an average fluoroscopy time of 74 seconds in MIS bunion procedures. In our work which is the first of its kind, average fluoroscopy time was one order of magnitude higher in MIS bunion correction than in chevron procedures at 122.47 seconds compared to 10.26 seconds. Foot and ankle surgeons should be mindful of this increase in radiation exposure if performing these surgeries in moderate to high volume. In further work, we hope to add to this cohort.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Anthony, J. Schwab, DPM, MS	anthonyjschwab7@gmail.com	I/We have nothing to disclose	
Gregory Rose, DPM, MPH	gwrose2012@gmail.com	I/We have nothing to disclose	
Sara Hammond, DPM	prysisaraelizabeth@gmail.com	I/We have nothing to disclose	
Lauren Weisel, DPM	laurenweisel@yahoo.com	I/We have nothing to disclose	
Corine L. Creech, DPM, FACFAS	creecher17@me.com	I/We have nothing to disclose	

Title

Retrospective Analysis of Chronic Syndesmotomic Injuries: Diagnostic Approach and Surgical Outcomes via Arthroscopic Debridement with Suture Button Fixation

Submit Date

10/15/2024

Correspondent

Last Name: Xenophontos

Full Name: Georgia T. Xenophontos, DPM

Practice/Company/Residency Program:

Email: gxenophontos@northwell.edu

Long Island Jewish/North Shore Hospitals

Authors

Author 1: Georgia T. Xenophontos, DPM

Author 2: Amira A. Abihaidar, DPM, MS

Author 3: Carina Alexis, DPM, MS

Author 4: Joseph Waterhouse, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Chronic syndesmotomic injuries present substantial diagnostic and therapeutic challenges in adult populations. Often misdiagnosed or identified late, these injuries lead to persistent pain, joint instability, and early-onset osteoarthritis. Although advancements in imaging techniques including magnetic resonance imaging and weight-bearing computed tomography have improved diagnostic accuracy, the management of these injuries remains contentious. We used a specific intra-operative technique to determine chronic syndesmotomic injuries prior to treatment and compared functional outcomes and pain scores pre-operatively and post-operatively to determine effectiveness.

Methodology

From 2022-2024, 10 patients treated via arthroscopy for ankle impingement with suspected syndesmotomic injury exhibited a positive drive through sign, indicating the presence of syndesmotomic instability. All patients were treated with a single suture button and syndesmotomic debridement with or without additional procedures. All patients completed AOFAS, CAIT, and VAS surveys pre-operatively which were compared to the same scores post-operatively at 3 months and up to 24 months to measure their functional outcomes.

Procedures

Results

Significant improvements were noted in AOFAS and VAS scores at every time interval. Significant improvement was noted in CAIT scores when compared pre-operatively and past the post global period.

Discussions

The results of this retrospective study contribute valuable insight to available options for optimal management of chronic syndesmotomic injuries. We demonstrated significant improvement by diagnosing chronic syndesmotomic injuries via drive through stress followed by treating with debridement and suture button placement with at least 3 months of follow up and for some patients, even up to 24 months of follow up.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Arthroscopy

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Georgia T. Xenophontos, DPM	gxenophontos@northwell.edu	I/We have nothing to disclose	
Amira A. Abihaidar, DPM, MS	aabihaidar@northwell.edu	I/We have nothing to disclose	
Carina Alexis, DPM, MS	calexis3@northwell.edu	I/We have nothing to disclose	
Joseph Waterhouse, DPM	josephwaterhousedpm@gmail.com	I/We have nothing to disclose	

Title

A Phase 1, Single-blind, Randomized, Placebo-Controlled Dose Escalation Study to Assess Collagenase Clostridium Histolyticum (CCH) vs Placebo in Patients With Plantar Fasciitis (PFA)

Submit Date

10/15/2024

Correspondent

Last Name: Deluca

Full Name: Jenifer Deluca

Practice/Company/Residency Program:

Email: DeLuca.Jennifer@endo.com

Endo USA, Inc.

Authors

Author 1: Joseph Caporusso, DPM

Author 2: Ira Gottlieb, DPM

Author 3: Jason Levy, DPM

Author 4: Saadiq El-Amin, MD, PhD

Author 5: Sara Suttle, DPM

Author 6: James Tursi, MD

Author 7: Nigel Jones, PharmD

Author 8: Luis Ortega, MD

Purpose

Improved nonsurgical treatment options are needed for PFA, the most common cause of heel pain. CCH is approved in the US for the treatment of adults with Dupuytren’s contracture with a palpable cord and adult men with Peyronie’s disease with a palpable plaque and curvature deformity of at least 30°. A phase 1, randomized, dose-escalating study of CCH for PFA was conducted.

Methodology

Adults with painful, chronic PFA (duration >8 weeks; unresponsive after 6-12 months of conservative therapy) were eligible. Planned treatments included placebo and 3 CCH doses by intrafascial injection. Primary endpoints were the incidence, severity, and duration of treatment-emergent adverse events (TEAEs) through day 84. Secondary endpoints included patient-reported measures of foot-related pain and treatment satisfaction. Outcomes were analyzed by comparing mean changes from baseline between treatment groups.

Procedures

Results

Sixty-two patients received placebo (n=14) or CCH treatment (n=48). Although the study was not powered to assess treatment efficacy, an improvement in mean pain scores was observed among CCH treatment groups (range, -4.0 to -4.3) vs placebo (-2.8). A positive treatment satisfaction response was seen in 56.3%-66.7% of CCH patients compared to 35.7% of placebo patients. No treatment-related deaths or withdrawals occurred. Most TEAEs were mild to moderate in severity, resolving within 21 days. TEAEs were reported with a higher frequency and severity for the highest CCH dose. Most frequent TEAEs were similar to those seen in the approved indications: injection site pain, swelling, and bruising.

Discussions

Results warranted further evaluation in an ongoing phase 2, double-blind, placebo-controlled study.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Joseph Caporusso, DPM	jcaporusso@aol.com	Consultant/Advisor/Speaker (List all affiliations)	Investigator: Endo USA, Inc.
Ira Gottlieb, DPM	igottlieb@crghmd.com	Consultant/Advisor/Speaker (List all affiliations)	Investigator: Endo USA, Inc.
Jason Levy, DPM	drjlevy@dmiresearch.com	Consultant/Advisor/Speaker (List all affiliations)	Investigator: Endo USA, Inc.
Saadiq El-Amin, MD, PhD	dr.saadiqelamin@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Investigator: Endo USA, Inc.
Sara Suttle, DPM	sarasuttle@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Investigator: Endo USA, Inc.
James Tursi, MD	Tursi.James3@endo.com	Consultant/Advisor/Speaker (List all affiliations)	Employment: Endo USA, Inc.
Nigel Jones, PharmD	jones.nigel@endo.com	Consultant/Advisor/Speaker (List all affiliations)	Employment: Endo USA, Inc.
Luis Ortega, MD	ortega.luis@endo.com	Consultant/Advisor/Speaker (List all affiliations)	Employment: Endo USA, Inc.

Title

Collagenase Clostridium Histolyticum (CCH) in Patients With Plantar Fibromatosis (PFI): Post hoc Analysis of a Phase 2, Double-blind, Randomized, Placebo-Controlled Study

Submit Date

10/15/2024

Correspondent

Last Name: DeLuca

Full Name: Jennifer DeLuca, BA

Practice/Company/Residency Program:

Email: deluca.jennifer@endo.com

Endo USA, Inc.

Authors

Author 1: C. James Anderson, DPM

Author 2: Ira Gottlieb DPM

Author 3: Jason Levy, DPM, FACFAS

Author 4: Saadiq El-Amin, MD, PhD

Author 5: Sara E. Suttle, DPM, FACFAS

Author 6: James Tursi, MD

Author 7: Nigel Jones, PharmD

Author 8: Luis Ortega, MD

Purpose

CCH, a nonsurgical treatment approved in the US for treatment of adults with Dupuytren’s contracture with a palpable cord and adult men with Peyronie’s disease with a palpable plaque and curvature deformity of $\geq 30^\circ$, is being investigated for PFI, which is characterized by collagen-containing nodules along the medial/central plantar fascia. We describe post hoc analysis results in a subgroup of patients with PFI from a phase 2, randomized, placebo-controlled trial of CCH (Study 222; NCT05152173).

Methodology

Subgroup efficacy analyses were performed for Study 222 patients with ≥ 1 injection of CCH or placebo and ≥ 1 post-injection Foot Function Index (FFI) Pain subscale assessment. Patients with baseline Numeric Rating Scale pain score of 10 (ie, patients with extreme distress or pain) or nodule consistency (firmness) of “moderately firm” (nodules with less collagen content) were excluded. Endpoints included change from baseline to day 57 in FFI Pain subscale, combined FFI Pain+Difficulty subscales, Clinician Global Impression of Change (CGIC), nodule hardness (durometer), and nodule consistency (firmness by palpation). Results were assessed using analysis of covariance, mixed model for repeated measures, or Cochran-Mantel-Haenszel test, as appropriate.

Procedures

Results

The subgroup analysis included 126 patients (CCH, n=61; placebo, n=65). Subgroup patients treated with CCH had significant improvements compared to placebo in FFI Pain (P=0.014) and Pain+Difficulty (P=0.020) subscales, CGIC score (P=0.025), nodule hardness (P=0.002), and nodule consistency (P<0.01). CCH was well tolerated; no serious adverse events were reported.

Discussions

This subgroup analysis identified patients with PFI with a robust CCH treatment effect. An appropriately powered phase 3 trial is underway.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level I

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
C. James Anderson, DPM	DrAnderson@podiatry1st.com	Consultant/Advisor/Speaker (List all affiliations)	Investigator: Endo USA, Inc.
Ira Gottlieb DPM	igottlieb@crgmd.com	Consultant/Advisor/Speaker (List all affiliations)	Investigator: Endo USA, Inc.
Jason Levy, DPM, FACFAS	drjlevy@dmiresearch.com	Consultant/Advisor/Speaker (List all affiliations)	Investigator: Endo USA, Inc.
Saadiq El-Amin, MD, PhD	dr.saadiqelamin@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Investigator: Endo USA, Inc.
Sara E. Suttle, DPM, FACFAS	sarasuttle@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Investigator: Endo USA, Inc.
James Tursi, MD	Tursi.James3@endo.com	Consultant/Advisor/Speaker (List all affiliations)	Employment: Endo USA, Inc.
Nigel Jones, PharmD	jones.nigel@endo.com	Consultant/Advisor/Speaker (List all affiliations)	Employment: Endo USA, Inc.
Luis Ortega, MD	ortega.luis@endo.com	Consultant/Advisor/Speaker (List all affiliations)	Employment: Endo USA, Inc.

Title

Multiple Variations of the Superficial Peroneal Nerve (SPN) in Fresh Frozen Cadaveric Limbs

Submit Date

10/14/2024

Correspondent

Last Name: Alejandro-Rivera

Full Name: Diego A. Alejandro-Rivera, BS

Practice/Company/Residency Program:

Email: diego.alejandro@my.rfums.org

Scholl College of Podiatric Medicine at Rosalind Franklin University

Authors

Author 1: Lauren L. Schnack, DPM, MS, AACFAS, FACP

Author 2: Stephanie Oexeman, DPM, AACFAS, DABPM

Author 3: Derek Talbot, DC, PhD

Author 4: Diego A. Alejandro-Rivera, BS

Author 5: Eduardo Badillo Colberg, MS

Author 6: Monica Thokkudubiyapu, MBA

Author 7: Gurkiran Kaur, BS

Author 8: Noah Sperber, BS

Purpose

To determine whether there are more than four variations of the SPN in the middle one-third of the leg and if there are more than three variations in the distal one-third of the leg.

Methodology

Sixty fresh frozen limbs were dissected. A flap of skin and subcutaneous tissue was created. Locations of anatomical variations included: middle one-third, distal ankle/bifurcations with intermediate dorsal cutaneous nerve (IDCN) and medial dorsal cutaneous nerve (MDCN), communicating branches, IDCN off sural nerve.

Procedures

Results

Of the 60 cadaveric limbs, 43.3% of the SPN coursed in the lateral compartment, 23.3% SPN coursed anterior and lateral, 16.7% SPN coursed anterior, 13.3% SPN coursed septal, and 3.3% coursed septal and lateral. In addition, we identified 4 distal variations: Type A with a frequency of 41.7% compared to 72% by Blair and Botte, Type B: 1.7% compared to 16%, Type C: 26.7% compared to 12%, and a fourth branching pattern (Type D), where IDCN branching from the sural nerve. Type D had a frequency of 30% compared to 8.6% identified by Kosinski.

Discussions

Most common pattern of nerve variation observed of the SPN was 43.3% in the lateral compartment with a new lateral and septal variation. In our specimens, the distal one-third Type D variation had a frequency of 30%. There are five SPN nerve variations within the middle one-third of the leg and four variations in the distal one-third of the leg.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Biomechanics and Anatomy

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lauren L. Schnack, DPM, MS, AACFAS, FACP	lauren.schnack@rosalindfranklin.edu	I/We have nothing to disclose	
Stephanie Oexeman, DPM, AACFAS, DABPM	droexeman@gmail.com	I/We have nothing to disclose	
Derek Talbot, DC, PhD	derek.talbot@rosalindfranklin.edu	I/We have nothing to disclose	
Diego A. Alejandro-Rivera, BS	diego.alejandro@my.rfums.org	I/We have nothing to disclose	
Eduardo Badillo Colberg, MS	e.badillocolberg@my.rfums.org	I/We have nothing to disclose	
Monica Thokkudubiyapu, MBA	m.thokkudubiyapu@my.rfums.org	I/We have nothing to disclose	
Gurkiran Kaur, BS	Gurkiran.Kaur@my.rfums.org	I/We have nothing to disclose	
Noah Sperber, BS	noah.sperber@my.rfums.org	I/We have nothing to disclose	

Title

Total Talus Replacement for Talar AVN: A Prospective Study

Submit Date

10/15/2024

Correspondent

Last Name:Chang

Full Name:Thomas J. Chang, DPM, FACFAS

Practice/Company/Residency Program:

Email:ThomasChang14@comcast.net

Sonoma County Orthopedic / Podiatric Specialists

Authors

Author 1:Thomas J. Chang, DPM

Author 2:Christopher E. Gross, MD

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

End stage talar avascular necrosis (AVN) is difficult to manage clinically. Three-dimensional (3D) printing and computer-aided design (CAD) has increased the ability to treat this complex pathology through patient specific 3D printed talus replacements (TTR). The purpose of this study is to report prospectively collected clinical data and patient reported outcome measures (PROMs) of patients implanted with TTR in a multi-institutional prospective study.

Methodology

Patients presenting with talar AVN at one of six institutions were prospectively enrolled and implanted with a TTR. Demographics, range of motion, VAS pain score, Foot and ankle outcome score (FAOS), and adverse events were collected and analyzed. A total of 20 total talus procedures (19 patients) were enrolled, with 19 reaching six weeks of follow-up and 16 reaching six months of follow-up or more.

Procedures

Results

50% of the cohort was female. Mean age and BMI were 49.2±15.7 years and 33.6±6.8 kg/m2, respectively. Three patients had five device-related serious adverse events (wound infection, complex regional pain syndrome, wound dehiscence, osteomyelitis, and pain). VAS Pain scores improved at six months postoperatively, with a significant decrease of 36.1 ± 28.94 points (p=.0001). All FAOS subscales showed statistically significant improvement from preoperative to six months postoperatively. Additionally, at six months postoperatively, 87% of patients indicated good or excellent satisfaction.

Discussions

TTR was found to have low rates of short-term adverse events and proved to be safe and effective for the treatment of end stage avascular necrosis. Patients were largely satisfied at six months postoperatively and showed considerable improvements in all PROMs.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Thomas J. Chang, DPM	ThomasChang14@comcast.net	Member of a medical publication or editorial governing board	Editorial Board - Foot and Ankle Specialist
		Consultant/Advisor/Speaker (List all affiliations)	Paragon 28, Ossio, Bioventus
		Grant/Research funding	Paragon 28
Christopher E. Gross, MD	cgross144@gmail.com	Grant/Research funding	Stryker, Paragon 28, Orthofix, Enovis
		Member of a medical publication or editorial governing board	FAI Associate Editor
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Committee Chairman for AOFAS
		Consultant/Advisor/Speaker (List all affiliations)	Paragon 28, Fusion Ortho, Orthofix, Shukla, Enovis

Title

Current Practice of Antibiotic Prophylaxis for Dental Procedures Following Total Ankle Arthroplasty: A Survey Study

Submit Date

10/14/2024

Correspondent

Last Name: Tirabassi

Full Name: Nathan C. Tirabassi, DPM, AACFAS

Practice/Company/Residency Program:

Email: tirabanc@gmail.com

Foot & Ankle Salvage, Trauma, and Reconstruction (FASTR) Fellowship of Atlanta

Authors

Author 1: Nathan C. Tirabassi, DPM, AACFAS

Author 2: Samantha A. Miner, DPM, FACFAS

Author 3: John A. Martucci, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Total ankle arthroplasty (TAA) is becoming the surgical treatment of choice for end-stage ankle arthritis. However, there is currently no consensus on postoperative protocols after TAA, including use of antibiotic prophylaxis for dental procedures. The primary aim of this study was to evaluate the current trends of antibiotic prophylaxis prior to invasive dental procedures in the setting of TAA.

Methodology

In this cross-sectional survey study, responses regarding antibiotic prophylaxis for dental procedures were collected via a 10-question, self-reported, anonymous online survey distributed to podiatric surgeons who perform TAA. Inferences and conclusions were drawn from the percentages of respondents.

Procedures

Results

Of the 38 respondents, 66% (n=25) use antibiotic prophylaxis for dental procedures after TAA. Approximately 50% (n=12) of respondents who use antibiotic prophylaxis do so indefinitely, while the remaining 50% (n=13) had varying lengths of duration of prophylaxis after TAA. Just 8% (n=3) have encountered a periprosthetic joint infection (PJI) after a dental procedure.

Discussions

Hematogenous PJI, which can result after an invasive dental procedure, is extremely rare in total joint arthroplasty as a whole. However, PJI is a devastating complication that requires revision surgery. Therefore, surgeons routinely prescribe antibiotics before dental procedures. Yet, recent literature casts doubt on the need for antibiotic prophylaxis. In this survey study, we found that two-thirds of foot and ankle surgeons routinely prescribe antibiotics before dental procedures after TAA. While we did not find a consensus, this study adds to the basis of knowledge regarding antibiotics in TAA patients prior to invasive dental procedures.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Epidemiology/Population Study

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Nathan C. Tirabassi, DPM, AACFAS	tirabanc@gmail.com	I/We have nothing to disclose	
Samantha A. Miner, DPM, FACFAS	dr.sam.miner@gmail.com	I/We have nothing to disclose	
John A. Martucci, DPM, FACFAS	john.a.martucci@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	MiRus LLC, AROA Biosurgery

Title

Fifth Digit Fillet Flaps: Outcomes in the Diabetic Foot

Submit Date

10/14/2024

Correspondent

Last Name: Egdorf

Full Name: Jay R, Egdorf DPM, PGY2

Practice/Company/Residency Program:

Email: jregdorf@lhs.org

Legacy Health Podiatric Residency

Authors

Author 1: Jay Egdorf DPM, PGY2

Author 2: Matt Shook DPM, PGY3

Author 3: Justin Tidwell DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Digital fillet flaps have been well described in literature for their potential to decrease wound burden with durable full thickness coverage, with reliable outcomes. The aim of this study is to describe the use of, fifth toe fillet flaps, to provide reliable, durable coverage of soft tissue defects in the diabetic foot.

Methodology

A retrospective chart review was conducted of all diabetic patients presenting to the senior author’s outpatient clinic or emergency room between January 1 2020 and May 1 2023, and underwent 5th toe amputation with fillet flap. Clinical data collected included: sex, age, BMI, laterality, wound measurements and duration, clinical signs of infection, smoking, laboratory data, and imaging. The primary end point was documentation of wound healing. Final follow up appointments were reviewed for re-ulceration, re-infection and flap integrity.

Procedures

Results

21 patients were identified for chart review. 13 patients were excluded. The median time to heal was 78 days. 3 of 8 (28.57%) patients required re-operations to manage re-ulcerations at other locations on the same foot. The average follow up time was 15.8 months, with a minimum of 1 year. At final follow up, all fillet flaps remained well healed without recurrent ulceration over the flap.

Discussions

Diabetic foot ulcers are a peripheral manifestation of multiple body system dysfunction, including the peripheral nervous, vascular, and immune systems. The use of digital fillet flaps provides a predictable, robust, and reliable blood supply while adhering to core tenants of reconstructive surgery, such as, replacement of like with like and spare parts surgery.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Diabetic Foot

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jay Egdorf DPM, PGY2	jregdorf@lhs.org	I/We have nothing to disclose	
Matt Shook DPM, PGY3	MGSHOOK@lhs.org	I/We have nothing to disclose	
Justin Tidwell DPM	JTIDWELL@LHS.org	I/We have nothing to disclose	

Title

Anatomy of the Peroneal/Fibular Complex: Ultrasonic Findings in Asymptomatic Ankles

Submit Date

10/14/2024

Correspondent

Last Name: Bykowski

Full Name: Alexa, T, Bykowski, DPM

Practice/Company/Residency Program:

Email: alexa.bykowski@ohiohealth.com

Grant Medical Center

Authors

Author 1: Alexa, T, Bykowski, DPM

Author 2: Joseph, R, Brown, DPM

Author 3: Zachary, P, Hill, DPM

Author 4: Meghan, C, Roby, DPM

Author 5: Nevin, C, Joseph, DPM

Author 6: Sara, J, Judickas, DPM

Author 7: Jeffrey, A, Strakowski, MD

Author 8: Robert, W, Mendicino, DPM, FACFAS

Purpose

Musculoskeletal ultrasound (US) has emerged as a valuable diagnostic tool for evaluating peroneal complex pathology. To the author’s knowledge, no publications have evaluated the normal anatomy of the peroneal complex in asymptomatic subjects utilizing musculoskeletal US. Therefore, the purpose of this study is to evaluate the morphological features of asymptomatic, nonpathological peroneal complexes utilizing diagnostic musculoskeletal US.

Methodology

Adult volunteers with asymptomatic and uninjured ankles were recruited and underwent a diagnostic US evaluation of the peroneal tendon complex performed by a single physician trained in musculoskeletal US. If only one ankle was asymptomatic and without injury history, a unilateral exam was performed on the asymptomatic limb, otherwise a bilateral exam was performed.

Procedures

Results

53 ankles were evaluated. Peroneal complex anatomy was identified and described. There were no tears or subluxations in either the peroneus brevis or longus tendons. 64.2% of the peroneus brevis tendons were described as “flat.” The mean distance of the myotendinous junction of the peroneus brevis to the CFL was -2.34mm in ankle inversion, 1.70mm in neutral, and 4.10mm in eversion. A proposed classification system was created to describe the brevis muscle belly distance with 7.5% of ankles classified as Type A, 56.6% as Type B, and 35.8% as Type C.

Discussions

With the first known dynamic US evaluation of non-pathologic peroneal complexes, a multitude of variables were identified and characterized. The proposed classification system will help identify patients at risk of peroneal complex pathologies. The study emphasizes the utility of dynamic US in patient evaluation for peroneal complex pathology.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Biomechanics and Anatomy

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Alexa, T, Bykowski, DPM	alexa.bykowski@ohiohealth.com	I/We have nothing to disclose	
Joseph, R, Brown, DPM	jrbrwndpm@gmail.com	I/We have nothing to disclose	
Zachary, P, Hill, DPM	zph1582@gmail.com	I/We have nothing to disclose	
Meghan, C, Roby, DPM	meghan.robby@ohiohealth.com	I/We have nothing to disclose	
Nevin, C, Joseph, DPM	nevin.joseph@ohiohealth.com	I/We have nothing to disclose	
Sara, J, Judickas, DPM	sara.judickas@ohiohealth.com	I/We have nothing to disclose	
Jeffrey, A, Strakowski, MD	jstrak@aol.com	I/We have nothing to disclose	
Robert, W, Mendicino, DPM, FACFAS	rmendicino@faiwp.com	I/We have nothing to disclose	

Title

Radiological outcomes with and without flexor digitorum longus transfer in the flexible progressive collapsing foot deformity

Submit Date

10/15/2024

Correspondent

Last Name:Kurian

Full Name:Geethu

Practice/Company/Residency Program:

Email:gakurian@gmail.com

West Penn Hospital

Authors

Author 1:Geethu Kurian

Author 2:Alan Catanzariti, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Progressive collapsing foot deformity is a common condition often requiring surgical intervention. We hypothesize that osteotomies and limited arthrodesis provide sufficient radiographic correction without the need for flexor digitorum longus transfer in the treatment of stage II flexible flatfoot deformity.

Methodology

This retrospective chart review of 48 adult patients with stage II flexible flatfoot reconstruction observes AP Mary, lateral Mary, and calcaneal pitch preoperatively, and 6 weeks, 6 months, and 1 year postoperatively. Descriptive statistics include mean, standard deviation, median and range. Two-way repeated measures ANOVAs were used to see if angle means for those with and without FDL transfer were equal across all time points. All analyses were conducted using R version 4.2.0. A p-value of <0.05 is defined as a statistically significant difference.

Procedures

Results

Population mean AP Meary and calcaneal pitch were not found to be statistically different between patients with and without FDL transfer (p-value = 0.2542 and 0.5467, respectively). Population mean lateral Meary was found to be statistically different between patients with and without FDL transfer (p-value =0.0028). Population means for AP Meary, lateral Meary, and calcaneal pitch were found to be statistically different over time (all p-values <0.0010).

Discussions

Our results indicate FDL transfer provides superior sagittal plane improvement in the flexible flatfoot. However, there was no significant difference in loss of correction with and without FDL transfer from 6 weeks to 1 year postoperatively. Given our limited sample size, it would be valuable to repeat this study with more subjects to create a more powerful analysis.

Format

Scientific

Case Rpt Followup

6

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Geethu Kurian	gakurian@gmail.com	I/We have nothing to disclose	
Alan Catanzariti, DPM, FACFAS	alan.catanzariti@ahn.org	I/We have nothing to disclose	

Title

Does Hyperbaric Oxygen Therapy Decrease Flap Complication Rates Following Reconstruction of the Charcot Foot & Ankle

Submit Date

10/14/2024

Correspondent

Last Name:Marker

Full Name:Curtis J Marker, DPMEmail:curtis.marker@hcmcd.org

Practice/Company/Residency Program:Hennepin Healthcare

Authors

Author 1:Curtis J Marker, DPM

Author 2:Kimberly Bobbitt, DPM, FACFAS

Author 3:Michelle Winder, DPM, FACFAS

Author 4:Thomas C Masters II, MD

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This pilot study evaluates if hyperbaric oxygen therapy decreases complication rates of flap healing following reconstructive surgery for Charcot foot and ankle deformity.

Methodology

Retrospective review of patients from 2014-2024 that underwent reconstructive Charcot surgery. Forty-two individuals and 45 limbs were identified. Patient demographics were evaluated. The primary endpoint was incision healing rate with secondary evaluation of complications. External fixator application with soft tissue balancing, closed or open reduction of joints and eventual arthrodesis of joints (tarsometatarsal, naviculocuneiform, talonavicular, calcaneocuboid, subtalar, ankle), hyperbaric oxygen therapy.

Procedures

Results

The average heal time in the HBO group was 16.8 weeks compared to 13.9 weeks in the Non-HBO group.

Discussions

Patient selection is multifactorial, especially when considering undergoing major limb salvage with reconstructive surgery. Our hypothesis was that the HBO group would have a shorter healing time. However, these results may be skewed as the HBO group had increased presence of pre-operative ulceration/infection, early ischemic changes to flap, and or history of peripheral arterial disease which resulted in overall longer time to heal.

Format

Scientific

Case Rpt Followup

120

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Curtis J Marker, DPM	curtis.marker@hcmcd.org	I/We have nothing to disclose	
Kimberly Bobbitt, DPM, FACFAS	kimberly.bobbitt@hcmcd.org	I/We have nothing to disclose	
Michelle Winder, DPM, FACFAS	michelle.winder@hcmcd.org	I/We have nothing to disclose	
Thomas C Masters II, MD	thomas.masters@hcmcd.org	I/We have nothing to disclose	

Title

SPECT/CT Diagnostic Accuracy in Total Ankle Arthroplasty Revision

Submit Date

10/15/2024

Correspondent

Last Name: Luettggen

Full Name: Sarah

Practice/Company/Residency Program: Swedish Medical Center

Email: sunfish01@gmail.com

Authors

Author 1: Chloe Mulligan, DPM

Author 2: Sarah Luettggen, DPM

Author 3: Jeffrey Christensen, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To determine the accuracy of SPECT/CT results for unexplained pain after total ankle arthroplasty (TAA) by comparing the imaging findings to the intraoperative findings during surgical revision.

Methodology

A retrospective review of SPECT/CT results from 2014 to 2023 in patients who underwent TAA and ultimately underwent revisional surgery. The results of the SPECT/CT were compared to the intraoperative findings from the operative notes to determine the accuracy of the imaging results. All patients underwent TAA with one surgeon and all SPECT/CTs were performed at the same imaging center.

Procedures

Results

There was a total of 41 SPECT/CTs (39 patients) for unexplained pain after TAA. The findings were categorized into four groups; 1) aseptic loosening, 2) osteolysis, 3) gutter impingement and 4) other findings. SPECT/CT correlated with intraoperative findings in 7/7 (100%) of cases that had aseptic loosening, with 11/17 (65%) of cases with osteolysis, and 21/21 (100%) of cases with gutter impingement.

Discussions

To date this is the largest retrospective review of SPECT/CT results compared to surgical findings in TAA. This demonstrates SPECT/CT can be a useful diagnostic tool to identify the pathology behind unexplained pain that cannot be clearly identified by other imaging modalities. In TAA this includes impingement, loosening, subsidence, and osteolysis. It can also be useful in diagnosing periprosthetic fractures and adjacent joint pathologies. The results of the study show that SPECT/CT is an important diagnostic tool in clinical management and surgical revision planning of unexplained pain after TAA.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Chloe Mulligan, DPM	chloe.mulligan24@gmail.com	I/We have nothing to disclose	
Sarah Luettggen, DPM	sunfish01@gmail.com	I/We have nothing to disclose	
Jeffrey Christensen, DPM, FACFAS	jccdp@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Paragon 28
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Research Director International Foot and Ankle Foundation
		Grant/Research funding	Clinical Site Director for Paragon 28

Title

Ultrasound Grading of Plantar Plate Injuries and Correlation with Surgical Intervention

Submit Date

10/14/2024

Correspondent

Last Name:Aslam

Full Name: Mohammed Y. Aslam, DPMEmail: maslamdpm@gmail.com

Practice/Company/Residency Program: Loyola University Medical Center

Authors

Author 1: Mohammed Y. Aslam, DPM

Author 2: Katherine Dux, DPM, FACFAS

Author 3: Bryn Laubacher, DPM, FACFAS

Author 4: Emad Allam, MD

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Plantar plate injuries are a common cause of forefoot pain and can lead to functional instability. The plantar plate maintains toe alignment and supports the metatarsophalangeal joint. The decision to pursue surgical correction will vary on the patient's level of pain and extent of deformity. Plantar plate tears may be low-grade (less than 50% thickness) or high grade (greater than 50% thickness). This study aims to evaluate whether the extent of plantar plate tear correlates with the necessity for surgical intervention to optimize treatment strategies based on tear grade and intervention.

Methodology

A retrospective review of 54 patients with ultrasound-confirmed plantar plate tears was conducted by review of medical records. A musculoskeletal ultrasound-trained radiologist classified tears as low-grade or high-grade. Treatment (non-surgical or surgical) was recorded for each patient.

Procedures

Results

Of the 54 patients, 23 demonstrated low-grade tears, while 31 demonstrated high-grade tears. 4 low-grade tear patients required surgery, while 11 high-grade tear patients required surgery. Chi-Square analysis showed no statistical association between tear grade and treatment ($p = 0.246$).

Discussions

The grade of the plantar plate tear does not correlate with need for surgical intervention. These findings support the idea that treatment strategies should be influenced by pain and level of disability.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Mohammed Y. Aslam, DPM	maslamdpm@gmail.com	I/We have nothing to disclose	
Katherine Dux, DPM, FACFAS	kdux1@lumc.edu	I/We have nothing to disclose	
Bryn Laubacher, DPM, FACFAS	bryn.laubacher@lumc.edu	I/We have nothing to disclose	
Emad Allam, MD	emad.allam@lumc.edu	I/We have nothing to disclose	

Title

Bacteriology of Microbes Cultured in Cases of Lower Extremity Infection and Associated Patient Outcomes

Submit Date

10/14/2024

Correspondent

Last Name: Richline

Full Name: Meghan

Practice/Company/Residency Program:

Email: meg.richline@gmail.com

LECOM Podiatric Medicine and Surgery Residency

Authors

Author 1: Meghan Richline

Author 2:

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Bacterial infections leading to lower extremity osteomyelitis, abscesses, and gas gangrene are commonly considered polymicrobial, often involving staphylococcus and streptococcus species. This study examines bacterial cultures from these cases and their antibiotic susceptibilities along with patient outcome.

Methodology

Records of patients presenting with a lower extremity abscess, gas gangrene, and/or acute osteomyelitis were included in this research. Excluded were those with abscess, gas gangrene, and/or acute osteomyelitis secondary to foreign body or recent elective surgery. Also excluded were those with chronic osteomyelitis or those whose cultures did not grow anything.

Procedures

Results

There was a more diverse range of species grown in cases involving osteomyelitis. No cases with gas gangrene produced clostridium in the cultures. The most common anaerobic bacteria seen in all cases were Finegoldia magna, Prevotella sp., and Anaerococcus. The most common aerobic bacteria seen were Staphylococcus aureus (MSSA), then MRSA, enterococcus faecalis, Group B streptococcus, and Escherichia coli. Clindamycin resistance was most prevalent in this population in comparison to other antibiotics tested.

Discussions

The majority of cases exhibited polymicrobial nature, with gas gangrene and osteomyelitis cases displaying the most diverse cultures. Additionally, this study identified several unique bacteria with limited documentation in lower extremity infections. Further investigation could explore correlations between lifestyle factors, wound location, and cultured bacteria in infected wounds, shedding light on potential predisposing factors.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:

Email:

Disclosure(s) selected:

Disclosed Organisation(s):

Meghan Richline

meg.richline@gmail.com

I/We have nothing to disclose

Title

The Role of Bone Culture and Bone Histopathology Specimen in the Diagnosis and Treatment of Osteomyelitis after Pedal Level Amputations

Submit Date

10/14/2024

Correspondent

Last Name: Kozeny

Full Name: James

Practice/Company/Residency Program:

Email: james.kozeny001@luhs.org

Loyola University Medical Center

Authors

Author 1: James Kozeny

Author 2: Jennifer Busser, DPM, AACFAS

Author 3: Francis J. Rottier, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Literature lacks a clear consensus on recommendations for detecting and demonstrating resolution of infections. There is a wide variation of surgeon preference and decision making to obtain cultures to guide treatment following infections. This study investigated the microbiology and histopathology of clearance fragments following pedal-level amputations. We analyzed how the results impacted antibiotic therapy.

Methodology

A retrospective review of veterans who underwent pedal level amputations between July 2019 and July 2022 was performed after IRB approval. We excluded patients treated with antibiotics for conditions unrelated to their pedal infection. 113 charts were reviewed and 84 veterans requiring 114 amputations met the inclusion criteria. Results of the clearance fragments and antibiotic treatment course were evaluated.

Procedures

Results

47.36% of study participants had microbiology specimens submitted and 93.85% had histopathology submitted. 45.6% of participants had both specimens submitted. Both specimens were negative in 34.6% of cases. Both were positive in 11.5% of cases. 51.9% had positive microbiology and negative pathology. 1.9% had negative microbiology and a positive pathology result. The mean duration of antibiotic therapy for double positive specimens was five weeks. Treatment duration was three weeks for positive microbiology with negative histopathology, and 1.8 weeks for double negative clearance fragments.

Discussions

The results of microbiology and histopathology clearance fragments influenced the length of antibiotic therapy. Further investigation of patients with positive microbiology and negative histopathology is warranted, since our data suggests likely contamination of clearance fragments from surrounding soft tissue and contaminated instrumentation may be leading to unnecessary antibiotic exposure.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
James Kozeny	james.kozeny001@luhs.org	I/We have nothing to disclose	
Jennifer Busser, DPM, AACFAS	jenbusser@att.net	I/We have nothing to disclose	
Francis J. Rottier, DPM, FACFAS	frottie@lumc.edu	I/We have nothing to disclose	

Title

Assessment of Radiation Exposure in Podiatric Surgery: How Much Does Lead Really Protect You in Foot and Ankle Surgery From Intra-op Fluoroscopy?

Submit Date

10/15/2024

Correspondent

Last Name:Patel

Full Name:Kush

Practice/Company/Residency Program:

Email:kushpateldpm@gmail.com

Emory University School of Medicine Podiatric Residency Program

Authors

Author 1:Kush H. Patel, DPM

Author 2:Madeline J. Boyle, DPM

Author 3:Ayanda D. Dube, DPM

Author 4:Neil S. Upadhyay, DPM

Author 5:Shivani J. Patel, DPM

Author 6:Kiara E. Francis, DPM

Author 7:Joshua C. Magno, DPM

Author 8:Angela S. Moon DPM

Purpose

The purpose of this study is to evaluate the amount of radiation exposure from intra-operative fluoroscopy during podiatric surgery. To understand the protective effects of lead from primarily mini C-arm radiation during podiatric surgery.

Methodology

Two monthly dosimetry badges were applied to one lead jacket used by podiatric surgeons. One dosimeter was applied to the front of the lead, unshielded from radiation (UD). The other dosimeter was applied to the inside of the lead, shielded from the radiation (SD). The monthly exposures of the badges were recorded and surgical procedures within the month noted.

Procedures

Results

All surgeries completed within the month while wearing the lead with the Dosimetry badges were noted, and the monthly exposure was recorded for both badges. This was performed over a period of 12 months whereupon statistical analysis was utilized to compare the exposure from both badges as well as a control badge kept away from radiation. The goal is to assess radiation exposure as well as lead protection in podiatric cases.

Discussions

The effects of radiation on the human body have been well-researched; however, not when it comes from intra-operative fluoroscopy during surgery. It is known that scatter radiation from mini c-arm is low. The need for intra-operative fluoroscopy is essential to perform precise podiatric surgery, which is commonly performed with mini c-arm. We set out to explore total radiation exposure to a podiatric surgeon and how much the utilization of lead contributes to shielding within podiatric surgery.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Epidemiology/Population Study

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kush H. Patel, DPM	kushpateldpm@gmail.com	I/We have nothing to disclose	
Madeline J. Boyle, DPM	madelinejboyle@gmail.com	I/We have nothing to disclose	
Ayanda D. Dube, DPM	ayandadpm@gmail.com	I/We have nothing to disclose	
Neil S. Upadhyay, DPM	neilupadhyay1834@gmail.com	I/We have nothing to disclose	
Shivani J. Patel, DPM	spat366@emory.edu	I/We have nothing to disclose	
Kiara E. Francis, DPM	kiara.francis@emory.edu	I/We have nothing to disclose	
Joshua C. Magno, DPM	joshua.magno@emory.edu	I/We have nothing to disclose	
Angela S. Moon DPM	angela.moon@emory.edu	I/We have nothing to disclose	

Title

Tibiototalocalcaneal Arthrodesis Experience Among Podiatric Reconstruction Fellows: A National Survey

Submit Date

10/14/2024

Correspondent

Last Name: Chauhan

Full Name: Dhavel Chauhan, DPM, AACFAS

Practice/Company/Residency Program:

Email: dhavelc@gmail.com

Dallas Advanced Foot and Ankle Reconstruction Fellowship

Authors

Author 1: Dr. Dhavel Chauhan, DPM, AACFAS

Author 2: Dr. Calvin J. Rushing, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This study aims to investigate trends in surgical training for tibiototalcaneal (TTC) arthrodesis among reconstructive foot and ankle fellows during the 2024-2025 academic year. With the increasing number of fellowships, understanding variations in case volume, intraoperative and postoperative protocols, and fellows' confidence is essential.

Methodology

A survey was distributed to 70 reconstructive foot and ankle fellows, achieving a 28.6% response rate (n=20). The survey gathered data on expected case volume, techniques utilized, and postoperative protocols, including antibiotic and anticoagulant usage. Statistical t-tests were employed to compare anticipated TTC volumes in fellowship to those performed during residency.

Procedures

Results

Survey results indicated that 55% of fellows expect an increase in TTC case volume, with significant differences between residency (average 8.25) and anticipated fellowship cases (average 11.65, $p < 0.001$). Postoperative protocols showed variability, particularly in antibiotic regimens, and 90% of fellows reported using anticoagulation routinely.

Discussions

The findings reflect an evolving landscape in podiatric fellowship training, emphasizing increased exposure to complex procedures and improved confidence among fellows. Variability in antibiotic protocols highlights the need for standardized guidelines. Future research should focus on long-term outcomes of fellowship training on surgical competence and patient safety, contributing to enhanced educational strategies in TTC arthrodesis.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Dr. Dhavel Chauhan, DPM, AACFAS	dhavelc@gmail.com	I/We have nothing to disclose	
Dr. Calvin J. Rushing, DPM, FACFAS	cjrushingdpm2016@gmail.com	I/We have nothing to disclose	

Title

IOFix™ with Plate construct is similar to locking plate construct for Lapidus bunionectomy procedure outcomes

Submit Date

10/14/2024

Correspondent

Last Name: Saxena

Full Name: Amol, Saxena, DPM, MPH, FACFAS

Practice/Company/Residency Program:

Email: heysax@aol.com

Extremity Medical, LLC

Authors

Author 1: Amol Saxena

Author 2:

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Case-control study to evaluate traditional locking plate and plantar lag screw construct for the Lapidus bunionectomy procedure compared to the IOFix™ and plate construct.

Methodology

Patients from one surgeon’s practice (2014 to 2022) that underwent the Lapidus procedure as a non-inferiority study. An equal number of patients (23) having the locking plate with plantar lag screw were evaluated and compared to those having the IOFix and plate construct. Outcome measures were incidence of non-union, loss of correction (1st Intermetatarsal angle >8° or Hallux Abductus angle > 20°), hardware removal and AOFAS Hallux score. Excluded were patients who only had isolated IOFix construct without plate in the intervention group and those with only plate fixation in the control group. Statistical analysis was performed (Excel™ and STAT SAK™), with two-tailed T-test and Chi squared, with significance set at 95% Confidence Interval and P<0.05.

Procedures

Results

There were 23 patients in the IOFix™ and 23 controls, with no difference in age (P=0.21). There were no infections, non-unions or revisions due to loss of correction in either group. Hardware removal was not significant between the IOFix™, 6 (26%) versus control, 3 (13%) groups, (P=0.46). Post-operative AOFAS scores improved significantly in both groups (P<0.0001). There was no difference between the IOFix™ and control groups both pre-operatively, (95% CI, -2.6 to 0.8, P=0.83) and post-operatively, (95% CI, -1.4 to 5.2, P=0.26).

Discussions

This study of 23 patients shows IOFix 2.0™ is an equivalent, effective and non-inferior fixation technique compared to plate and lag screw for the Lapidus procedure.

Format

Scientific

Case Rpt Followup

18

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:

Email:

Disclosure(s) selected:

Disclosed Organisation(s):

Amol Saxena

heysax@aol.com

Consultant/Advisor/Speaker (List all affiliations)

Extremity Medical, LLC

Title

Intraoperative fracture rate with versus without medial malleolar prophylactic pinning in total ankle arthroplasty

Submit Date

10/15/2024

Correspondent

Last Name: Lanoue

Full Name: Mary K Lanoue, DPM PGY-3

Practice/Company/Residency Program:

Email: maryklanoue@gmail.com

Highlands-Presbyterian/St. Luke's Podiatry Residency Program

Authors

Author 1: Mary K Lanoue DPM

Author 2: Kira Cramer DPM

Author 3: Alan Ng DPM

Author 4: Ronnie Pollard DPM

Author 5: Brett Sachs DPM

Author 6:

Author 7:

Author 8:

Purpose

Intraoperative fracture is a common complication during total ankle arthroplasty. The goal of this study is to evaluate the rate of intraoperative fracture with and without prophylactic pinning of the medial malleolus in total ankle arthroplasty.

Methodology

A retrospective case series of a single surgeon was performed from December 2012 to November 2023. Eighty-six patients were included in this study. Patients were excluded if they had less than 12 months follow-up, total talus replacement, and patients without postoperative radiographs. Outcome measures included rate of intraoperative and postoperative fractures.

Procedures

Results

In this study of 86 total ankle replacements, 56 (65.12%) patients underwent prophylactic medial malleolar pinning and 30 (34.88%) patients had no pinning. Preoperative diagnoses included end stage OA 64 (74%), failed TAR 12 (14%), post-traumatic arthritis 8 (9.3%), aseptic loosening 1 (1.2%), and non-union 1 (1.2%). The rate of intraoperative fractures in patients without pinning was 16.67% (5/30) and 0% (0/56) in patient with pinning. The postoperative fracture rate was higher in patients without pinning (10.0%, 3/30) compared to with pinning (0.0%). The average medial malleolar isthmus distance was 11.57 mm. The isthmus distance in the patients without an intraoperative fracture (11.61 mm) compared to patients with an intraoperative fracture (10.96 mm).

Discussions

We demonstrated the importance of prophylactic medial malleolar pinning to prevent intraoperative fractures in total ankle arthroplasty. The rate of intraoperative fractures was higher in patients without pinning at 16.67% compared to no cases in patients with pinning. In our study, there was a trend towards a smaller medial malleolar isthmus distance in the fracture group. In conclusion, prophylactic medial malleolar pinning should be considered to prevent intraoperative fractures in total ankle arthroplasty.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Mary K Lanoue DPM	maryklanoue@gmail.com	I/We have nothing to disclose	
Kira Cramer DPM	kirakirac@gmail.com	I/We have nothing to disclose	
Alan Ng DPM	alanng.ankle@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Restore3d, Stryker Foot and Ankle, Paragon 28
Ronnie Pollard DPM	rweber2@gmail.com	I/We have nothing to disclose	
Brett Sachs DPM	brettsachs1@gmail.com	I/We have nothing to disclose	

Title

Mortality Rate of Open Ankle Fractures in Geriatric Patients

Submit Date

10/15/2024

Correspondent

Last Name: Katzer

Full Name: Jessica M. Katzer, DPM

Practice/Company/Residency Program:

Email: jkatzer@carilionclinic.org

Carilion Clinic

Authors

Author 1: Jessica M. Katzer, DPM

Author 2: David M. Calderwood, DPM

Author 3: Isabella G. Saley, DPM

Author 4: Sarah A. Mansager

Author 5: John R. Clements DPM FACFAS

Author 6:

Author 7:

Author 8:

Purpose

Geriatric open ankle fractures can have direct impact on life. Existing literature on geriatric open ankle fracture mortality is limited. Current research lacks follow-up longevity beyond 30 days and has reported on small patient volumes. There is a profound need for additional research to better understand the overall mortality rates associated.

Methodology

A retrospective review was conducted to determine mortality rates up to 5 years post-operatively in geriatric patients (>65 years of age) who sustained an open ankle fracture. A single facility within the system was selected for data collection from January 2012-January 2018. Simple summary statistics were used for analysis.

Procedures

Results

75 patients were identified and reviewed. 17 patients (22.67%) had a documented date of death in the electronic health records. 3 patients died within 30 days of their surgery. 3 died between 90 days and 6 months. 3 died between 1 and 2 years. 3 died between 2-5 years. The average time to death in years was 2.59 with a mean standard deviation of 2.94 under a 95% confidence interval (1.07, 4.10).

Discussions

Our study is ongoing with plans to obtain federal death records for a more detailed interpretation of mortality rates. Further analysis, including identification of patient specific factors related to mortality, will be made at the study's conclusion. Our preliminary results illustrate at least a 17.33% mortality rate within 5 years of sustaining a geriatric open ankle fracture. This highlights the importance of provider driven goals of care discussions for informed decision making with patients and their families.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Epidemiology/Population Study

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jessica M. Katzer, DPM	jkatzer@carilionclinic.org	I/We have nothing to disclose	
David M. Calderwood, DPM	dcalderwood@carilionclinic.org	I/We have nothing to disclose	
Isabella G. Saley, DPM	isaley@carilionclinic.org	I/We have nothing to disclose	
Sarah A. Mansager	samansager@carilionclinic.org	I/We have nothing to disclose	
John R. Clements DPM FACFAS	jrclements@carilionclinic.org	I/We have nothing to disclose	

Title

A preliminary study: Is oral anti-coagulation over-utilized for DVT prophylaxis in the post-operative course for primary traumas?

Submit Date

10/15/2024

Correspondent

Last Name:Shao

Full Name:Zhisheng Shao, DPM

Practice/Company/Residency Program:

Email:zhisheng.shao@obhny.org

One Brooklyn Health Systems

Authors

Author 1:Zhisheng Shao, DPM

Author 2:Nison Basalilov, DPM

Author 3:Parmvir Deo, DPM

Author 4:Tyler Miranda, DPM

Author 5:Peter Mollica, DPM

Author 6:

Author 7:

Author 8:

Purpose

DVT prophylaxis considerations are often viewed as crucial in the surgical management of podiatric traumas. This study attempts to set the groundwork for establishing guidelines for post-operative prophylaxis and attempts to answer the question if post-operative prophylaxis is over-utilized.

Methodology

Retrospective chart review was conducted through Brookdale Hospital Medical Center Medical Records to assess patients across the time frame of 2015-2022 who underwent “ankle fracture”, “achilles tendon rupture repair”, and “foot trauma”. Exclusion criteria for this study was any evidence of incomplete or absent medication list and non-traumatic procedures.

Procedures

Results

15 patients were included in the final analyses. 1 patient was excluded due to absent medication list, 5 others were excluded due to non-traumatic procedure. Of these, 4/15 (26.7%) were started on DVT prophylaxis (325mg daily vs 41mg BID vs 81mg BID for 6 weeks). Among all patients, podiatric procedures were not documented to have utilized DVT prophylaxis. 1/15 (6.7%) were already started on DVT prophylaxis for existing medical conditions and so these medications were continued through surgery. 0/19 (0%) patients developed DVT in the post-operative course.

Discussions

This preliminary study suggests that aspirin alone may be sufficient in the post-operative course for DVT prophylaxis. Over-prescribing oral DVT prophylaxis even in the setting of traumas may overshadow the importance of passive mobilization and frequent follow-ups in the immediate post-operative course to curb DVT and VTE.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Trauma

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Zhisheng Shao, DPM	zhisheng.shao@obhny.org	I/We have nothing to disclose	
Nison Basalilov, DPM	nbasalil@bhmcny.org	I/We have nothing to disclose	
Parmvir Deo, DPM	pdeo@bhmcny.org	I/We have nothing to disclose	
Tyler Miranda, DPM	tmiranda@kingsbrook.org	I/We have nothing to disclose	
Peter Mollica, DPM	pmollica@kingsbrook.org	I/We have nothing to disclose	

Title

Re-operation Rate of Pronation External Rotation versus Supination External Rotation Ankle Fracture Patterns

Submit Date

10/15/2024

Correspondent

Last Name: Kiefer

Full Name: Brooke E. Kiefer DPM

Practice/Company/Residency Program:

Email: bkiefer@wakehealth.edu

Atrium Health Wake Forest Baptist

Authors

Author 1: Brooke E. Kiefer DPM

Author 2: Stephen K. Polacek DPM

Author 3: Lindsay K. LeSavage DPM

Author 4: Joni Evans MS

Author 5: Cody Blazek DPM

Author 6: Nicholas Powers DPM, FACFAS

Author 7:

Author 8:

Purpose

Pronation External Rotation (PER) ankle fracture patterns are relatively rare compared to Supination External Rotation (SER) patterns. Patients with rotational ankle fractures are predisposed to development of post-traumatic ankle arthritis, which can lead to further surgical intervention. The purpose of this study was to investigate reoperation rates influenced by PER vs SER fracture patterns as well as demographic characteristics.

Methodology

A retrospective chart review was conducted to identify the reoperation rate of patients who underwent ORIF for ankle fractures between January 1, 2013 and January 1, 2018. 113 patients that underwent ORIF with a fracture pattern of SER or PER were included. Demographic characteristics influencing reoperation rate were also investigated.

Procedures

Results

Overall reoperation rate was 13.3%. Among the SER group (n=86), the average reoperation rate was 12.8%. Among the PER group (n=27), the average reoperation rate was 14.8%. No statistical significance was found between SER or PER fracture pattern in regards to the reoperation rate or the time from the initial surgery to the second surgery. However, there was a statistically significant difference in weight and BMI associated with higher likelihood of reoperation. Additionally, more females and elderly patients were found to have SER fracture patterns.

Discussions

This is the first study to our knowledge specifically addressing reoperation rates following these injury patterns. No statistically significant difference was found in reoperation rates between patterns. Patient demographics did have influence on the need for further operation. This review may help guide patient expectations during operative treatment for ankle fractures.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Trauma

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Brooke E. Kiefer DPM	bkiefer@wakehealth.edu	I/We have nothing to disclose	
Stephen K. Polacek DPM	spolacek@wakehealth.edu	I/We have nothing to disclose	
Lindsay K. LeSavage DPM	llesavag@wakehealth.edu	I/We have nothing to disclose	
Joni Evans MS	jkevens@wakehealth.edu	I/We have nothing to disclose	
Cody Blazek DPM	cdblazek@wakehealth.edu	I/We have nothing to disclose	
Nicholas Powers DPM, FACFAS	nspowers@wakehealth.edu	I/We have nothing to disclose	

Title

A Multicenter, Prospective, Randomized and Subject Blinded Comparative Study of Axoguard Nerve Cap and Neurectomy for the Treatment of Symptomatic Neuroma

Submit Date

10/15/2024

Correspondent

Last Name: Thomajan
Full Name: Craig H. Thomajan, DPM, FACFAS, FAENS Email: craig.thomajan@stridecare.com
Practice/Company/Residency Program: Austin Foot and Ankle Specialists

Authors

Author 1: Craig Thomajan, DPM, FACFAS, FAENS Author 2: Carl Van Gils, DPM, FACFAS, FAENS
Author 3: John Sigle, DPM, FACFAS Author 4: Ryan Pereira, DPM, FACFAS
Author 5: Kelly John, DPM, MHA, FACFAS, DABPM Author 6: Kazuto Augustus, DPM
Author 7: Alan Garrett, DPM, FACFAS Author 8: James Anderson, DPM

Purpose

Nerve injuries causing axonal disruption can lead to neuroma formation. In the case of free flap harvests, neuroma formation is a known complication. While neurectomy can alleviate painful neuromas, up to 37% of patients report recurrence of pain. This multicenter, prospective, randomized, subject-blinded study compared a novel nerve cap (Axoguard Nerve Cap®) to standard-of-care neurectomy evaluating recovery and symptom recurrence in neuromas in the foot and ankle, where neuromas are prevalent.

Methodology

Eighty-four adults underwent surgery: 41 received neurectomy followed by nerve cap, and 43 underwent neurectomy as controls. Subjects were followed for one year. Evaluations included visual analog scale (VAS) for pain, medication usage, and patient-reported outcomes (PROMIS® and FHSQ). Statistical testing was determined using t-tests.

Procedures

Results

Primary endpoint VAS pain reduction compared to neurectomy was met ($p=0.01$, non-inferiority) with 76.9% of nerve cap subjects pain free at 12 months (vs 48.3%, $p=0.051$). Total reported pain (AUC, scale 0-1) was lower in nerve cap (0.104 ± 0.12) than neurectomy (0.187 ± 0.22 , $p=0.04$). Nerve cap subjects demonstrated greater improvement in PROMIS Pain Behavior and FHSQ General Foot Health scores, with trends in reduced medication use. One neurectomy subject reported higher VAS pain at 12-months compared to baseline.

Discussions

Pain scores and medication usage indicated clinical benefits for pain reduction and foot health. Additionally, improvement in PROMIS and FHSQ scores indicate reduction in external manifestations of pain. While this study used a foot and ankle model, these results are generalizable for painful neuroma throughout the body.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level I

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Craig Thomajan, DPM, FACFAS, FAENS	craig.thomajan@stridecare.com	Consultant/Advisor/Speaker (List all affiliations)	Axogen, Inc.
Carl Van Gils, DPM, FACFAS, FAENS	drvangils@feetnet.com	Consultant/Advisor/Speaker (List all affiliations)	Axogen, Inc.
John Sigle, DPM, FACFAS	john_sigle@yahoo.com	I/We have nothing to disclose	
Ryan Pereira, DPM, FACFAS	ryanjpereira@yahoo.com	I/We have nothing to disclose	
Kelly John, DPM, MHA, FACFAS, DABPM	kellyj@orthoillinois.com	I/We have nothing to disclose	
Kazuto Augustus, DPM	kaugustus@chemidox.com	I/We have nothing to disclose	
Alan Garrett, DPM, FACFAS	aggarrett@sbcglobal.net	I/We have nothing to disclose	
James Anderson, DPM	DrAnderson@podiatry1st.com	I/We have nothing to disclose	

Title

Evaluating Graft Subsidence and Radiographic Outcomes in Evans Lateral Column Lengthening with Staple Fixation

Submit Date

10/15/2024

Correspondent

Last Name: igbinigie

Full Name: Nicholas A. Igbinigie, DPM

Email: nigbinigie31@gmail.com

Practice/Company/Residency Program: HCA Houston Healthcare, West

Authors

Author 1: Nicholas Igbinigie, DPM

Author 2: Patrick Briggs, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The study is aimed to evaluate bone graft resorption over time in patients who underwent the Evans procedure with graft augmentation and staple hardware fixation. Radiographic correction and complication rates were also assessed.

Methodology

A retrospective review was performed on 34 patients (13 males, 21 females; mean age 55.7 years) who underwent this procedure between 2020 and 2024. Radiographic assessments included calcaneal pitch, talar-first metatarsal angle, and cuboid abduction angle. Complications such as graft subsidence, infection, and hardware failure were recorded.

Procedures

N/A

Results

Fourteen patients (13% bilateral) were included, with a mean follow-up of 6 months. Radiographs showed significant postoperative improvements mainly focusing on cuboid abduction angle which showed a mean correction from pre-operative angle of 23.7°, immediate post-operative of 10.2°, to final mean follow-up of 9.3° (p < 0.001). Minimal graft subsidence was observed during follow-up, with two cases of hardware irritation requiring removal.

Discussions

Staple hardware fixation in Evans procedures provides reliable stabilization for bone grafts, resulting in minimal graft subsidence and significant radiographic improvements. Long-term studies are needed to further evaluate the durability of this approach.

Format

Scientific

Case Rpt Followup

0

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Nicholas Igbinigie, DPM	nigbinigie31@gmail.com	I/We have nothing to disclose	
Patrick Briggs, DPM	footmed001@gmail.com	I/We have nothing to disclose	

Title

Validation of a patient expectations survey for bunion surgery

Submit Date

10/15/2024

Correspondent

Last Name: DeLestry

Full Name: Daniel, J, DeLestry, DPM

Practice/Company/Residency Program:

Email: ddelestry@gmail.com

Advocate Illinois Masonic Medical Center

Authors

Author 1: Rachel Albright, DPM, MPH

Author 2: Daniel DeLestry, DPM

Author 3: Quinn Landoch, MS

Author 4: Adam Fleischer, DPM, MPH

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

It is estimated that as many as 10% of patients are not fully satisfied following hallux valgus surgery. While patient expectations are believed to play a significant role in postoperative satisfaction, there is not a validated survey instrument available that helps to understand expectations of patients contemplating bunion surgery. This study aimed to validate a patient expectations survey by looking at the psychometric properties (validity and reliability) of a newly developed survey.

Methodology

Fifty patients contemplating bunion surgery were surveyed.

Procedures

Results

When measuring internal consistency, the “cosmesis scale” had a Cronbach’s alpha of 0.74, while the “pain and function scale” had a Cronbach’s alpha of 0.72 demonstrating good reliability of both survey scales. Survey items demonstrated content validity and were found to contain relevant questions from the target population’s perspective via cognitive interviews. Adequate construct validity was demonstrated with hypothesis testing. Patients who valued cosmesis expected their edema to be resolved in 6-8 weeks after surgery and expected to return to high heels in 10-12 weeks. In people who felt pain relief was the most important factor, 50% felt they would return to their pre-surgery activity level in 6-8 weeks but felt it would take greater than 12 weeks to return to a high heel.

Discussions

We conclude that the patient expectations survey may be a reliable, valid instrument for use in patients contemplating bunion surgery. Implementation of the survey may improve dialogue during preoperative visits, manage unrealistic expectations, and lead to more predictable patient satisfaction.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Epidemiology/Population Study

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Rachel Albright, DPM, MPH	albrightrh@gmail.com	I/We have nothing to disclose	
Daniel DeLestry, DPM	ddelestry@gmail.com	I/We have nothing to disclose	
Quinn Landoch, MS	quinn.landoch@my.rfums.org	I/We have nothing to disclose	
Adam Fleischer, DPM, MPH	adam.fleischer@rosalindfranklin.edu	I/We have nothing to disclose	

Title

Use of Femoral Head Allograft for Large Bone Deficits in First Ray Surgery: Pushing the Limits on Allograft Size

Submit Date

10/15/2024

Correspondent

Last Name: Moon

Full Name: Angela S Moon DPM

Practice/Company/Residency Program:

Email: angelamoon19@gmail.com

Emory University School of Medicine

Authors

Author 1: Angela Moon DPM

Author 2: Madeline Boyle DPM

Author 3: Chandler Ligas DPM FACFAS

Author 4: Thomas Brosky DPM FACFAS

Author 5: Ayanda Dube DPM

Author 6:

Author 7:

Author 8:

Purpose

This is a retrospective case series review of femoral head allograft combined with bone marrow aspirate in the treatment of segmental bone defects within the first ray.

Methodology

A retrospective chart review was conducted by the senior authors of the investigation from 2011-2024. All first ray surgeries were included if there was femoral head allograft used as structural bone support for the treatment of segmental bone defects within the first ray. Exclusion criteria were if patients had another type of allograft or autograft used during surgical intervention. Primary outcomes measured were length of follow up, time to weightbearing, time to union, age of patient.

Procedures

Results

From 2011-2024 a total of 20 cases were reviewed of surgeries within the first ray that used structural femoral head allograft in segmental bone defects. The average length of follow up time was more than 12 months for all patients, with the longest follow up time being more than 8 years. Average length of graft needed was 1.9 cm. The average length to union was 10.6 weeks. There was no evidence of subsidence in our patient population. We had one delayed union due to a patient that was a heavy smoker.

Discussions

Several studies have evaluated the use of structural allograft for segmental bone defects with good results. The results of our findings suggest that femoral head allograft combined with bone marrow aspirate can be used in large bone defects of the first ray with success. Therefore, consideration of this adjunct for surgical repair of bone defects of the first ray is a viable option.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Angela Moon DPM	angelamoon19@gmail.com	I/We have nothing to disclose	
Madeline Boyle DPM	madeline.boyle@emory.edu	I/We have nothing to disclose	
Chandler Ligas DPM FACFAS	chandler.ligas19@gmail.com	I/We have nothing to disclose	
Thomas Brosky DPM FACFAS	drbrosky@gmail.com	I/We have nothing to disclose	
Ayanda Dube DPM	ayanda.dube@emory.edu	I/We have nothing to disclose	

TitleMinimally Invasive Hallux Abducto Valgus Fixation Standardization

Submit Date10/15/2024

Correspondent

Last Name: Nolve

Full Name: Victoria M. Nolte, DPM, MSEmail: nolte.dpm@gmail.com

Practice/Company/Residency Program:Certified Foot & Ankle Specialists LLC

Authors

Author 1: Victoria M. Nolte, DPM, MSAuthor 2: Joshua A. Sebag, DPM, FACFAS

Author 3: Craig J. Breslauer, DPM, FACFASAuthor 4: Ashley L. Bowles, DPM, FACFAS

Author 5: Kyle J. Kinmon, DPM, MS, FACFASAuthor 6:

Author 7:Author 8:

PurposeEvaluate different fixation techniques in extra-capsular minimally invasive correction of hallux abducto valgus for efficiency and standardization based on radiographic IM angle.

MethodologyRetrospective analysis over 12 months of 50 patients without significant comorbidities from a two surgeon database who underwent minimally invasive transverse osteotomy approach to HAV correction, their fixation construct and osseous healing based on improvement of IM angle.

Procedures

ResultsStandardization of mild IM angle improvement utilizing a stemmed intramedullary device and moderate to severe IM angle improvement utilizing two screw fixation allows operative efficiency.

DiscussionsMinimally invasive surgical (MIS) approaches in orthopedic surgery began and dissipated in 1980's with lack of viable long-term patient improved outcomes. With the addition of flouroscopic guidance, MIS techniques have become more popular in the 2000's with current techniques becoming more popular over the past ten years. There is currently a lack of fixation construct standardization with an extra-capsular approach of transverse osteotomy HAV correction. We have found preoperative evaluation of fixation construct based on IM angle allows for efficiency during surgery, where further investigation into an algorithm is a viable prospective study.

FormatScientific

Case Rpt Followup

Student Club

ClassificationForefoot Reconstruction

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Victoria M. Nolte, DPM, MS	nolte.dpm@gmail.com	I/We have nothing to disclose	
Joshua A. Sebag, DPM, FACFAS	sebag.josh@gmail.com	I/We have nothing to disclose	
Craig J. Breslauer, DPM, FACFAS	cbreslauer@southflaortho.com	Consultant/Advisor/Speaker (List all affiliations)	Johnson & Johnson
Ashley L. Bowles, DPM, FACFAS	abowles@certifiedfoot.com	I/We have nothing to disclose	
Kyle J. Kinmon, DPM, MS, FACFAS	kkinmon1@certifiedfoot.com	I/We have nothing to disclose	

Title

Interim 1-Year Analysis of a Prospective Multicenter Study Assessing Radiographic and Patient-Reported Outcomes Following Combined Metatarsus Adductus and Hallux Valgus Correction through 3rd, 2nd, and 1st Tarsometatarsal Arthrodesis with Early Weightbearing

Submit Date

10/15/2024

Correspondent

Last Name:Dayton

Full Name:Paul D Dayton, DPM, MS, FACFAS

Practice/Company/Residency Program:Foot & Ankle Center of Iowa

Email:daytonp@icloud.com

Authors

Author 1:Paul Dayton, DPM, MS, FACFAS

Author 2:Mindi Dayton DPM, MHA, FACFAS

Author 3:Jody McAleer DPM, FACFAS

Author 4:Jesseka Kay Kaldenberg-Leppert, DPM, MSA, FACFAS

Author 5:Daniel J Hatch, DPM, FACFAS

Author 6:Cesar De Cesar Netto, MD

Author 7:Barry White, DPM, FACFAS

Author 8:Paul Steinke, DPM, FACFAS

Purpose

This study evaluated the clinical, radiographic, and patient-reported outcomes in patients undergoing instrumented 3-2-1 tarsometatarsal (TMT) arthrodesis for correction of combined hallux valgus with metatarsus adductus (MTA) deformities.

Methodology

This is an interim analysis of a prospective multicenter study on patients with symptomatic HV and MTA treated utilizing cut guides for angular correction arthrodesis of the 2nd and 3rd TMT and first ray correction at the 1st TMT. Titanium 4-hole locking plates were utilized for fixation at each joint. Patients were allowed to weightbear in a fracture boot within two weeks. Outcomes included radiographic correction of the HV and MTA deformities, patient-reported outcomes (VAS, MOxFQ, and PROMIS-29), and clinical complications.

Procedures

Results

Thirty-eight patients (mean [range] age: 41.3 [14-65] years) underwent HV with MTA correction, of whom 18 completed 12-month visits. Mean (95% CI) time to protected weightbearing and return to full unrestricted activity were 7.5 (4.3, 10.7) days and 3.7 (3.4, 4.1) months, respectively. Clinically significant improvements from baseline in HVA, IMA, TSP, MAA angle, and osseous foot width were maintained through 12 months. (Table 1) Improvements in patient-reported outcomes were maintained through 12 months for VAS, MOxFQ (Table 2), and PROMIS-29. (Table 3) There were no complications that required subsequent surgery.

Discussions

These interim results of this 5-year prospective, multicenter study of an instrumented approach to HV with MTA correction via 3-2-1 TMT arthrodesis with early weightbearing demonstrated favorable radiographic correction of the HV and MTA deformities, positive patient-reported outcomes, and a low rate of clinical complications.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Paul Dayton, DPM, MS, FACFAS	Daytonp@icloud.com	Consultant/Advisor/Speaker (List all affiliations)	Treace Medical
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	ACFAS skills committee
		Member of a medical publication or editorial governing board	Section Editor JFAS
		Grant/Research funding	Treace Medical, Align3D, MTA3D
Mindi Dayton DPM, MHA, FACFAS	Mindi.dayton@icloud.com	Consultant/Advisor/Speaker (List all affiliations)	Treace Medical
		Grant/Research funding	Treace Medical Concepts, Inc. ALIGN3D™ Study, MTA3D™ Study
Jody McAleer DPM, FACFAS	jpmcaleer@me.com	Consultant/Advisor/Speaker (List all affiliations)	Treace Medical
		Grant/Research funding	Treace Medical Concepts, Inc. ALIGN3D™ Study, MTA3D™ Study
Jesseka Kay Kaldenberg-Leppert, DPM, MSA, FACFAS	jkaldenberg@footanklecenteriowa.com	I/We have nothing to disclose	
Daniel J Hatch, DPM, FACFAS	dhatch@facrookies.com	Consultant/Advisor/Speaker (List all affiliations)	Treace Medical
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	President, International Foot and Ankle Foundation
		Member of a medical publication or editorial governing board	Section Editor JFAS

		Grant/Research funding	Treace Medical Concepts, Inc. ALIGN3D™ Study, MTA3D™ Study
Cesar De Cesar Netto, MD	Cesar.netto@duke.edu	Consultant/Advisor/Speaker (List all affiliations)	Paragon 28 • Medartis • Ossio • Stryker • Zimmer-Biomet • Exactech • ARthrex • CurveBeam AI • Tayco Brace
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	AOFAS Committee Member
		Member of a medical publication or editorial governing board	Editor in Chief Foot and Ankle Clinics
		Grant/Research funding	AOFAS Arthritis Foundation Paragon 28 • Treace Medical Concepts, Inc. MTA3D™
Barry White, DPM, FACFAS	footdocbmw@outlook.com	Consultant/Advisor/Speaker (List all affiliations)	Treace Medical
		Grant/Research funding	Treace Medical Concepts, Inc. MTA3D™ Study
Paul Steinke, DPM, FACFAS	Paul.steinke1@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Treace Medical
		Grant/Research funding	• Treace Medical Concepts, Inc. Mini3D™ Study, MTA3D™ Study

Title

Outcomes of Peripheral Nerve Decompression of the Lower Extremities in the Setting of Radiculopathy

Submit Date

10/15/2024

Correspondent

Last Name: Nolte

Full Name: Victoria M. Nolte, DPM, MS

Practice/Company/Residency Program:

Email: nolte.dpm@gmail.com

Certified Foot and Ankle Specialists LLC

Authors

Author 1: Victoria M. Nolte, DPM, MS

Author 2: Ashley L. Bowles, DPM, FACFAS

Author 3: Kyle J. Kinmon, DPM, MS, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Evaluate impact of lower extremity nerve decompression in the setting of radiculopathy

Methodology

Retrospective analysis of 35 patients from two surgeons over 5 years in medically optimized patients who underwent lower extremity peripheral nerve decompressions, monitoring if patients experience any level of relief.

Procedures

Results

Relative improvement of lower extremity neuropathic pain found s/p peripheral nerve decompression in the setting of radiculopathy

Discussions

Lower extremity Double Crush Syndrome has been reported, although specific treatment modalities have not yet been published. An improvement of severe pain may be worth addressing peripherally, with or without treatment of radiculopathy, which could be masking concurrent compression of peripheral nerves. In patients with lower extremity nerve symptoms who have failed treatment of spinal radiculopathies, peripheral nerve decompressions are rarely offered as an option to address continued pain. We have found that it is a worthwhile discussion to have with this subset of patients, albeit with tempered expectations, if they are amenable to the appropriate post- operative rehabilitation. Addressing the compressed peripheral nerves following spinal surgery, in our experience, has shown an improvement in lower extremity neuropathic pain.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Victoria M. Nolte, DPM, MS	nolte.dpm@gmail.com	I/We have nothing to disclose	
Ashley L. Bowles, DPM, FACFAS	abowles@certifiedfoot.com	I/We have nothing to disclose	
Kyle J. Kinmon, DPM, MS, FACFAS	kkinmon1@certifiedfoot.com	I/We have nothing to disclose	

Title

Correlation of Lateral Ankle Ligament Pathology Seen on MRI with Intraoperative Stress Radiographs

Submit Date

10/15/2024

Correspondent

Last Name: Burandt

Full Name: Madison, K, Burandt

Practice/Company/Residency Program:

Email: madison.burandt12@gmail.com

West Penn Hospital Foot and Ankle Institute Residency Program

Authors

Author 1: Madison, K, Burandt, DPM

Author 2: Alan, R, Catanzariti, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of the study was to assess correlation between MRI and preoperative stress radiographs to determine if level of pathology on MRI is synonymous to clinical testing. Understanding these correlations might provide better understanding for procedural selection and reinforce the need for MRI preoperatively.

Methodology

This retrospective study included a review of 48 patients who underwent lateral ankle stabilization procedures with a preoperative MRI and preoperative stress radiographs between 01/01/2020-07/20/2024. Inclusion criteria: ages 17-70, lateral ankle stabilization procedure performed, MRI commenting on lateral ankle ligaments and peroneals, preoperative stress images. Exclusion criteria include no MRI preoperatively and no stress images preoperatively. Stress views (anterior drawer and talar tilt) were performed in the operating room under general anesthesia prior to surgery.

Procedures

Results

Patients with ATFL damage on MRI have a talar tilt of 3.6 degrees higher than those without ATFL damage on MRI. For every one unit increase in the aggregate score (ATFL vs ATFL+CFL vs ATFL+CFL+PTFL) talar tilt increased by 1.8 degrees. There was no difference when assessing age, BMI, and sex with lateral ankle ligament damage.

Discussions

The results of this study demonstrated a lack of correlation between MRI finding and the degree of preoperative talar tilt. Results of stress radiography did not align with MRI results. This might be secondary to under-reporting and/or lack of injury demonstrated on MRI. This reinforces the importance of not relying solely on MRI results when choosing procedures for lateral ankle reconstruction.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Madison, K, Burandt, DPM	madison.burandt12@gmail.com	I/We have nothing to disclose	
Alan, R, Catanzariti, DPM, FACFAS	alan.catanzariti@ahn.org	I/We have nothing to disclose	

Title

Single Institution Experience of Hammered Hallux Arthroplasty for Management of Chronic Diabetic Ulcers

Submit Date

10/15/2024

Correspondent

Last Name: Suri

Full Name: Gurbani Suri MD

Practice/Company/Residency Program:

Email: gus9023@med.cornell.edu

Weill Cornell Medical Center

Authors

Author 1: Gurbani Suri MD

Author 2: Ariella Fuzailof DPM

Author 3: Nitin Jethmalani MD

Author 4: Nicholas Salerno DPM

Author 5: John Doolan DPM

Author 6: Brian DeRubertis MD

Author 7: Deena Horn DPM

Author 8:

Purpose

Chronic diabetic hallux ulceration in hammer toe cases arises due to neuropathy, deformities, or excessive pressure over the interphalangeal joints or plantar surface of the distal digit. Amputation is the current standard for managing chronic hallux ulceration or osteomyelitis, but this study proposes that arthroplasty is a viable alternative for managing non-healing diabetic hallux ulceration secondary to hammer toe deformities.

Methodology

We retrospectively identified patients who underwent hallux arthroplasty from January 2017 to August 2024 using CPT code 28285 with TA and T5 modifiers. Inclusion criteria were chronic diabetic hallux ulceration from hammer toe, with or without osteomyelitis. Patient demographics, operative details, and outcomes were collected and reviewed using descriptive statistics.

Procedures

Results

This single-institution study includes 17 cases of chronic diabetic hallux ulceration; 82% are male, with an average BMI of 29.2 ± 4.8 , HbA1c of 7.9 ± 2.4 , 10 (58%) with osteomyelitis, and 6 (35%) smokers. Patients with $HbA1c \leq 7$ healed on average in 24.17 days versus 37.81 days with poorly controlled diabetes ($HbA1c \geq 7$). One patient progressed to TMA due to the development of gas gangrene and another had prolonged healing (92 days), both with abnormal ABIs of 0.57 and 0.51, respectively, requiring tibial angioplasty.

Discussions

Arthroplasty offers a promising approach for managing diabetic hallux ulceration related to hammer toe deformities by correcting deformities, redistributing pressure, and restoring mobility. Patient selection is paramount as low ABIs were associated with prolonged healing or amputation progression. Future studies may evaluate arthroplasty as an alternative to amputation or arthrodesis for pre-ulcerative and ulcerative lesions.

Format

Scientific

Case Rpt Followup

0

Student Club

Classification

Diabetic Foot

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Gurbani Suri MD	gus9023@med.cornell.edu	I/We have nothing to disclose	
Ariella Fuzailof DPM	oi9003@nyp.org	I/We have nothing to disclose	
Nitin Jethmalani MD	nij9045@med.cornell.edu	I/We have nothing to disclose	
Nicholas Salerno DPM	nds4002@med.cornell.edu	I/We have nothing to disclose	
John Doolan DPM	jod9114@med.cornell.edu	I/We have nothing to disclose	
Brian DeRubertis MD	brd9011@med.cornell.edu	I/We have nothing to disclose	
Deena Horn DPM	deh9091@med.cornell.edu	I/We have nothing to disclose	

Title

Impact of Talar Morphology on the Posterior Malleolus in Acute Ankle Fractures

Submit Date

10/15/2024

Correspondent

Last Name: Tates

Full Name: Isaiah

Practice/Company/Residency Program:

Email: isaiahtates4@gmail.com

UPMC Medical Education Harrisburg

Authors

Author 1: Isaiah Tates, DPM

Author 3:

Author 5:

Author 7:

Author 2: Daniel Yarmel, DPM

Author 4:

Author 6:

Author 8:

Purpose

Talar height may contribute to posterior malleolus pathology. Studies suggest the position of the foot, and deforming force isn't the only way to describe posterior malleolar fracture injuries. This study examines the correlation of talar and posterior malleolar fracture heights, and how it could influence the decision for preoperative imaging and surgical planning.

Methodology

This study is a retrospective chart review of 51 patients, ages 18-81, that underwent ORIF for ankle fractures in 2022-2024 at UPMC Central PA hospital systems. Patients had preoperative CTs which were used to measure talar body heights by identifying the midpoint of talus using axial and coronal views. Measurements were made from the apex of the talar dome, parallel to its anatomical alignment to the most inferior portion of the talar body. Measurements for height of posterior malleolar fracture fragments were also performed. The exclusion criteria included: skeletally immature patients, presence of talar fracture, previous talar surgery, foot and ankle deformities. Patient demographics (age, sex, BMI, height) were considered.

Procedures

Results

Talar body heights were divided into 2 groups: lower (22.9-27.8mm) and higher (27.9-32.9mm). Average TBH height was 27.8mm. Average posterior malleolar fracture heights in lower TBH group and higher TBH group were 23.2mm and 24.28mm, respectively.

Discussions

A taller talus may result in a more complex posterior malleolar fracture. Posterior malleolar fracture height correlates with the surface area of the posterior malleolus fragment. Risks of incorrectly identifying and addressing posterior malleolar fractures could result in post-traumatic arthritis. A simple measure could provide indication for further imaging in traumatic ankle fractures.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Isaiah Tates, DPM	isaiahtates4@gmail.com	I/We have nothing to disclose	
Daniel Yarmel, DPM	footdoc1@gmail.com	I/We have nothing to disclose	

Title

Effect of Tibial Sesamoid Position on Patient Functional Outcome Scores After Distal Chevron Osteotomy

Submit Date

10/15/2024

Correspondent

Last Name: Tran

Full Name: Tiffany T Tran, DPM

Practice/Company/Residency Program:

Email: tiffany.t.tran@kp.org

Kaiser Permanente Santa Clara Podiatry Residency

Authors

Author 1: Tiffany T Tran, DPM

Author 2: Arjun Vijayakumar, DPM

Author 3: Douglas A Stram, MS

Author 4: Matthew L Schneider, DPM

Author 5: Melinda A Bowlby, DPM

Author 6:

Author 7:

Author 8:

Purpose

While some literature suggests that correction of the tibial sesamoid position (TSP) is necessary to reduce the risk of hallux abductovalgus (HAV) recurrence, sesamoid irritation, and altered gait, there is disagreement about the impact of TSP on functional outcome and patient satisfaction after surgery. This study sought to assess whether patients who had a reduction in TSP score to 3 or less had greater functional and satisfaction scores than patients who had a postoperative TSP of 4 or greater after Chevron osteotomy.

Methodology

Thirty-four adults underwent a chevron osteotomy of the first metatarsal at a Kaiser Permanente Northern California (KPNC) medical center between May 2023 and August 2024. The first intermetatarsal angle, hallux abductus angle, TSP, and Foot and Ankle Outcome score (FAOS) were collected pre-operatively and 6-weeks post-operatively. Group differences were calculated using Chi-square and Wilcoxon rank sum tests.

Procedures

Results

Those with a post-operative TSP of 3 or less had significantly different pre- and post-operative TSPs compared to those with a post-operative TSP of 4 or greater (p=0.006 and p=0.001, respectively). Preoperative FAOS score for the ‘Symptoms’ subset was also found to differ between the two groups (p=0.041). There were no other significant differences in functional outcome or patient satisfaction scores.

Discussions

While achieving a postoperative tibial sesamoid position of less than 3 may not significantly enhance functional outcomes or patient satisfaction at 6-week follow-up, restoring tibial sesamoid alignment remains an important consideration in surgical planning to mitigate the risk of HAV recurrence and altered gait in the long term.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Tiffany T Tran, DPM	tiffany.t.tran@kp.org	I/We have nothing to disclose	
Arjun Vijayakumar, DPM	ArjunV2011@gmail.com	I/We have nothing to disclose	
Douglas A Stram, MS	Douglas.A.Stram@kp.org	I/We have nothing to disclose	
Matthew L Schneider, DPM	matthew.l.schneider@kp.org	I/We have nothing to disclose	
Melinda A Bowlby, DPM	melinda.a.bowlby@kp.org	I/We have nothing to disclose	

Title

Outcomes of ankle valgus in patients with global instability and fibular buttress wear

Submit Date

10/15/2024

Correspondent

Last Name: McCulley

Full Name: Hannah E. McCulley, DPM

Email: hannah.windauer@gmail.com

Practice/Company/Residency Program: Swedish Medical Center

Authors

Author 1: Hannah E. McCulley, DPM

Author 2: Supreet K. Dhillon, DPM

Author 3: Jeffrey C. Christensen, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The fibular buttress is essential for ankle stability, yet its importance is often overlooked in patients with ankle valgus undergoing total ankle replacements (TAR). This paper explores the distinctions in valgus deformities and the relationship between ankle valgus and global instability from past ankle sprains which can worsen valgus alignment. Without intervention, this can lead to future revisions. We aim to educate practitioners on recognizing global instability, identify risk factors for recurrent deformity, and recognize the importance of fibular buttress in preventing further valgus alignment.

Methodology

This retrospective cohort study evaluated 26 patients who underwent TAR by a single surgeon, focusing on those with ankle valgus and a minimum follow-up of 1 year. Two groups were identified: Group 1 consisted of patients with preoperative ankle valgus deformity and instability, while Group 2 included patients without valgus deformity, matched based on body mass index (BMI), and the type of implant used.

Procedures

Results

The valgus ankle group has significantly increased complications, especially in patients with mobile-bearing implants. Patients with preoperative valgus alignment without global instability addressed demonstrated recurrence of deformity at a minimum 1-year follow-up.

Discussions

This study highlights the critical role of the fibular buttress in preventing reversion to valgus alignment in patients with global instability. Limitations include a small sample size and potential bias from a single surgeon's techniques.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Hannah E. McCulley, DPM	hannah.windauer@gmail.com	I/We have nothing to disclose	
Supreet K. Dhillon, DPM	s.dhillon1997@gmail.com	I/We have nothing to disclose	
Jeffrey C. Christensen, DPM, FACFAS	jccdp@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Paragon 28

Title

Multiple Saphenous Nerve Variations and Termination Points With Classification.

Submit Date

10/15/2024

Correspondent

Last Name: Alejandro-Rivera

Full Name: Diego A. Alejandro-Rivera, BS

Practice/Company/Residency Program:

Email: diego.alejandro@my.rfums.org

Scholl College of Podiatric Medicine at Rosalind Franklin University

Authors

Author 1: Lauren L. Schnack, DPM, MS, AACFAS, FACPM

Author 2: Stephanie Oexeman, DPM, AACFAS, DABPM

Author 3: Derek Talbot, DC, PhD

Author 4: Diego A. Alejandro-Rivera, BS

Author 5: Eduardo Badillo Colberg, MS

Author 6: Monica Thokkudubiyapu, MBA

Author 7: Gurkiran Kaur, BS

Author 8: Noah Sperber, BS

Purpose

To determine whether the majority of specimens have a saphenous nerve terminating prior to reaching the first metatarsal.

Methodology

Sixty fresh frozen limbs from the tibial tuberosity to the toes were obtained from 33 males and 27 females with an average age of 73. The cadaveric specimens were random in selection. The cadaveric specimens were dissected proximally from the tibial tuberosity and distally to the forefoot by creating a superficial soft tissue flap with skin and subcutaneous tissue to reflect it and provide exposure.

Procedures

Results

In 60 cadaveric limbs, the saphenous nerve terminated proximal to or at the medial malleolus with a frequency of 36.67% (Type 1), terminated distal to the medial malleolus up to the navicular cuneiform joint with a frequency of 45% (Type 2), terminated distal to the navicular-cuneiform joint to the first tarsometatarsal joint with a frequency of 8.3% (Type 3), and terminated distal to the first metatarsal with a frequency of 10% (Type 4). Additionally, there was an incidence of 65% solely anterior branches, 31.33% of anterior and posterior branches, and 3.33% of solely posterior branches at the medial malleolus.

Discussions

The most common pattern of nerve variation is the Type 2 variation with termination distal to the medial malleolus to the navicular cuneiform joint at 45%. Only 10% of specimens terminated distal to the first tarsometatarsal joint. The findings are relevant for anesthesia blocks and surgical implications.

Format

Scientific

Case Rpt Followup

Student Club

Biomechanics and Anatomy

Classification

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lauren L. Schnack, DPM, MS, AACFAS, FACPM	lauren.schnack@rosalindfranklin.edu	I/We have nothing to disclose	
Stephanie Oexeman, DPM, AACFAS, DABPM	droexeman@gmail.com	I/We have nothing to disclose	
Derek Talbot, DC, PhD	derek.talbot@rosalindfranklin.edu	I/We have nothing to disclose	
Diego A. Alejandro-Rivera, BS	diego.alejandro@my.rfums.org	I/We have nothing to disclose	
Eduardo Badillo Colberg, MS	e.badillocolberg@my.rfums.org	I/We have nothing to disclose	
Monica Thokkudubiyapu, MBA	m.thokkudubiyapu@my.rfums.org	I/We have nothing to disclose	
Gurkiran Kaur, BS	Gurkiran.Kaur@my.rfums.org	I/We have nothing to disclose	
Noah Sperber, BS	noah.sperber@my.rfums.org	I/We have nothing to disclose	

Title

The effectiveness of the Salvation nail fixation for STJ fusion: A retrospective analysis

Submit Date

10/15/2024

Correspondent

Last Name: Sipala

Full Name: David

Practice/Company/Residency Program:

Email: dsipala22@gmail.com

Agility Orthopedics

Authors

Author 1: David Sipala

Author 2:

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Retrospective analysis of subtalar joint fusion fix ation with the salvation, compared to the fusion rates of standard fixation

Methodology

This retrospective study reviews 47 cases where STJ and triple arthrodesis was performed over a 5 year period.

Radiographic evidence was utilized to assess osseous consolidation and successful fusion, as well as the return to function.

Procedures

Results

The fixation utilized in foot and ankle reconstruction must provide proper stability, which equates to a strong mechanical construct while providing compression. This concerted effort subsequently ensures proper fusion while maintaining in proper alignment. This retrospective study would assess the time to fusion and return to normal function when performing subtalar joint (STJ) arthrodesis via Salvation Midfoot Nail (Stryker, Kalamazoo, MI). Previous studies assessing 2 parallel screw fixation reported fusion rates at 10-12 weeks¹, but there is currently no analysis comparing techniques and fixation construct in STJ arthrodesis. This is in comparison to the rate of fusion appreciated on radiographs as early as 5 weeks post-op with use of the Salvation nail. The subtalar joint is a pivotal location to be fixated in a neutral position, especially when performing hindfoot arthrodesis. This will allow for successful return to propulsive gait and resolution of pain. Delay in union, or malunion, can have devastating consequences with regards to gait and mechanics following hindfoot reconstructive surgery.

Discussions

The multiplanar construct of the salvation nail has allowed a quicker fusion of the subtalar joint,

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level I

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
David Sipala	dsipala22@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Stryker

Title

IMPACT OF VITAMIN K ANTAGONIST WARFARIN ON ANKLE FRACTURE HEALING

Submit Date

10/15/2024

Correspondent

Last Name:Hoque

Full Name: Tamanna Hoque, DPM

Practice/Company/Residency Program:

Email: tamanna.x.hoque@kp.org

Kaiser Permanente Santa Clara

Authors

Author 1: Tamanna Hoque, DPM

Author 2: Deanna Fink, MPH

Author 3: Melinda Bowlby, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Warfarin has a known relationship to two Vitamin K dependent proteins, which regulate bone mineralization and activate bone morphogenic protein. The purpose of this study is to evaluate whether there is a correlation between patients that use Vitamin K antagonist, Warfarin, and nonunion of ankle fracture. To date, there has been no published literature that evaluates the relationship of long-term warfarin use and the nonunion rate of traumatic fractures.

Methodology

This retrospective study of adult Kaiser Permanente Northern California (KPNC) members with ankle fractures between 2017 and 2021 assessed correlation between Warfarin use and ankle nonunion. Patients with open fractures or infections were excluded. Nonunion patients were matched to unions 1:4 on race, BMI, and age. Covariates included sex, diabetes mellitus, osteoporosis, vitamin D deficiency, alcohol use, tobacco use, vitamin D medication, and steroid use. Groups were compared using Wilcoxon and Fisher’s Exact tests.

Procedures

Results

There were 610 patients in our cohort (122 nonunion; 488 matched union controls). A higher proportion of patients on Warfarin had nonunion compared to those not on Warfarin (29.4% vs 19.7%, respectively), but this relationship was not statistically significant (p<0.354). Four of five Warfarin group nonunion patients were on long-term Warfarin (>6 months).

Discussions

Warfarin is known to inhibit activation of Vitamin K, which has been proven to play a role in bone strength. Although not statistically significant, our study findings suggest that there may be a correlation between long-term Warfarin use and ankle fracture nonunion. Future studies can help direct care for patients with ankle fracture and long-term Warfarin use.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Trauma

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Tamanna Hoque, DPM	tamanna.x.hoque@kp.org	I/We have nothing to disclose	
Deanna Fink, MPH	Deanna.X.Fink@kp.org	I/We have nothing to disclose	
Melinda Bowlby, FACFAS	Melinda.A.Bowlby@kp.org	I/We have nothing to disclose	

Title

Flipper Foot Procedure with Ankle Arthrodesis for the Treatment of Charcot Neuroarthropathy Deformities

Submit Date

10/15/2024

Correspondent

Last Name: Loveland

Full Name: Jeffrey D. Loveland DPM FACFAS

Email: lovelanddpm@yahoo.com

Practice/Company/Residency Program: Central Tennessee Foot and Ankle Center

Authors

Author 1: Jeffrey D. Loveland DPM, FACFAS

Author 2: Aaron Mates MD

Author 3: Brandon Denton MBA, ABSA

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To show the efficacy of the described “flipper foot” procedure as a viable option in the treatment of neuropathic foot and ankle deformities.

Methodology

Retrospective chart review with 98 patients that underwent midfoot osteotomy with ankle arthrodesis. The ankle arthrodesis was fixated with intramedullary nail and using an external fixator to control the midfoot correction with a bent wire to create a pseudo fusion / articulation point within the midfoot or talo-navicular region. CT scans were obtained to assess fusion. Once the fixator was removed, patients were then placed into a CROW Boot for 1 year.

Procedures

Results

98 patients underwent ankle arthrodesis with midfoot osteotomy for treatment of Charcot Neuroarthropathy. CT scans confirmed fusion of the ankle joint on average of 14 weeks and with average of 36 months follow up. 91 patients went on to fusion with 6 patients that required a revisional surgery for a nonunion and one below-the-knee amputation. There was no breakdown or increased deformity seen in the midfoot. No wounds developed following the reconstructive surgery.

Discussions

The results show evidence the “Flipper Foot technique” could be used as a viable limb salvage option for patients with Charcot Neuroarthropathy deformities and revisional surgeries. With a stable hindfoot/ankle along with the motion segment in the foot provides some movement to put on shoe gear and allows patients to have a functional gait pattern. This technique described may become a standard in treatment of Charcot deformities in the future.

Format

Scientific

Case Rpt Followup

36

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jeffrey D. Loveland DPM, FACFAS	lovelanddpm@yahoo.com	Consultant/Advisor/Speaker (List all affiliations)	Stryker, Vilex
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Treasurer Tennessee Podiatric Medical Association
		Grant/Research funding	Stryker
Aaron Mates MD	akmates@icloud.com	Consultant/Advisor/Speaker (List all affiliations)	Stryker, Vilex
Brandon Denton MBA, ABSA	brandondenton15@gmail.com	I/We have nothing to disclose	

TitleDurability of Lisfranc tarsometatarsal joint amputation as a limb preservation option.

Submit Date10/15/2024

CorrespondentLast Name: MeyrFull Name: Andrew J. Meyr, DPM FACFASEmail: ajmeyr@gmail.comPractice/Company/Residency Program: Temple University Hospital

AuthorsAuthor 1: Sarah Ames, DPMAuthor 2: Salvatore Fazio, DPMAuthor 3: Andrew J. Meyr, DPM FACFASAuthor 4: Author 5: Author 6: Author 7: Author 8:

PurposePartial foot amputations in the setting of ischemia, infection and tissue loss are associated with high rates of new wound formation, unplanned reoperation, and more proximal levels of amputation. Amputations at or proximal to the tarsometatarsal joint are generally considered to be salvage procedures due to the resulting musculotendinous imbalances. The objective of this investigation was to evaluate the durability of Lisfranc joint level amputations at an urban tertiary care center with a limb preservation program.

MethodologyConsecutive patients with a Lisfranc tarsometatarsal joint level amputation as a part of their care were evaluated. Durability of the procedure was considered with respect to primary healing rates, rates of reamputation, and definitive level of amputation.

Procedures

ResultsThe observed readmission rate was 33.3% and reoperation rate was 42.9%. 28.6% of cases eventually resulted in major limb amputation while 33.3% resulted in a healed intact soft tissue envelope.

DiscussionsResults of this investigation provide evidence on the durability of partial foot amputations at the Lisfranc tarsometatarsal joint level. These results indicate that this level of amputation should be considered as a salvage procedure and not a functional level of partial foot amputation.

FormatScientific

Case Rpt Followup

Student Club

ClassificationDiabetic Foot

Level of EvidenceLevel III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Sarah Ames, DPM	sarah.ames@tuhs.temple.edu	I/We have nothing to disclose	
Salvatore Fazio, DPM	salvatore.fazio@tuhs.temple.edu	I/We have nothing to disclose	
Andrew J. Meyr, DPM FACFAS	ajmeyr@gmail.com	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s) Member of a medical publication or editorial governing board	AACPM, ACFAS, ABFAS, COTH JFAS

Title

Comparison of Union Rates and Complications Between Intramedullary Nail Design in Tibiototalcaneal Arthrodesis

Submit Date

10/15/2024

Correspondent

Last Name: Stringham

Full Name: Spencer Daniel Stringham DPM

Practice/Company/Residency Program:

Email: sdsme2018@gmail.com

JFK Medical Center Podiatric Medicine and Surgery Residency

Authors

Author 1: spencer stringham

Author 2: Josh Sebag DPM FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Major trauma and severe multiplanar deformity poses significant challenges in reconstructive surgery of the foot and ankle (1). Tibiototalcaneal arthrodesis is often indicated in the management of these cases in order to provide pain-free ambulation and improved quality of life. Many options for fixation are available and have been utilized in hindfoot arthrodesis including intramedullary nailing, external fixation, plate fixation and interfragmentary compression with lagged screws (2). Intramedullary nailing is a popular method of fixation with many options available including straight, curved, static, and dynamic. However, overall fusion rates and complication rates vary considerably in the literature, with an overall fusion rate between 76-100%. (2) In our study, we present a retrospective review of patients who underwent tibiototalcaneal arthrodesis with three different intramedullary nails (static, dynamic, dynamic with active compression) and compare overall union rates and complications and to assess the difference in weight bearing status based on intramedullary nail

Methodology

A retrospective review will be conducted of all patients undergoing tibiototalcaneal arthrodesis by a single surgeon with minimum one year follow up. Groups will be compared via weight bearing status and nail design (static, dynamic, dynamic with compression) Union rates and complications will be compared between nail design

Procedures

Results

In progress

Discussions

In progress

Format

Scientific

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
spencer stringham	sdsme2018@gmail.com	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Lantana
Josh Sebag DPM FACFAS	josh.sebag@gmail.com	I/We have nothing to disclose	

Title

Impact of Uncontrolled Diabetes Mellitus on Post-Surgical Complication of Hammer Toe Correction Surgery

Submit Date

10/15/2024

Correspondent

Last Name: Panda

Full Name: Ajay

Practice/Company/Residency Program:

Email: akpanda@utmb.edu

University of Texas Medical Branch

Authors

Author 1: Ajay Panda

Author 2: Wilmer Rodriguez

Author 3: Cale Watkins

Author 4: Winston Tawiah

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study was to determine if outcomes of hammer-toe correction surgery in type 2 diabetes mellitus (T2DM) patients differed based on if their diabetes was controlled versus uncontrolled.

Methodology

Data was collected from the Trinetx database. Cohort A (n=2,223) was defined as patients who had a anytime diagnosis of T2DM with a HbA1c percentage between 4.5 and 6.9 in the past year and underwent a hammer-toe correction surgery. Cohort B (n=2,223) was defined as patients who had a anytime diagnosis of T2DM, with a HbA1c percentage between greater than 7 in the past year, and underwent a hammer-toe correction surgery. The two cohorts were matched for age at event, ethnicity, race, sex, COPD, heart failure, and BMI.

Procedures

Results

Cohort B had no statistical difference compared to cohort A in the majority of the post-surgical complications that were considered within 6 months post-treatment. However, cohort B was found to statistically increase the odds of post-surgical infection (OR = 1.538, 95% CI: 1.303 – 1.815) and post-surgical acute kidney injury (OR = 1.355, 95% CI: 1.008 – 1.821) compared to cohort A. Additionally, when Cohort B was compared to T2DM patients with uncontrolled diabetes who did not have surgery, there was an increased risk of infection but decreased risk of acute kidney injury.

Discussions

This study indicates that patients with uncontrolled T2DM compared to those with controlled T2DM had an increased risk for infection and AKI, implying that surgeons could monitor these outcomes in the post surgical care of this patient population.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Diabetic Foot

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Ajay Panda	akpanda@utmb.edu	I/We have nothing to disclose	
Wilmer Rodriguez	wilrodr@utmb.edu	I/We have nothing to disclose	
Cale Watkins	cmwatkin@utmb.edu	I/We have nothing to disclose	
Winston Tawiah	wetawiah@utmb.edu	I/We have nothing to disclose	

Title

Utility and associated cost of routinely collecting acid fast cultures for diabetic foot infections

Submit Date

10/15/2024

Correspondent

Last Name: Woolf

Full Name: Kaden D Woolf, DPM

Practice/Company/Residency Program:

Email: kaden_woolf@trihealth.com

Trihealth Podiatry Residency

Authors

Author 1: Kaden D Woolf, DPM

Author 2: James B Davis, DPM

Author 3: Dean DC Walters, DPM, AACFAS

Author 4: Dominic A Rizzo, DPM, FACFAS

Author 5: Haim Cohen, DPM

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study is to determine whether routinely collecting acid-fast cultures should be a standard part of first-line evaluation in diabetic foot infections (DFI) or be reserved for atypical circumstances. This study also considers how the current practice of routinely ordering acid-fast cultures in standard DFI's impacts healthcare costs. There are no current studies which support routine Acid-fast culture collection in diabetic foot infections in the outpatient or inpatient setting.

Methodology

This is a retrospective cohort study collecting data from two hospitals (inpatient) and two wound care centers (outpatient) between 01/01/2017 and 12/31/2020. Criteria for inclusion were patients who were treated for a diabetic foot infection and received an acid-fast culture. Those <18 years old were excluded.

Procedures

Results

We had 286 patients cultured and 437 Acid-fast cultures analyzed (151 patients had cultures run a second time during subsequent infections). Of the 437 independent Acid-fast cultures taken, 0% were positive for bacteria. The average amount billed to Medicare for collection of the cultures was \$73.76.

Discussions

Based on the results of our study we did not see a benefit to routinely collecting Acid-fast cultures. Of the 286 patients, zero were infected with Acid-fast bacteria. Just collection of the cultures resulted in an estimated \$32,233 billed in 3 years. Acid-fast cultures in both outpatient and inpatient settings should be reserved for high-risk patients or those with a previous mycobacterium infection. Since collection of this data, we have ceased to routinely collect Acid-fast cultures when treating diabetic foot infections.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kaden D Woolf, DPM	kaden_woolf@trihealth.com	I/We have nothing to disclose	
James B Davis, DPM	james_davis3@trihealth.com	I/We have nothing to disclose	
Dean DC Walters, DPM, AACFAS	dean_walters@trihealth.com	I/We have nothing to disclose	
Dominic A Rizzo, DPM, FACFAS	rizzodpm@gmail.com	I/We have nothing to disclose	
Haim Cohen, DPM	haim_cohen@trihealth.com	I/We have nothing to disclose	

Title

Radiographic Analysis of Hallux valgus deformity correction utilizing a novel pre-operative patient-matched system.

Submit Date

10/15/2024

Correspondent

Last Name:Arzumand

Full Name:Maliha Arzumand, DPM

Practice/Company/Residency Program:

Email:marzumanddy@gmail.com

MercyOne Waterloo Medical Center

Authors

Author 1:Maliha Arzumand, DPM

Author 2:Gregory Foote DPM, FACFAS

Author 3:Ronald Kane DPM, FACFAS

Author 4:Levi Andrews, DPM

Author 5:Ryan Bauermeister DPM

Author 6:Aaron Lalehzarian DPM

Author 7:

Author 8:

Purpose

The Lapidus procedure for bunion correction has been altered in various ways over the years, including introducing new techniques to achieve the tri-planar correction of the deformity. We present the short-term radiographic results utilizing a novel patient-specific modality to gain tri-planar correction. Utilizing the proposed correction, a patient-matched pin guide is utilized to appropriately position the intraoperative cut guides to make accurate osteotomy at the first metatarsal cuneiform joint. The correction is then obtained by using a re-alignment compression device and fixated per the surgeon's preference.

Methodology

Twenty patients (n = 20 feet) treated by two surgeons at a single institution, employing a patient-matched surgical approach for hallux valgus correction met the inclusion criteria. Preoperative assessments include weight-bearing films to evaluate the correction of the intermetatarsal angle and the frontal plane positioning of the sesamoids. The 3-month weight-bearing post-operative radiographs were then evaluated to determine the accuracy of the correction.

Procedures

Results

All 20 bunionectomies included in the study showed correction of intermetatarsal angle to within 1 degree of the proposed correction based on the software analysis with restoration of the sesamoids to a neutral position. No iatrogenic malpositioning of the first ray in the sagittal plane was noted in any of these cases.

Discussions

Pre-operatively planned patient-matched correction of hallux valgus deformity is a novel technique that allows for reproducible results, allowing correction tailored to the individual patient's anatomy, optimizing the reduction of the intermetatarsal angle and frontal plane alignment of the sesamoids.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Maliha Arzumand, DPM	marzumanddy@gmail.com	I/We have nothing to disclose	
Gregory Foote DPM, FACFAS	gregafoote@gmail.com	I/We have nothing to disclose	
Ronald Kane DPM, FACFAS	ronald.kane@mercyhealth.com	I/We have nothing to disclose	
Levi Andrews, DPM	leviandrews1@gmail.com	I/We have nothing to disclose	
Ryan Bauermeister DPM	rjbauermeister@gmail.com	I/We have nothing to disclose	
Aaron Lalehzarian DPM	aaronlalehzariandpm@gmail.com	I/We have nothing to disclose	

Title

A comparison of outcomes in patients with and without physical therapy after lateral ankle stabilization procedure

Submit Date

10/15/2024

Correspondent

Last Name:Schadegg

Full Name:Margaret G Schadegg DPM

Practice/Company/Residency Program:

Email:mys343@jefferson.edu

Jefferson Health NJ

Authors

Author 1:Margaret Schadegg

Author 2:Alyssa Kellmyer, DPM

Author 3:Sarah Ayvazov, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The aim of this study is to compare patient reported pain, complication rates, and time to weight bearing in patients who received physical therapy (PT) versus those who did not after a lateral ankle stabilization procedure. We hypothesize that PT increases overall patient reported outcomes and leads to quicker return to activity.

Methodology

A retrospective comparative study was conducted on patients who underwent a lateral ankle stabilization procedure. A total of 23 patients were included in the study and split into two groups: those who received physical therapy and those who did not. The following data was collected: patient-reported VAS pain scale and time to full weight bearing.

Procedures

Results

23 patients were included, 11 male (48%) and 12 female (52%). 17 patients received PT and 6 did not. Average pain pre- and post-operatively was noted to be 6.6/10 and 2.5/10 in the PT group and 6.2/10 and 3.2/10 in the non-PT group, respectively. The average time of return to weight bearing was 9.3 weeks in the PT group and 6.2 in the non-PT group.

Discussions

There has been debate in the literature regarding whether PT after a lateral ankle stabilization procedure is beneficial and/or essential for post-operative recovery, reduction of pain, and quicker return to weight bearing. Our research found that post-operative pain levels were similar in both PT and non-PT groups. Surprisingly, we found that the PT group had a longer time to full weight bearing. According to these results, we found no correlation between post-operative PT and quicker patient recovery.

Format

Scientific

Case Rpt Followup

0

Student Club

Classification

Physical Therapy/Rehabilitation

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Margaret Schadegg	mys343@jefferson.edu	I/We have nothing to disclose	
Alyssa Kellmyer, DPM	alyssa.kellmyer@temple.edu	I/We have nothing to disclose	
Sarah Ayvazov, DPM	sarah.ayvazov@gmail.com	I/We have nothing to disclose	

Title

9 liter of normal saline 6 grams of common glycopeptidide antibiotic via pulse lavage yield better results for infected wounds and reinfection

Submit Date

10/15/2024

Correspondent

Last Name:Giagnacova

Full Name:Albert

Practice/Company/Residency Program:

Email:Albertdpm@gmail.com

Company:

Authors

Author 1:Albert Giagnacova

Author 2:Lev Blekher DPM

Author 3:Lydia Thomas DPM

Author 4:Adam Bieker DPM

Author 5:Wilven Smoody DPM

Author 6:Sydney Rotman DO

Author 7:

Author 8:

Purpose

We clearly looked at treating every wound and infections similar to how Gustillo /Anderson view as open fracture, we surmise that bulb in not adequate and compare an 12 year followup with every infection over 381 treated over 144 months career.

Methodology

Our research documented carefully how fluid is used to lavage a wound, how much pressure is necessary to properly lavage a wound, and is there a local systematic result from the antibiotics. We randomized our data, based on season. 213 patient had either diabetes or PVD or vascular disease.

Procedures

Results

219 received a lavage of 9 liter of normal saline mixed with 6 g Vancomycin (trade name), compare to lavage with normal saline via pulse lavage and bulb syringe. We had 3 reinfections, and 7 reinfections within 3 months period. We explored the total joint literature, ENT, and neurosurgery literature, our long term followup defined as 1 year had 164 patients. Data strongly favors 9 liter with antibiotics group, but data cannot separate outside such as oral or IV antibiotics, and overall health of the patient.

Discussions

We have offered this once performed without acceptances 5 years ago. Our workgroup scope of this includes the importance of adequately decreasing the bioburden within the wound bed. Proper methodology of obtaining specimen include sending tissue with culture. Local systematic effect of glycopeptide antibiotics and it effect on tissue. The importance of my data set within a community hospital versus medical literature were show that total lavage time is key factor, in our results. Localized angiogenesis within wound bed via mm HG with the lavage will be offered.

Format

Scientific

Case Rpt Followup

144

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Albert Giagnacova	Albertdpm@gmail.com	I/We have nothing to disclose	
Lev Blekher DPM	lev_blekher@hotmail.com	I/We have nothing to disclose	
Lydia Thomas DPM	lbhpodiatriy@gmail.com	I/We have nothing to disclose	
Adam Bieker DPM	lbhpodiatriy@gmail.com	I/We have nothing to disclose	
Wilven Smoody DPM	lbhpodiatriy@gmail.com	I/We have nothing to disclose	
Sydney Rotman DO	srotman@phsi.us	I/We have nothing to disclose	

Title	Negative Prognostic Factors for Progression to Hindfoot Fusion Following Midfoot Arthrodesis in Charcot Neuroarthropathy		
Submit Date	10/15/2024		
Correspondent	Last Name: Berkelbach Full Name: Christopher, J. Email: berkelbc@gmail.com Practice/Company/Residency Program: Limb Preservation and Deformity Correction Fellowship at University of Maryland		
Authors	Author 1: Christopher J. Berkelbach, DPM Author 2: Jacob Wynes, DPM, MS, FAFAS Author 3: Author 4: Author 5: Author 6: Author 7: Author 8:		
Purpose	There is an increasing trend of the use of tibiototalcaneal (TTC) arthrodesis for primary surgical management for midfoot Charcot. Subtalar joint arthrodesis and lateral ankle ligament reconstruction at the time of midfoot Charcot arthrodesis have been shown to be protective against the development of ankle Charcot. We aimed to identify risk factors in midfoot Charcot patients undergoing midfoot arthrodesis that may increase the likelihood of failure requiring subsequent TTC arthrodesis.		
Methodology	We performed a retrospective review of 72 patients diagnosed with midfoot Charcot and treated surgically with midfoot arthrodesis. Patients with less than 12 months of post-operative follow-up were excluded.		
Procedures			
Results	Following midfoot arthrodesis, thirteen patients (18.1%) underwent subsequent tibiototalcaneal (TTC) arthrodesis as the result of hindfoot Charcot or other complications. The average follow-up for patients who underwent subsequent TTC arthrodesis was 4.1 years, compared with 3.0 years for patients that did not progress to hindfoot Charcot. 61.5% of patients who underwent subsequent TTC arthrodesis presented with BMI over 40, compared with 15.4% of patients who did not progress. 58.3% of patients who underwent subsequent TTC arthrodesis presented with HbA1c over 8.0%, compared with 30.8% of patients who did not progress. Patients with subsequent TTC arthrodesis underwent an average of 4.5 unplanned surgeries, compared with 1.6 unplanned surgeries in the comparison group.		
Discussions	This investigation found high BMI and poorly controlled diabetic patients with midfoot Charcot to be at higher risk of progression to TTC arthrodesis after midfoot arthrodesis. These patients may benefit from primary TTC arthrodesis for midfoot Charcot.		
Format	Scientific		
Case Rpt Followup	12		
Student Club			
Classification	Rearfoot and Ankle Reconstruction		
Level of Evidence	Level IV		
Authors/Financial Disclosures			
Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Christopher J. Berkelbach, DPM	berkelbc@gmail.com	I/We have nothing to disclose	
Jacob Wynes, DPM, MS, FAFAS	jwynes@som.umaryland.edu	Consultant/Advisor/Speaker (List all affiliations)	Paragon28

Title

Effect of Travel Distance and Time on Clinical Outcomes in Patients Undergoing Charcot Reconstruction

Submit Date

10/15/2024

Correspondent

Last Name: Berkelbach

Full Name: Christopher J.

Practice/Company/Residency Program:

Email: berkelbc@gmail.com

Limb Preservation and Deformity Correction Fellowship at University of Maryland

Authors

Author 1: Christopher J. Berkelbach, DPM

Author 2: Jacob Wynes, DPM, MS, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

There is a high morbidity and mortality related to Charcot neuroarthropathy and its surgical and non-surgical management. A recent study showed good outcomes for Charcot patients with early referral to a tertiary care center. We investigated the effect of travel distance and time on clinical outcomes in patients undergoing surgical treatment for Charcot neuroarthropathy at a large urban tertiary care specialty clinic in Maryland.

Methodology

We performed a retrospective review of 145 patients treated surgically for Charcot neuroarthropathy. Patients with less than 12 months of post-operative follow-up were excluded. We used the directions feature on Google Maps to estimate the distance and driving time from the patient's home address to the outpatient treatment facility and hospital.

Procedures

Results

The average distance and driving time to the main outpatient treatment facility was 35.2 miles and 40.8 minutes, respectively. Patients who lived greater than 50 miles from the outpatient treatment facility underwent an average of 4.5 unplanned reoperations compared with 2.3 unplanned reoperations for those who lived less than 50 miles from the outpatient treatment facility. Patients who lived greater than 50 miles from the outpatient treatment facility were more likely to have complications with their external fixator including pin site irritation and pin breakage/loosening.

Discussions

Patients with Charcot neuroarthropathy traveling a great distance for treatment at a tertiary care specialty clinic may be at increased risk of complications and re-operation following surgical management.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Christopher J. Berkelbach, DPM	berkelbc@gmail.com	I/We have nothing to disclose	
Jacob Wynes, DPM, MS, FACFAS	jwynes@som.umaryland.edu	Consultant/Advisor/Speaker (List all affiliations)	Paragon28

Title

The Psychofunctional Impact of Length Preservation in Various Levels of Pedal Amputation

Submit Date

10/15/2024

Correspondent

Last Name: Qadri

Full Name: Ali A. Qadri, DPM

Email: aliqadri631@gmail.com

Practice/Company/Residency Program: Medstar Georgetown University Hospital

Authors

Author 1: Ali A. Qadri, DPM

Author 2: Craig J. Verdin, DPM

Author 3: Alex Dang, DPM

Author 4: Christopher E. Attinger, MD

Author 5: John S. Steinberg, DPM, FACFAS

Author 6: Jayson N. Atves, DPM, FACFAS

Author 7:

Author 8:

Purpose

Diabetes related foot amputations can be particularly challenging for patients, as they not only face medical comorbidities but often overlooked psychological distress. We seek to provide information on the functional as well as the psychological benefits of length preservation in diabetic foot amputations.

Methodology

We performed a comparative retrospective analysis of 65 unilateral ambulatory midfoot amputees (8 pandigital, 43 transmetatarsal, 5 Lisfranc, and 9 Chopart) who were evaluated at Georgetown University Hospital between June 2021-June 2023. Outcomes were defined as major/minor complications, rates of limb salvage, assessment of residual function, psychological well-being, and quality of life.

Procedures

Results

The average age of our cohort was 64.6 ± 12.7 years with a mean follow-up of 12.1 months. An overall limb salvage rate of 96.36% and 21.8% overall complication rate was noted. A higher incidence of major complications within the Lisfranc group was noted ($p=0.02$). Patient reported outcomes pertaining to functionality, psychological well-being, and quality of life demonstrated that pandigital amputations were superior to all other forms of pedal amputation and length preservation reduced the psychological burden and had less an impact on quality of life than a shorter residual limb.

Discussions

The present study is the first study to evaluate the psychofunctional impact of all levels of midfoot amputation. Our analysis revealed that pandigital amputations were superior to other forms of pedal amputation in terms of functionality, psychological well-being, and quality of life. Additionally, preserving limb length alleviated psychological distress and had a lower negative impact on quality of life compared to shorter residual limbs.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Diabetic Foot

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Ali A. Qadri, DPM	aliqadri631@gmail.com	I/We have nothing to disclose	
Craig J. Verdin, DPM	cverdin@kent.edu	I/We have nothing to disclose	
Alex Dang, DPM	alex.dang@medstar.net	I/We have nothing to disclose	
Christopher E. Attinger, MD	christopher.attinger@medstar.n	I/We have nothing to disclose	
John S. Steinberg, DPM, FACFAS	John.steinberg@medstar.net	I/We have nothing to disclose	
Jayson N. Atves, DPM, FACFAS	jatves@gmail.com	I/We have nothing to disclose	

Title

Are Supination External Rotation Still Non-Surgical, as Arthroscopic Exploration?

Submit Date

10/15/2024

Correspondent

Last Name:Giagnacova

Full Name:Albert

Practice/Company/Residency Program:

Email:Albertdpm@gmail.com

Lower Bucks Hospital

Authors

Author 1:Albert Giagnacova

Author 2:Anthony Mina DPM

Author 3:Sydney Rotman DO

Author 4:Wilven Smoody

Author 5:Adam Bieker DPM

Author 6:Lev Blekher DPM

Author 7:

Author 8:

Purpose

15 years ago literature stated that SER were not surgical, immobilize and treated conservatively. Recently there has been a brevity of literature highlighting AITF, as well as subtle SER 4 with ligamentous involvement and no medial malleolar fracture.

Methodology

We evaluate 39 SER type 2 fractures, we perform stress views under anesthesia, and performed arthroscopic evaluation fractures. We were compelled to reconsider this based on Pakarinen (FAI 2011) looking at stability criteria. Anecdotally we felt patients had good outcomes, however intra articular pathology was mitigated, this was demonstrated with local injection within the joint relieved. We used PROMs to further validate our results.

Procedures

Results

11 of 39 had a so called "drive sign positive" or indicative of deltoid injury stress views only reveal 6 of these via stress abduction test. Total Operating room was 40 minutes, patients were 85 percent of normal activity with 3 months without physical therapy.

Discussions

Drakos presented a class paper addressing non operative for isolated Lateral malleolus fracture. Traditionally speaking these fracture were thought as non displaced fractures that do well with immobilization. The purpose of this study is to better understand the ligamentous importance, and the pathology that exists with the ankle joint. We offer easy reproducible methodology with simple construct to fix these troublesome fracture. Recently its has been at 3 months there was 30 percent nonunion at fracture line. The purpose of this poster is better communicate our literature and form a better consensus, since these are very ubiquitous fracture type.

Format

Scientific

Case Rpt Followup

71

Student Club

Classification

Trauma

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Albert Giagnacova	Albertdpm@gmail.com	I/We have nothing to disclose	
Anthony Mina DPM	lbhpodiatry@gmail.com	I/We have nothing to disclose	
Sydney Rotman DO	srotman@phsi.us	I/We have nothing to disclose	
Wilven Smoody	lbhpodiatry@gmail.com	I/We have nothing to disclose	
Adam Bieker DPM	lbhpodiatry@gmail.com	I/We have nothing to disclose	
Lev Blekher DPM	lev_blekher@hotmail.com	I/We have nothing to disclose	

Title

Ability to Accurately Predict Intraoperative Clean Margins of Osteomyelitis in Diabetic Foot Infections Requiring Amputation

Submit Date

10/15/2024

Correspondent

Last Name:Gutting

Full Name:Austin L Gutting, DPM

Practice/Company/Residency Program:West Penn Hospital

Email:austin.gutting@gmail.com

Authors

Author 1:Austin Gutting, DPM

Author 2:Michael Huth, DPM

Author 3:Gabriel Roberts, DPM

Author 4:Alan Catanzariti, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study is to assess the accuracy of a surgeon's predictability of clean margins following various amputations of the lower extremity at the time of closure with the goal of reducing usage of long-term antibiotics, decreased length of stay and hospital cost, and revision amputations.

Methodology

This study is a retrospective chart review of patients who underwent various levels of amputation due to diabetic foot infection with underlying osteomyelitis. We examine operative notes to assess whether the surgeon suspected clean margins at the time of closure and surgical pathology reports to confirm the presence of osteomyelitis and involvement at the proximal margin.

Procedures

Results

We reviewed a total of 168 patients with confirmed osteomyelitis on the surgical pathology. 83/87 (95.4%) patients had viable proximal bone margin following toe amputation. 46/48 (95.83%) patients had viable proximal bone margin following partial ray amputation. 29/33 (87.88%) patients had viable proximal bone margin following transmetatarsal amputation.

Discussions

The data suggests surgeons are highly accurate (94.05%) at intraoperative assessment of resecting osteomyelitis in diabetic foot infections confirmed by clean margins on surgical pathology. Transmetatarsal amputations had the highest proportion of unclear margins compared to toe amputation and partial ray amputation. Although we found a high success rate with respect to resecting osteomyelitis, more work is required to develop a standardized approach to assessing clean margins. This will require a collaborative effort between surgeon and pathologist to more accurately assess all patients with the goal of reducing usage of long-term antibiotics, decreasing length of stay and hospital cost, and minimizing revision amputations.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Diabetic Foot

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Austin Gutting, DPM	austin.gutting@gmail.com	I/We have nothing to disclose	
Michael Huth, DPM	mhuth1020@gmail.com	I/We have nothing to disclose	
Gabriel Roberts, DPM	gabriel.roberts@ahn.org	I/We have nothing to disclose	
Alan Catanzariti, DPM	alan.catanzariti@ahn.org	I/We have nothing to disclose	

Title

Postoperative Complications After Hammertoe Correction: The Influence of Tobacco and Non-Tobacco Nicotine

Submit Date

10/15/2024

Correspondent

Last Name:Wang

Full Name:Joshua S Wang

Practice/Company/Residency Program:

Email:joswang@utmb.edu

University of Texas, Medical Branch-Galveston

Authors

Author 1:Joshua S Wang

Author 2:Apurvakumar Patel

Author 3:Philong Nguyen

Author 4:Megna Panchbhavi

Author 5:Vinod K. Panchbhavi

Author 6:

Author 7:

Author 8:

Purpose

Previous literature states that smoking status is associated with increased perioperative risk for impaired wound healing and increased complication rates following major surgical procedures. Hammertoe, a common foot deformity, often necessitates surgical intervention due to severe pain or mobility issues. The effect of both tobacco and non-tobacco nicotine on postoperative complications following hammertoe surgery remains unclear. This study aims to assess the impact of nicotine use (both tobacco and non-tobacco sources) on postoperative complications following hammertoe correction surgery.

Methodology

A retrospective cohort study was conducted using the TriNetX global health research network, which provides deidentified electronic medical records from 95 healthcare organizations. Patients aged 18 and older who underwent hammertoe surgery (CPT: 28285) were categorized into three cohorts: nicotine users, non-tobacco nicotine users (e.g., e-cigarettes), and non-nicotine users. Propensity score matching was employed to balance confounding variables, including age, sex, race, ethnicity, and comorbidities.

Procedures

Results

Postoperative complications were significantly higher in both nicotine cohorts compared to non-nicotine users. In the nicotine cohort, rates of wound disruption, infection, sepsis, deep vein thrombosis, and pulmonary embolism were 2.7%, 1.8%, 0.4%, 1.1%, and 0.4%, respectively. The non-tobacco nicotine cohort showed increased rates of complications as well, with wound disruption (2.4%), infection (1.8%), sepsis (0.3%), DVT (1.2%), and PE (0.4%).

Discussions

This study demonstrates that both tobacco and non-tobacco nicotine use significantly heightens the risk of postoperative complications following hammertoe corrective procedures, underscoring the importance of addressing all forms of nicotine use in preoperative assessments, and advocating for comprehensive patient education and cessation programs to improve surgical outcomes and patient safety.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Joshua S Wang	joswang@utmb.edu	I/We have nothing to disclose	
Apurvakumar Patel	apkpatcl@utmb.edu	I/We have nothing to disclose	
Philong Nguyen	longnguy@utmb.edu	I/We have nothing to disclose	
Megna Panchbhavi	mpanch2003@gmail.com	I/We have nothing to disclose	
Vinod K. Panchbhavi	vkpanchb@utmb.edu	I/We have nothing to disclose	

Title

Assessing the Impact of Nicotine and Non-Tobacco Nicotine Use on 90-Day Post Operative Complications in Patients with Bimalleolar Ankle Fractures

Submit Date

10/15/2024

Correspondent

Last Name:Wang

Full Name:Joshua S Wang

Practice/Company/Residency Program:

Email:joshwang08@gmail.com

University of Texas, Medical Branch-Galveston

Authors

Author 1:Joshua S Wang

Author 2:Philong Nguyen

Author 3:Sudhanvan Iyer

Author 4:Apurvakumar Patel

Author 5:Vinod K. Panchbhavi

Author 6:

Author 7:

Author 8:

Purpose

Nicotine is recognized as a risk factor for poor bone healing and overall health. Patients who are dependent on nicotine may be at greater risk for complications following surgery compared to non-users. This study aims to investigate the influence of nicotine and non-tobacco nicotine use on major complications within 90 days after bimalleolar ankle fracture surgery.

Methodology

We conducted a retrospective analysis using deidentified patient data from the TriNetX global health database. Two groups were formed: one including patients with documented nicotine dependence (F17) or a personal history of nicotine dependence (Z87.891) who underwent surgical repair for bimalleolar ankle fractures (27808 or 27810), and a second group of patients without any nicotine dependence or use of non-tobacco nicotine products who underwent the same surgery. Data from 20 years ago up to October 12, 2024 were evaluated, and postoperative complications were assessed over a 90-day period.

Procedures

Results

The study analyzed data from 2930 nicotine-dependent patients compared to 2390 non-users. After adjusting for key variables such as age, gender, race, comorbidities, and body mass index, the results showed a significantly higher rate of complications in nicotine-dependent patients. Complications included wound disruption, infection, sepsis, and acute kidney injury highlighting the added risks posed by nicotine dependence in this surgical population.

Discussions

This study found a significant association between nicotine dependence and an increased likelihood of major complications within the 90-day postoperative period following bimalleolar ankle fracture surgery, highlighting the need for preoperative assessment and interventions of nicotine cessation to reduce adverse outcomes and improve recovery.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Epidemiology/Population Study

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Joshua S Wang	joswang@utmb.edu	I/We have nothing to disclose	
Philong Nguyen	longnguy@utmb.edu	I/We have nothing to disclose	
Sudhanvan Iyer	suiyer@utmb.edu	I/We have nothing to disclose	
Apurvakumar Patel	apkpatel@utmb.edu	I/We have nothing to disclose	
Vinod K. Panchbhavi	vkpanchb@utmb.edu	I/We have nothing to disclose	

Title

Hypertrophic Tendinopathy following Haglund’s Resection and Secondary Repair of the Achilles Tendon, A Case Review Study

Submit Date

10/15/2024

Correspondent

Last Name: Perry

Full Name: Donovan Perry, DPM

Practice/Company/Residency Program:

Email: donovanpdp@gmail.com

HCA Florida Northwest Hospital

Authors

Author 1: Donovan Perry, DPM

Author 2: Paloma De Leon, DPM

Author 3: Justin Vilaseca

Author 4: Alan MacGill, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Chronic insertional Achilles tendinopathy (CIAT) with Haglund’s deformity is often treated by detaching and reattaching the Achilles tendon while removing the deformity. This case series examines postoperative MRI confirmed Achilles tendon hypertrophy following Haglund’s resection and secondary repair, addressing a gap in literature regarding this potential complication.

Methodology

This retrospective study examined three patients who underwent debridement and secondary repair of the Achilles tendon with Haglund’s resection. Inclusion criteria required both preoperative and postoperative MRI reports. Patients with Achilles tendon rupture or incomplete MRI data were excluded. MRI reports were used to analyze the cross-sectional area (CSA) of the Achilles tendon before surgery and at final follow-up. The CSA, percentage increase were analyzed, and a paired t-test was conducted to assess the significance of tendon hypertrophy.

Procedures

Results

Average preoperative and postoperative cross-sectional area of the achilles tendon was 172.86 mm2 and 438.96 mm2 respectively. An average of 163.84% hypertrophy of the achilles tendon postoperatively (range of 30.38%- 256.48%). Two additional patients were identified with hypertrophic healing reported on postoperative MRI without preoperative imaging. The CSA postoperatively of these patients were 401.87mm2 and 342.18mm2.

Discussions

This study explored Achilles tendon hypertrophy following Haglund’s resection. Analysis of cases from 2018 to 2023 revealed significant postoperative tendon hypertrophy, with an average increase of 163.84% in three cases confirmed by MRI. We hypothesize that resection of Haglund’s deformity and invasion of healthy calcaneal bone may contribute to this hypertrophy. However, the limited sample size precludes definitive conclusions, necessitating further research to understand the implications of this complication on surgical outcomes.

Format

Scientific

Case Rpt Followup

13

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Donovan Perry, DPM	donovanpdp@gmail.com	I/We have nothing to disclose	
Paloma De Leon, DPM	Palomadeleondpm@gmail.com	I/We have nothing to disclose	
Justin Vilaseca	jvilasecadpm@gmail.com	I/We have nothing to disclose	
Alan MacGill, DPM	alanmacgill@gmail.com	I/We have nothing to disclose	

Title

Outcomes of Ankle Valgus in Patients with Global Instability

Submit Date

10/15/2024

Correspondent

Last Name: McCulley

Full Name: Hannah E. McCulley

Practice/Company/Residency Program:

Email: hannah.mcculley@midwestern.edu

Swedish Medical Center

Authors

Author 1: Hannah E. McCulley, DPM

Author 2: Supreet K. Dhillon, DPM

Author 3: Jeffrey C. Christensen, DPM, FACFAS | Everett, WA

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The concept of global instability of the ankle is poorly understood, especially regarding how it affects total ankle replacement outcomes. It is known that global instability can lead to ankle valgus wear and likely has negative effects on total ankle replacement (TAR) survivability. This paper explores complication rates of this subset of end-stage ankle arthritis patients compared with controls. Ancillary procedures that help normalize function will be explored in this setting.

Methodology

This retrospective cohort study evaluated 26 patients who underwent TAR by a single surgeon, focusing on those with ankle valgus and a minimum follow-up of 1 year. Two groups were identified: Group 1 consisted of patients with preoperative ankle valgus deformity and instability, while Group 2 included patients with no deformity, matched activity profile, and the implant type placed.

Procedures

Results

The valgus ankle group has significantly more complications compared to controls, especially in patients with mobile-bearing implants.

Discussions

This study highlights the importance of restoring functional anatomy in these at-risk ankles in preventing reversion to valgus alignment. Fixed bearing designs also have some protective qualities with this pathological subset. Limitations include a small sample size, unequal numbers of implant designs used, and a spectrum of pathology encountered.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Hannah E. McCulley, DPM	hannah.windauer@gmail.com	I/We have nothing to disclose	
Supreet K. Dhillon, DPM	s.dhillon1997@gmail.com	I/We have nothing to disclose	
Jeffrey C. Christensen, DPM, FACFAS Everett, WA	jccdpm@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Paragon 28
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	IFAF

Title

When is Enough, Enough? - Clinical and Patient Reported Outcomes of Charcot Patients Undergoing Multiple Major Unplanned Reoperations

Submit Date

10/15/2024

Correspondent

Last Name: Berkelbach

Full Name: Christopher J.

Practice/Company/Residency Program:

Email: berkelbc@gmail.com

Limb Preservation and Deformity Correction Fellowship at University of Maryland

Authors

Author 1: Christopher J. Berkelbach, DPM

Author 2: Jacob Wynes, DPM, MS, FACFAS

Author 3: Hiba Mohiuddin, DPM

Author 4: Madeira Curry, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Charcot patients have a lifetime risk of amputation of 15%. Improvements in the surgical management of Charcot have increased salvageability, however patients often face months to years in and out of surgery which takes an economic and emotional toll. We evaluated the clinical outcomes of patients who underwent Charcot reconstruction involving multiple unplanned reoperations after their index procedure.

Methodology

We performed a retrospective review of 145 patients treated surgically for Charcot neuroarthropathy. Patients with less than 12 months of post-operative follow-up were excluded. All operative interventions on the affected limb were categorized as major or minor, planned or unplanned, and to have taken place before or after the index procedure. Clinical and patient reported outcomes were collected.

Procedures

Results

Charcot patients who underwent surgical reconstruction underwent a median of 5 surgical procedures on the affected limb (range 1-17). 44.8% of patients underwent 3 or more surgical procedures. The most common major operation both prior to and following the index procedure was incision and drainage/extensive debridement. The most common unplanned reoperations were percutaneous procedures such as exostectomy, and partial hardware removal. The most common major unplanned reoperations included complete removal of hardware, application of external fixator, and progression of arthrodesis to a more proximal level. Patients who progressed to eventual above ankle amputation had lower LIMB-Q Decision Scores.

Discussions

Patients undergoing Charcot reconstruction should be informed of the high likelihood of requiring unplanned reoperation and the impact that may have on their overall outcome.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Christopher J. Berkelbach, DPM	berkelbc@gmail.com	I/We have nothing to disclose	
Jacob Wynes, DPM, MS, FACFAS	jwynes@som.umaryland.edu	Consultant/Advisor/Speaker (List all affiliations)	Paragon28
Hiba Mohiuddin, DPM	hiba_mohiuddin@yahoo.com	I/We have nothing to disclose	
Madeira Curry, DPM	madeiracurry@gmail.com	I/We have nothing to disclose	

Title

Current Considerations and Trends of Ankle Arthrodesis Among Reconstructive Foot and Ankle Surgeons

Submit Date

08/15/2024

Correspondent

Last Name: Hill

Full Name: Zachary

Practice/Company/Residency Program:

Email: zph1582@gmail.com

Indy Foot and Ankle Reconstructive Fellowship

Authors

Author 1: Zachary P. Hill, DPM

Author 2: Andrew Regal, DPM

Author 3: Robert Mendicino, DPM

Author 4: J. Michael Miller, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Ankle arthrodesis is a widely used procedure for treating ankle arthritis, but there is significant variation in the preferred surgical techniques and perioperative management. To capture the latest practices and opinions, we conducted a survey study of prominent reconstructive foot and ankle surgeons focusing on these key discussion areas.

Methodology

The survey was developed by the researchers and consisted of 10 multiple-choice or write-in questions. This was then sent to 100 prominent reconstructive foot and ankle surgeons.

Procedures

Results

51 participants (51% response rate) were included. No complete consensus was reached regarding any questions. Factors most agreed upon (>75% agreement) included choice of joint preparation (osteotome, curette, and rongeur - 84.3%), incision approach (anterior - 84.3%), and use of orthobiologics for augmentation (94%). Factors moderately agreed upon (50 – 75% agreement) included indications for the procedure (ankle DJD with valgus or varus deformity -66.7%, post-traumatic arthritis - 58.8%), fixation construct (anterior plate with 1-2 screws crossing the ankle joint - 60.8%), choice of ankle arthrodesis (AA) over total ankle replacement (TAR) (52.9%) and post-operative course (non-weight bearing 6-8 weeks - 66.7%). Factors least agreed upon (<50% agreement) included surgeon choice of TAR over AA (47.1%), definitions of final fusion position (variable), and use of autograft (4%).

Discussions

Significant variation was noted in answers to this questionnaire. The findings of this survey study provide insight into the most up-to-date concepts and techniques currently utilized by foot and ankle surgeons when performing an ankle arthrodesis.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Zachary P. Hill, DPM	zph1582@gmail.com	I/We have nothing to disclose	
Andrew Regal, DPM	regal.dpm@gmail.com	I/We have nothing to disclose	
Robert Mendicino, DPM	rwmendicino@gmail.com	I/We have nothing to disclose	
J. Michael Miller, DPM	JMichaelMiller77@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Fusion Orthopedics

Title

Using pulsed electromagnetic field (PEMF) stimulation to treat 5th metatarsal fracture nonunions

Submit Date

09/23/2024

Correspondent

Last Name: Cowgill

Full Name: Ian A Cowgill, MS, MBA

Practice/Company/Residency Program:

Email: iancowgill@orthofix.com

Orthofix

Authors

Author 1: William R Adams, II, DPM, FACFAS

Author 2: Mark S Bromson, MD

Author 3: David Lin, DPM, FACFAS

Author 4: Daniel Perez, DPM, FACFAS

Author 5: Olga L Gonzalez, DPM

Author 6:

Author 7:

Author 8:

Purpose

Fifth metatarsal fracture nonunions are challenging to treat and are often associated with prolonged pain and reduced function. Advanced age, high BMI, osteoporosis, smoking, and diabetes are risk factors associated with suboptimal bone healing. Prior research shows that PEMF stimulation promotes bone healing and can help overcome biological deficiencies in patients at risk. The current study further evaluates PEMF treatment for 5th metatarsal nonunions.

Methodology

A multicenter retrospective study was conducted at 5 research sites. Subjects were enrolled based on receiving PEMF treatment for 5th metatarsal nonunions. Time to radiographic fusion and the impact of various risk factors were evaluated.

Procedures

Results

Fifty-six (n=56) subjects were included in the analysis. Subjects were 89.3% female with a mean age of 59.7 years. Of the risk factors studied, 75% of subjects had at least 1 risk factor associated with compromised bone healing. PEMF treatment started shortly after the nonunion diagnosis, and the average time from nonunion diagnosis until fusion was 154.7 days. The majority of subjects healed by 4 months (35/56, 62.5%) and 75% of subjects (42/56) healed by 6 months. The number of risk factors (up to 5 total per subject) was associated with longer heal times (p<0.03). Of the individual risk factors studied, only nicotine use was associated with longer healing times (p<0.04).

Discussions

Fifth metatarsal nonunion subjects treated with PEMF achieved favorable time to healing despite having risk factors for compromised healing. The results suggest that PEMF may attenuate compromised healing associated with some known risk factors. PEMF treatment is a beneficial nonoperative therapy that can aid 5th metatarsal nonunion healing.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
William R Adams, II, DPM, FACFAS	wa1984@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Orthofix, Enovis, Treace, Fusion Medical, Gensano, Restore 3D
Mark S Bromson, MD	mbromson@brog.com	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Florida Orthopaedic Society, Florida Orthopaedic Risk Purchasing Group, Ortho Florida
David Lin, DPM, FACFAS	dlin@precisionorthomd.com	Consultant/Advisor/Speaker (List all affiliations)	Orthofix
Daniel Perez, DPM, FACFAS	dperez8@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Enovis, MTF
Olga L Gonzalez, DPM	olgon06@gmail.com	I/We have nothing to disclose	

TitleRadiological Evaluation and Comparative Analysis of First Metatarsal-Cuneiform Fusion Constructs: Assessing Outcomes and Stability Across Varied Fusion Techniques

Submit Date08/19/2024

CorrespondentLast Name:LyonsFull Name:Katherine Lyons, DPMEmail:ksamuel@umich.eduPractice/Company/Residency Program:Trinity Health Livonia

AuthorsAuthor 1:Katherine Lyons, DPMAuthor 2:Hoang Nguyen, DPMAuthor 3:Katelyn Cleypool, DPMAuthor 4:Vanessa Adelman, DPMAuthor 5:Ronald Adelman, DPMAuthor 6:Author 7:Author 8:

PurposeThe Lapidus procedure has recurrence rates as high as 12% in the literature. Recent literature suggests addition of intermetatarsal and/or intercuneiform screw fixation will enhance the overall stability of the fusion and reduce the risk of recurrence. There are no radiographic studies that compare outcomes of the addition of a transverse screw versus metatarsal-cuneiform screw or both. In this study we compare radiographic outcomes following three distinct Lapidus fixation techniques to determine most stable construct for achieving long-term stability and maintaining the intermetatarsal angle (IMA).

MethodologyThis is a retrospective enrollment of 26 patients with 32 feet. A standard Lapidus procedure was performed with dorsal medial plate fixation with the addition of three different constructs: Group 1: Transverse intermetatarsal or intercuneiform screw fixation (n=11), Group 2: Metatarsal-cuneiform screw fixation (n=8), Group 3: Combined transverse and metatarsal-cuneiform screw fixation (n=13). Primary outcome: Maintenance of IMA correction, radiographs taken over 1 year period. Secondary outcomes: AOFAS scores evaluated through postoperative surveys conducted over 1-year period. Complications were recorded over 1 year period.

Procedures

ResultsLapidus procedure with all 3 constructs was effective in restoring medial midfoot stability and preventing reoccurrence. Group 3 exhibited a stronger initial reduction in the IMA. Maintenance of IMA was statistically significant in Group 3 at 1 year post op compared to other two groups (p<0.05). All three groups had minimal complications, no incidences of nonunion, and excellent postoperative AOFAS scores.

DiscussionsLapidus procedure with addition of combined transverse and metatarsal-cuneiform screw fixation is the strongest construct for stable IMA correction over time.

FormatScientific

Case Rpt Followup12

Student Club

ClassificationForefoot Reconstruction

Level of EvidenceLevel III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Katherine Lyons, DPM	ksamuel@umich.edu	I/We have nothing to disclose	
Hoang Nguyen, DPM	hoang.nguyen@my.rfums.org	I/We have nothing to disclose	
Katelyn Cleypool, DPM	ugok@mail.gvsu.edu	I/We have nothing to disclose	
Vanessa Adelman, DPM	vanesaadelman@yahoo.com	I/We have nothing to disclose	
Ronald Adelman, DPM	ronald_adleman@ihacares.com	I/We have nothing to disclose	

Title

Anatomic Evaluation of Percutaneous Flexor Tenotomy

Submit Date

10/11/2024

Correspondent

Last Name: Henson-Vendrell

Full Name: Antonella, M, Henson-Vendrell, BS

Practice/Company/Residency Program:

Email: ahensonv@wakehealth.edu

Wake Forest University School of Medicine

Authors

Author 1: Devon Niewohner, DPM

Author 2: Hayden Bush, DPM

Author 3: Lindsay LeSavage, DPM

Author 4: Ashleigh Wells Medda, DPM, FACFAS

Author 5: Paula Gangopadhyay, DPM, FACFAS

Author 6:

Author 7:

Author 8:

Purpose

Lesser toe deformities are common in diabetic patients, which can lead to increased risk of developing pressure ulcers, infections, or amputations. A percutaneous flexor tenotomy (PFT) is a minimally invasive foot procedure frequently utilized to correct lesser toe deformities by cutting the flexor digitorum longus (FDL) in the affected toe with a blade or percutaneously with an 18-gauge needle. The objectives of this study are to 1) evaluate the safety and efficacy of flexor digitorum longus needle PFT's and 2) assess whether efficiency of this procedure might change when performed by surgeons with different experience levels.

Methodology

Fifty-four cadaveric toes, digits two through four, were used. Post-transection longitudinal dissection was performed to ensure integrity of plantar nerves and assess success of needle PFT in transecting the FDL.

Procedures

Results

Of 54 cases, only ten tenotomies (18.5%) resulted in complete transections of FDL tendons. Interns and residents exhibited statistically less aptitude in tendon resection (~1.5 mm less resection) compared to attendings. Following dissection, surrounding neurovascular structures were found intact in all 54 cases. No difference was observed in overall transection rates between digits, regardless of surgeon level.

Discussions

Regardless of experience, percutaneous needle tenotomies are shown to be safe at preserving surrounding structures. Our anatomical study is the first to demonstrate the performance differences in PFT among surgeons with varying experience levels, with interns and residents showing less proficiency in tendon transection than attending physicians. Future research may explore necessary experience and case repetitions for a podiatric surgeon to exhibit proficiency in performing PFT's.

Format

Scientific

0

Case Rpt Followup

Student Club

Biomechanics and Anatomy

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Devon Niewohner, DPM	dniewohn@wakehealth.edu	I/We have nothing to disclose	
Hayden Bush, DPM	hbush@wakehealth.edu	I/We have nothing to disclose	
Lindsay LeSavage, DPM	llesavag@wakehealth.edu	I/We have nothing to disclose	
Ashleigh Wells Medda, DPM, FACFAS	aewells@wakehealth.edu	I/We have nothing to disclose	
Paula Gangopadhyay, DPM, FACFAS	pgangopa@wakehealth.edu	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	North Carolina Foot and Ankle Society
		Grant/Research funding	Department of Defense

Title

Evaluation of Laboratory Inflammatory Markers Following A Bedside Debridement in Infected Diabetic Foot Ulcers (DFU)

Submit Date

08/25/2024

Correspondent

Last Name: Mughal

Full Name: Umay R Mughal, DPM

Email: umay.mughal@nyulangone.org

Practice/Company/Residency Program: NYU Grossman Long Island School of Medicine

Authors

Author 1: Raymond J Ferguon, DPM, FAFCAS

Author 2: April Bailey-Maletta, DPM, FAFCAS

Author 3: Ashley T Russo, DPM, MA, AACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study is to determine diagnostic test accuracy of commonly used inflammatory markers such as erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), procalcitonin, and white cell count to diagnose and monitor the treatment of soft tissue infection in a diabetic foot ulcer (DFU) following a bedside debridement. Accurate diagnosis of DFU severity through inflammatory markers will assist in reducing impact on quality of life.

Methodology

In this retrospective cohort study, we assessed the effectiveness of inflammatory markers to diagnose and monitor the treatment of soft tissue infection in a diabetic foot ulcer (DFU) following a bedside debridement. We evaluated 30 consecutive patients diagnosed with soft tissue emphysema and compared various inflammatory markers including erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), white blood cell (WBC) with neutrophil percentage, non-fasting glucose, and hemoglobin A1C levels upon initial emergency department encounter and after a bedside debridement and standard therapy. Inclusion criteria included diabetic patients with Type 2 Diabetes diagnosed with necrotizing fasciitis or gas gangrene with a or without peripheral arterial disease.

Procedures

Results

Our results suggest that CRP remains relatively stagnant even after a post-debridement while ESR and WBC markers decrease significantly.

Discussions

These indicative values may be used as a guide when deciding if patients are at a higher risk for poor outcomes and can suggest which diagnostic marker is most beneficial in monitoring patients with diabetic foot ulcers complicated by a soft tissue infection.

Format

Scientific

Case Rpt Followup

6

Student Club

Classification

Diabetic Foot

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Raymond J Ferguon, DPM, FAFCAS	raymond.ferguson@nyulangone.org	I/We have nothing to disclose	
April Bailey-Maletta, DPM, FAFCAS	april.bailey-maletta@nyulangone.org	I/We have nothing to disclose	
Ashley T Russo, DPM, MA, AACFAS	ashley.russo@nyulangone.org	I/We have nothing to disclose	

Title

Early Weight Bearing Protocol For Operative Treatment Of Zone 1 Fifth Metatarsal Base Fractures

Submit Date

10/14/2024

Correspondent

Last Name:Malik

Full Name:Shoueb Malik DPM

Practice/Company/Residency Program:

Email:shouebmmalik@gmail.com

OrthoIllinois Foot and Ankle Surgery Fellowship

Authors

Author 1:Matthew Sorenson DPM FAFAS

Author 2:

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Zone 1 fractures of the fifth metatarsal base have historically been treated conservatively with 6 weeks of immobilized weight-bearing but this resulted in significant lower extremity atrophy and prolonged time out of sport or work. The purpose of this study is to evaluate ORIF of zone 1 fractures in the context of immediate weight-bearing and return to regular shoes at 2 weeks post-op with the perceived benefit of mitigating atrophy and early return to activity.

Methodology

36 patients underwent ORIF of zone 1 fifth metatarsal base fractures. Out of the 36 patients there were 23 females (63.8%) and 13 males (36.1%). The average age of the patient cohort was 49.1 (Range 16-76). Serial x-rays were taken at 2 week intervals. The postoperative protocol for all 36 patients was immediate weight bearing in a CAM boot for 2 weeks. At the 2 week interval patients were transitioned into a supportive gym shoe and allowed to begin low-impact activities such as walking, biking, elliptical training and swimming. At the 6 week interval patients were allowed to return to full unrestricted activity such as running, jumping and high impact activity.

Procedures

Results

36/36 (100%) patients were able to begin non-ballistic activity at the 2 week interval and return to high impact activity at the 6 week interval. All 36 patients showed fracture union at the 6 week interval.

Discussions

Standard conservative and surgical protocols typically require at least six weeks of immobilization before starting functional rehabilitation. Our early weight-bearing protocol is crucial for facilitating a swift return to activity for active individuals, athletes, and those needing to resume work without weight-bearing restrictions.

Format

Scientific

Case Rpt Followup

12

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:Matthew Sorenson DPM FAFAS

Email:matthew.sorensen@orthoillinois.com

Disclosure(s) selected:Consultant/Advisor/Speaker (List all affiliations)

Disclosed Organisation(s):Stryker Orthopedics, Medline Unite foot & Ankle, Enovis Foot & Ankle

Title

Outcomes and Complication Rate with Pre-operative Ultrasonographic Superficial Peroneal Nerve Mapping in Patients Undergoing Ankle Arthroscopy

Submit Date

10/08/2024

Correspondent

Last Name:Verdoni

Full Name:Tyler J. Verdoni, DPM AACFAS

Practice/Company/Residency Program:

Email:tyler.verdoni@gmail.com

Florida Orthopedic Foot and Ankle Center (FLOFAC)

Authors

Author 1:Tyler J. Verdoni, DPM AACFAS

Author 2:Jay S. Badell, DPM FACFAS

Author 3:James M. Cottom, DPM FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To present our results utilizing routine preoperative ultrasonographic superficial peroneal nerve mapping in patients undergoing ankle arthroscopy

Methodology

We prospectively followed 25 patients over a 1 year time period. Patient demographics, gender, laterality, surgical procedure, and BMI were all recorded. Patients who were booked for ankle arthroscopy were included in the study. Patients who were lost to follow up were excluded from the study. Patients underwent routine diagnostic ultrasound preoperatively to map the course of the superficial peroneal nerve and marked. AOFAS/VAS scores were obtained pre operatively and at final follow up (1 year follow up). Nerve irritation was defined as neurologic symptoms along the course of the superficial peroneal nerve distal to the ankle. Both the mean and standard deviation were also recorded.

Procedures

Results

1 patient (4%) had irritation to the superficial peroneal nerve during lateral ankle portal placement. 3 patients (12%) had pre-existing irritation to the nerve where 1 patient (4%) had resolved symptoms at the end of the study. VAS scores (6.52 preoperatively, 1.04 at final follow up) and AOFAS scores (35.36 preoperatively, 95.51 at final follow up) significantly improved pre to post operatively.

Discussions

In our practice, we perform ankle arthroscopy routinely as an ancillary procedure during elective and traumatic ankle reconstruction. Since utilizing pre operative ultrasound, we have been able to not only decrease iatrogenic injury to the nerve but also alter the lateral portal placement as needed to avoid the nerve. We hope foot and ankle surgeons utilize this quick and simple technique to reduce injury to the superficial peroneal nerve.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Arthroscopy

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Tyler J. Verdoni, DPM AACFAS	tyler.verdoni@gmail.com	I/We have nothing to disclose	
Jay S. Badell, DPM FACFAS	jaybadell@gmail.com	I/We have nothing to disclose	
James M. Cottom, DPM FACFAS	jamescottom300@hotmail.com	I/We have nothing to disclose	

Title

Efficacy of a Porcine Pericardium Nerve Wrap in Peripheral Nerve Surgery

Submit Date

09/11/2024

Correspondent

Last Name:Adams

Full Name:William

Practice/Company/Residency Program:

Email:wil.adams86@gmail.com

Henry County Center for Orthopedic Surgery and Sports Medicine

Authors

Author 1:Nathan Namanny, DPM, AACFAS

Author 2:William JE Adams, DPM, FACFAS

Author 3:Kelly Peasley, NP

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Peripheral nerve disorders, particularly in the lower extremity, pose significant challenges for both clinicians and patients. Nerve surgery is a growing subspecialty in podiatric and orthopedic surgery, yet it is often complicated by incomplete pain relief and scar tissue formation. This study aimed to assess whether an acellular porcine pericardium nerve graft could enhance outcomes in patients treated with neurectomy or neurolysis surgery.

Methodology

A retrospective study was conducted with 23 patients, and 24 feet. Minimum follow-up time was 2 months, max was 36 months, average was 9.3 months. Inclusion criteria was foot or ankle pain that could be improved with peripheral nerve surgery (PNS). Exclusion criteria were patients with previous history of PNS in the same extremity.

Procedures

Results

There were 23 patients in the study, and 24 feet. The mean pre-op Visual Analogue Scale (VAS) pain scores for the control group was 7.1, and 7.1 for the graft group. Mean post-op VAS pain scores for the control was 3.3, and 0.4 for the graft group.

Discussions

The results of our study show that there is a statistically significant difference in VAS pain scores for patients that received an acellular porcine nerve graft during their surgery versus the group that did not. Furthermore, patients that received the graft during their surgery were more likely to agree that they were satisfied with the result of their surgery. Overall both PNS groups did well as a whole.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Nathan Namanny, DPM, AACFAS	nate.namanny11@gmail.com	I/We have nothing to disclose	
William JE Adams, DPM, FACFAS	wil.adams86@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Extremity Medical, ReNerve, Arthrex, Skye Biologics
Kelly Peasley, NP	kpeasley@gmail.com	I/We have nothing to disclose	

Title

Comparative Outcomes of Early Surgical Intervention vs. Conservative Management in Diabetic Foot Ulcers with Osteomyelitis

Submit Date

10/16/2024

Correspondent

Last Name: Casimir

Full Name: Steffi Casimir, B.S.,M.S.

Practice/Company/Residency Program:

Email: stefficasimirpod@gmail.com

Samuel Merritt University College of Podiatric Medicine

Authors

Author 1: Steffi Casimir, B.S.,M.S.

Author 2: Harmehak Kaur, B.S.

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This study aims to compare early surgical intervention and conservative management in treating diabetic foot ulcers (DFUs) complicated by osteomyelitis. The objective is to determine the effectiveness of each approach concerning healing time, infection resolution, amputation rates, and hospital stay duration. By providing evidence on whether early surgical debridement improves outcomes, the study seeks to guide podiatric surgeons in optimizing treatment protocols for diabetic foot management.

Methodology

A retrospective analysis of 100 patients with DFUs and osteomyelitis treated between January 2018 and December 2023 was conducted. The patients were divided into two groups: 50 who received early surgical intervention (debridement or bone resection) and 50 managed conservatively with antibiotics and wound care. Outcome measures included time to healing, infection resolution, amputation rates, and hospital stay duration. Data were analyzed using chi-square and independent t-tests, with a significance level of $p<0.05$.

Procedures

Results

Patients in the surgical group experienced faster healing (8 vs. 16 weeks, $p<0.05$), higher infection resolution (90% vs. 75%, $p<0.05$), and lower amputation rates (5% vs. 15%, $p<0.05$). Hospital stays were also shorter in the surgical group (7 vs. 14 days, $p<0.05$).

Discussions

Early surgical intervention was associated with superior outcomes, including faster wound healing, better infection control, and reduced amputations. These findings suggest that early surgery should be considered when conservative treatment fails to yield rapid progress in DFUs with osteomyelitis. Further prospective research is recommended to validate these findings.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Diabetic Foot

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Steffi Casimir, B.S.,M.S.	stefficasimirpod@gmail.com	I/We have nothing to disclose	
Harmehak Kaur, B.S.	medharmehak@gmail.com	I/We have nothing to disclose	
	ranjinidharu.fnu@samuelmerritt.edu	I/We have nothing to disclose	

Title

The Impact of Multidrug-Resistant Organisms (MDROs) on Healing Outcomes in Diabetic Foot Ulcers: A Retrospective Study

Submit Date

10/16/2024

Correspondent

Last Name: Casimir

Full Name: Steffi Casimir, B.S.,M.S.

Email: stefficasimirpod@gmail.com

Practice/Company/Residency Program: Samuel Merritt University College of Podiatric Medicine

Authors

Author 1: Steffi Casimir, B.S.,M.S.

Author 2: Harmehak Kaur, B.S.

Author 3: Arman Kirakosian, DPM, FABPM, FAAFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This study investigates the impact of multidrug-resistant organisms (MDROs) on the healing outcomes of diabetic foot ulcers (DFUs), focusing on underserved and minority populations. It aims to assess the prevalence of MDROs, including MRSA, VRE, and ESBL-producing organisms, and evaluate the effectiveness of current wound care strategies and antibiotic regimens.

Methodology

A retrospective study was conducted using medical records from 300 diabetic patients with foot ulcers treated at an urban healthcare center over five years. Patients were divided into MDRO-infected and non-infected groups based on wound culture results. Data on demographics, comorbidities, ulcer characteristics, treatments, and outcomes were analyzed. Special attention was given to socioeconomic and minority status to assess disparities in infection management.

Procedures

Results

Among the patients, 40% had MDRO-infected DFUs, with MRSA being the most prevalent pathogen (55%). MDRO-infected patients exhibited significantly longer healing times (median 16 vs. 10 weeks, $p<0.05$), higher recurrence rates (30% vs. 12%, $p<0.05$), increased hospitalizations (45% vs. 20%, $p<0.05$), and more amputations (25% vs. 10%, $p<0.05$). Minority patients, particularly African Americans and Hispanics, were disproportionately affected, comprising 65% of MDRO cases, with poorer healing outcomes.

Discussions

MDRO infections in DFUs lead to worse clinical outcomes, particularly in minority populations. The study highlights the need for early detection and aggressive treatment, along with addressing healthcare access disparities. Further research should focus on effective MDRO management and reducing inequities in care to improve outcomes for underserved populations.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Steffi Casimir, B.S.,M.S.	stefficasimirpod@gmail.com	I/We have nothing to disclose	
Harmehak Kaur, B.S.	medharmehak@gmail.com	I/We have nothing to disclose	
Arman Kirakosian, DPM, FABPM, FAAFAS	akirakosian@samuelmerritt.edu	I/We have nothing to disclose	

Circles of volunteerism in the podiatric profession: 2023-2024 large organization snapshot.

09/16/2024

Last Name: Meyr
Full Name: Andrew J. Meyr, DPM FACFAS Email: ajmeyr@gmail.com
Practice/Company/Residency Program: Temple University Hospital

Author 1:	Asmaa Ibrahim, DPM	Author 2:	Jeneen Elagha, DPM
Author 3:	Andrew J. Meyr, DPM FACFAS	Author 4:	
Author 5:		Author 6:	
Author 7:		Author 8:	

The objective of this investigation was to describe a cross-section of large podiatric national organization volunteers during the 2023-2024 academic year. The specific aims were to 1) investigate multi-organization volunteerism, 2) promote collaboration and cooperation between organizations, and 3) provide a visual representation of large podiatric organization volunteerism.

Public volunteer listings from ABFAS, ABPM, ACFAS, APMA and CPME during the 2023-2024 academic year were itemized and cross-analyzed. Descriptive statistics were performed.

We identified 667 individual volunteers recognized by ABFAS (n=162), ABPM (n=67), ACFAS (n=304), APMA (n=128) and the CPME (n=155). 167 (17.4%) of these individuals volunteered with >1 large organization over this time frame. 15.4% of ACFAS volunteers also volunteered with ABFAS, 1.3% of ACFAS volunteers also volunteered with ABPM, 5.6% of ACFAS volunteers also volunteered with APMA, and 10.8% of ACFAS volunteers also volunteered with the CPME. In a comparison between the 5 organizations, ACFAS had the highest number of volunteers and the highest number of volunteers who additionally volunteered with other organizations.

These results demonstrate high levels of volunteerism associated with American College of Foot and Ankle Surgeons members, both within the organization and more broadly through the profession. It is our hope that these results encourage and support the concept of volunteerism throughout the profession.

Scientific

Epidemiology/Population Study

Epidemiol. Infect. (2007), 135, 1031–1037. © 2007 Cambridge University Press
doi:10.1017/S0950268807008817 Printed in the United Kingdom

Disclosures		
Email:	Disclosure(s) selected:	Disclosed Organisation(s):
uma.ibrahim@tuhs.temple.edu	I/We have nothing to disclose	
neen.elagha@tuhs.temple.edu	I/We have nothing to disclose	

Disclosed Organisation(s):

I/We have nothing to disclose

I/We have nothing to disclose

PodArt, Anatomic
Meditation

AACPM, ACFAS, COTH

JFAS

TitleCircles of service in the podiatric profession: 2023-2024 professional service position snapshot.

Submit Date09/16/2024

CorrespondentLast Name: Meyr
Full Name: Andrew J. Meyr, DPM FACFASEmail: ajmeyr@gmail.com
Practice/Company/Residency Program: Temple University Hospital

AuthorsAuthor 1: Jeneen Elagha, DPMAuthor 2: Asmaa Ibrahim, DPM
Author 3: Andy MeyrAuthor 4:
Author 5:Author 6:
Author 7:Author 8:

PurposeThe objective of this investigation was to describe a cross-section of professional service positions during the 2023-2024 academic year. The specific aims were to 1) recognize multi-organizational volunteerism in service positions, 2) promote collaboration and cooperation between organizations, and 3) provide organizations with a visual representation of potential areas for growth.

MethodologyFor the purposes of this investigation, professional service positions were defined as residency program directors, fellowship program directors, podiatric medical school faculty, and APMA House of Delegates participants. These individuals were identified and evaluated for their board certification status and volunteerism with ABFAS, ABPM, ACFAS, APMA and CPME.

Procedures

ResultsResidency program directors and fellowship program directors demonstrated relatively high rates of ABFAS qualification/certification (88.7% and 91.2%, respectfully), relatively low rates of ABPM certification (27.7% and 16.2%, respectfully), high rates of ACFAS volunteerism (13.3% and 28.8%, respectfully), high rates of ABFAS volunteerism (8.4% and 12.5%, respectfully), and high rates of CPME volunteerism (16.8% and 11.3%). These rates of board certification and volunteerism were substantially higher than those observed in the podiatric medical school faculty and APMA House of Delegates cohorts.

DiscussionsThese results demonstrate the importance and high activity levels of American College of Foot and Ankle Surgeons members and volunteers in professional education activities, particularly residency and fellowship training. It is our hope that these results encouraged and support the concept of volunteerism throughout the profession.

FormatScientific

Case Rpt Followup

Student Club

ClassificationEpidemiology/Population Study

Level of EvidenceLevel III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jeneen Elagha, DPM	jeneen.elagha@tuhs.temple.edu	I/We have nothing to disclose	
Asmaa Ibrahim, DPM	asmaa.ibrahim@tuhs.temple.edu	I/We have nothing to disclose	
Andy Meyr	ajmeyr@gmail.com	Intellectual Property rights owned	PodArt, Anatomic Meditation
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	AACPM, ACFAS, COTH
		Member of a medical publication or editorial governing board	JFAS

Title

Prediction of angular correction following first metatarsal-phalangeal joint arthrodesis.

Submit Date

09/16/2024

Correspondent

Last Name: Meyr

Full Name: Andrew J. Meyr, DPM FACFAS Email: ajmeyr@gmail.com

Practice/Company/Residency Program: Temple University Hospital

Authors

Author 1: Shaun Novoshelski, DPM Author 2: Salvatore Fazio, DPM

Author 3: Andrew J. Meyr, DPM FACFAS Author 4:

Author 5: Author 6:

Author 7: Author 8:

Purpose

It is well established that the first metatarsal-phalangeal joint arthrodesis procedure will provide some correction of the first intermetatarsal angle. But while this has previously been investigated as an association, the objective of this investigation was to consider intermetatarsal angle change as a continuous variable and to specifically correlate it with pre-operative values.

Methodology

Radiographs from 57 consecutive first metatarsal-phalangeal joint arthrodeses meeting selection criteria were evaluated. Recorded variables included the first intermetatarsal angle (IMA), hallux valgus angle (HVA), tibial sesamoid position, and hallux interphalangeus angle.

Procedures

Results

A negative Pearson correlation was observed between the pre-operative first IMA and intraoperative change in the first IMA (Pearson -0.5016; $p<0.001$). This means that with progressively increased levels of pre-operative IMA, one might expect greater IMA correction. And for every one degree of pre-operative IMA deformity over 7.5 degrees, 0.57 degrees of correction might be expected. A negative Pearson correlation was observed between the pre-operative HVA and the intraoperative change in the first HVA (Pearson -0.7723; $p<0.001$). This means that with progressively increased levels of pre-operative HVA, one might expect greater HVA correction. And for every one degree of pre-operative HVA deformity over 5 degrees, 0.58 degrees of HVA correction might be expected.

Discussions

Results of this investigation demonstrate a statistical correlation beyond an association of IMA and HVA correction following first metatarsal-phalangeal joint arthrodesis, and might provide foot and ankle surgeons with a degree pre-operative prediction of expected angular correction following the procedure.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Shaun Novoshelski, DPM	shaun.novoshelski@tuhs.temple.edu	I/We have nothing to disclose	
Salvatore Fazio, DPM	salvatore.fazio@tuhs.temple.edu	I/We have nothing to disclose	
Andrew J. Meyr, DPM FACFAS	ajmeyr@gmail.com	Intellectual Property rights owned	PodArt, Anatomic Meditation
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	AACPM, ACFAS, COTH
		Member of a medical publication or editorial governing board	JFAS

Andy Meyr	ajmeyr@gmail.com	Intellectual Property rights owned	PodArt, Anatomic Meditation
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	AACPM, ACFAS, COTH
		Member of a medical publication or editorial governing board	JFAS

Title

An Evaluation of Pointe Readiness Criteria at a Professional Institutional Level

Submit Date

09/17/2024

Correspondent

Last Name: Campbell

Full Name: Sibella S. Campbell MA, PMS-IV

Practice/Company/Residency Program:

Email: sibella.campbell@midwestern.edu

Arizona College of Podiatric Medicine

Authors

Author 1: Sibella S Campbell

Author 2: Lily Cohen PMS-II

Author 3: David Jenkins DPM, FACFAS, FAAPSM

Author 4: Melanie Violand DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Ballet dancers, who perform en pointe, experience higher incidence of pain to the lower extremity, and injury. Thus, physical and mental preparedness before beginning pointe training is vital. Currently, no guidelines exist for determining pointe readiness in young dancers and it is common for recreational studios to lack instructors with the proper training to conduct an adequate readiness evaluation. This study's purpose was to determine what criteria and factors are considered when determining pointe readiness at an elite level.

Methodology

Twenty-two elite dance companies were surveyed across the United States to determine what guidelines, criteria, and examinations are utilized to determine pointe readiness in young dancers. Programs were selected from Dance Magazine's 2023-2024 Pre-Professional Program Guide. Only elite training programs were included.

Procedures

Results

The survey showed 72.2% of programs design their own readiness guidelines. Many responses allude to ankle flexibility/strength, proper technique/alignment, and the student's experience level as the most crucial factors to consider. 63.6% of dancers have 4-6 years of training and 85.7% are 11-12 years old when starting pointe.

Discussions

In conclusion, no standard guideline for evaluating pointe readiness is currently used at the elite level. However, the literature shows that pointe work is associated with increased risk of injury in dancers. Proper training and adequate readiness before beginning transition to pointe work, helps minimize the risk of injury later in their training. Thus, decreasing the need for long term treatment or potential surgeries in the future. Development of guidelines based on best practices for pointe readiness could benefit young dancers.

Format

Scientific

Case Rpt Followup

0

Student Club

Epidemiology/Population Study

Classification

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Sibella S Campbell	sibella.campbell@midwestern.edu	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Phoenix
Lily Cohen PMS-II	lily.cohen@midwestern.edu	I/We have nothing to disclose	
David Jenkins DPM, FACFAS, FAAPSM	djenki@midwestern.edu	I/We have nothing to disclose	
Melanie Violand DPM, FACFAS	mviola@midwestern.edu	I/We have nothing to disclose	

Title

Characteristics of current professional podiatric organization leaders as students.

Submit Date

09/21/2024

Correspondent

Last Name: Meyr

Full Name: Andrew J. Meyr, DPM FACFAS

Practice/Company/Residency Program:

Email: ajmeyr@gmail.com

Temple University Hospital

Authors

Author 1: Jeneen Elagha, DPM

Author 2: Asmaa Ibrahim, DPM

Author 3: Andrew J. Meyr, DPM FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The objective of this investigation was to survey contemporary podiatric organizational leaders in an attempt to elucidate characteristics of these individuals when they were students.

Methodology

An electronic anonymous survey was developed attempting to determine student characteristics and volunteer organizational involvement during medical school. The survey was sent to the executive directors of leading national podiatric organizations including AACPM, ABFAS, ABPM, ACFAS, APMA, COTH, and the CPME. Only DPM responses were included.

Procedures

Results

A survey response rate of 79.7% was achieved. During school it was most common to be involved with ACFAS student chapters (63.3%), APMSA (44.9%), and with student government/class council (28.6%). During their professional careers, it was most common to be involved with a state society (81.8%), APMA (63.0%) and ACFAS (51.9%). Perhaps somewhat surprisingly, a majority of respondents reported that they did not serve in a leadership role with these student organizations (54.5%), and that they did not anticipate going on to a leadership role during their professional careers (58.2%). However, if not overwhelmingly serving in leadership positions during school, this group did demonstrate high levels of other extra-curricular academic activity and volunteerism.

Discussions

This investigation describes characteristics and considerable volunteerism of current podiatric organizational leaders as students. It is our hope that this recognizes, encourages and supports the concept of volunteerism throughout the podiatric profession.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Epidemiology/Population Study

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jeneen Elagha, DPM	jeneen.elagha@tuhs.temple.edu	I/We have nothing to disclose	
Asmaa Ibrahim, DPM	asmaa.ibrahim@tuhs.temple.edu	I/We have nothing to disclose	
Andrew J. Meyr, DPM FACFAS	ajmeyr@gmail.com	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	AACPM, ACFAS, COTH
		Member of a medical publication or editorial governing board	JFAS

Title

Procedure-Specific Plate Provides Improved Construct Strength as Compared to Traditional Fixation Techniques in Medial Malleolus Fractures

Submit Date

10/11/2024

Correspondent

Last Name:Johnson

Full Name:James, W., Johnson, Ph.D.

Practice/Company/Residency Program:Enovis

Email:james.johnson@enovis.com

Authors

Author 1:Shannon King

Author 2:Leah Buch

Author 3:Mia Fiacchi

Author 4:James Johnson, Ph.D.

Author 5:Tyler Touchet, Ph.D.

Author 6:Jason Bariteau MD

Author 7:Daniel Perez MD

Author 8:David Safranski, Ph.D.

Purpose

Medial malleolus fractures require stable fixation to promote effective healing and reduce complications. Traditional methods, such as AO tension band wiring and interfragmentary screws, have demonstrated variable biomechanical outcomes. Recent procedure-specific plates have been developed to offer enhanced fixation strength and consistency. This study aimed to assess the mechanical stability provided by one such plate compared to other common fixation constructs. The purpose of this study was to evaluate and compare the biomechanical performance of three different fixation methods for medial malleolus fractures: a procedure-specific plate, AO tension band wiring, and two interfragmentary screws.

Methodology

The study simulated medial malleolus fractures in Sawbones anatomical models. Three fixation constructs were tested: the procedure-specific plate, AO tension band wiring, and two bicortical interfragmentary screws (N=8/group). A load-to-failure test was conducted, applying a load at 0.2 mm/second until catastrophic failure [stiffness (N/mm), failure force (N)]. Statistical analysis was performed using a one-way ANOVA with Tukey post hoc test.

Procedures

Results

The Plate group demonstrated significantly higher stiffness (mean 148.9 N/mm) and failure force (mean 1239 N) compared to AO tension band wiring (30.5 N/mm, 430.5 N) and two interfragmentary screws (70.0 N/mm, 570.5 N) (p<0.001).

Discussions

The results indicate that the procedure specific plate provides superior biomechanical fixation compared to AO tension band wiring and interfragmentary screws, making it a potentially more reliable option for medial malleolus fracture repair. This improved mechanical stability may reduce the risk of implant failure and improve patient outcomes.

Format

Scientific

Case Rpt Followup

0

Student Club

Classification

Biomechanics and Anatomy

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Shannon King	shannon.king@enovis.com	I/We have nothing to disclose	
Leah Buch	leah.buch@enovis.com	I/We have nothing to disclose	
Mia Fiacchi	mia.fiacchi@enovis.com	I/We have nothing to disclose	
James Johnson, Ph.D.	james.johnson@enovis.com	I/We have nothing to disclose	
Tyler Touchet, Ph.D.	tyler.touchet@enovis.com	I/We have nothing to disclose	
Jason Bariteau MD	jason.bariteau@emory.edu	Consultant/Advisor/Speaker (List all affiliations)	Enovis
Daniel Perez MD	dperez8@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Enovis
David Safranski, Ph.D.	david.safranski@enovis.com	I/We have nothing to disclose	

TitleAVASCULAR NECROSIS OF THE TALUS FOLLOWING CHARCOT MIDFOOT BEAMING

Submit Date09/28/2024

Correspondent

Last Name:Grant-McDonaldFull Name:Grant-McDonaldEmail:lisa.m.grantmcdonald@gmail.comPractice/Company/Residency Program:Eastern Virginia Adult Reconstruction and Limb Salvage

Authors

Author 1:Lisa M Grant-McDonald DPM FACFASAuthor 2:Junaid Khazi DPMAuthor 3:Author 4:Author 5:Author 6:Author 7:Author 8:

PurposeAvascular necrosis (AVN) of the talus is a significant complication of Charcot midfoot reconstruction, caused by osteocyte death from impaired vascular supply. Due to its limited blood flow, the talus is vulnerable to ischemia. The incidence and risk factors of talar AVN following midfoot beaming, particularly concerning anatomical proximity to the talus, are not well-defined.

MethodologyA retrospective review of 135 Charcot midfoot reconstructions from 2016-2022 assessed talar AVN incidence. Nineteen cases of AVN and 19 non-AVN controls were identified. Risk factors such as talonavicular (TN) joint dislocation, end-stage renal disease (ESRD), and body mass index (BMI) were analyzed, with a focus on the effect of surgical proximity to the talus.

Procedures

ResultsThe incidence of talar AVN post-midfoot beaming was approximately 14%. Significant risk factors included TN joint dislocation ($p < 0.05$), ESRD (marginal significance), and higher BMI. TN joint dislocation, indicating closer proximity to the talus, was strongly associated with AVN. AVN-related failures had a shorter time to failure (mean 12 months) compared to non-AVN Charcot failures (6-18 months) and an increased risk of revision surgery, external fixation, and limb loss. Mortality rates at 1-7 years were similar between AVN and non-AVN groups.

DiscussionsA 14% incidence of talar AVN was found following Charcot midfoot beaming, with TN dislocation, ESRD, and BMI as key risk factors. The proximity of the reconstruction to the talus may necessitate reclassifying Charcot collapse patterns and has important implications for surgical planning and AVN risk mitigation.

FormatScientific

Case Rpt Followup84

Student Club

ClassificationRearfoot and Ankle Reconstruction

Level of EvidenceLevel III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lisa M Grant-McDonald DPM FACFAS	lisa.m.grantmcdonald@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Orthofix, Johnson and Johnson
Junaid Khazi DPM	jkhazi4@gmail.com	I/We have nothing to disclose	

TitlePre-Operative Prep Choice - Any Difference in Infection?

Submit Date10/06/2024

Correspondent

Last Name: LiewFull Name: Victoria H Liew, DPMPractice/Company/Residency Program: Palo Alto Medical Foundation Santa Cruz FellowshipEmail: vhliew320@gmail.com

Authors

Author 1: Victoria H Liew, DPMAuthor 2: Brandon K Kim, DPMAuthor 3: Author 4:Author 5: Author 6:Author 7: Author 8:

PurposeRisk of surgery ranges from bone union to skin healing, with the biggest risk being infection and/or death, but can be minimized with proper prevention. Not limited to, pre-incisional prep including CHG, DuraPrep, Alcohol 70%, Povidone-Iodine, etc. Our study analyzed the difference between Povidone-Iodine and CHG while looking at post-operative skin infection rates.

MethodologyThis study compared effectiveness of two skin preparation methods. Four qualified podiatric surgeons were separated into two groups based on their skin prep, Povidone-Iodine versus CHG. Patients excluded if PMH included diabetes, rheumatoid arthritis, infection, revision surgery, etc. Cases stratified based on soft tissue versus bony fixation, and/or age. All data extracted from Epic EMR and retrospectively analyzed. Infection was defined as a patient who required antibiotics for clinical signs of infection within the 30 day post-op period. Overall, there was no statistical significance between groups.

Procedures

ResultsThe CHG group totaled 538 while Povidone-Iodine had 745. 41 patients in PI needed antibiotics while CHG had 27 patients. The 60-69 year old group had the most cases of SSI in both groups, however also had the most patients. There was no difference in soft tissue or bony work between the groups. As age groups increased, more patients needed bony work. Overall, no statistical significance between prep type.

DiscussionsIn conclusion, no statistical difference when using CHG or Povidone-Iodine for prep. The number of patients per age group/ decade had a positive correlation with increased bony work vs soft tissue, correlating the number of patients needing antibiotics.

FormatScientific

Case Rpt Followup

Student Club

ClassificationWound Care/Infectious Diseases

Level of EvidenceLevel III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Victoria H Liew, DPM	vhliew320@gmail.com	I/We have nothing to disclose	
Brandon K Kim, DPM	Brandon.Kim@sutterhealth.org	I/We have nothing to disclose	

Title

Correlation of Plantar Fascia Thickness and Interstitial Tearing

Submit Date

10/09/2024

Correspondent

Last Name:Verdoni

Full Name:Tyler J. Verdoni, DPM, AACFAS

Practice/Company/Residency Program:Florida Orthopedic Foot and Ankle Center (FLOFAC)

Email:tyler.verdoni@gmail.com

Authors

Author 1:Tyler J. Verdoni, DPM, AACFAS

Author 2:James M. Cottom, DPM, FACFAS

Author 3:Jay S. Badell, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To describe the correlation between interstitial plantar fascial tears and fascia thickness

Methodology

Plantar fascial interstitial tears have not been documented in the literature to date. We studied if there was any correlation between the plantar fascial thickness and confirmed interstitial tears. 40 patients and 41 feet met the inclusion criteria over a 1 year period. Retrospective chart review was performed and utilizing the sagittal TIMRI imaging, the plantar fascial thickness was measured at the thickest portion visualized at the insertion. Patient demographics, laterality, and documented interstitial tear were all recorded. The MRI was read and measured independently by a surgical foot and ankle fellow. The recorded measurements were then averaged and standard deviation was also performed.

Procedures

Results

We found an average plantar fascia thickness of 6.04mm [Range 2.71 mm to 9.54 mm] in patients who also had interstitial tears.

Discussions

The average plantar fascia thickness is approximately 3.03 mm in asymptomatic individuals. Patients with heel pain and chronic plantar fasciitis have been found to have a plantar fascia thickness of 5.00 mm in prior studies. In our study, we found on average patients who have MRI findings of interstitial plantar fascia tears have an average fascia thickness of 6.04mm. Over time as degenerative tissue lays down over the plantar fascia, the integrity of the fascia also decreases, which increases the chance of tearing. We hope that the foot and ankle surgeon becomes more aware of interstitial plantar fascial tears, especially if they see increased thickness of the plantar fascia on MRI.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Tyler J. Verdoni, DPM, AACFAS	tyler.verdoni@gmail.com	I/We have nothing to disclose	
James M. Cottom, DPM, FACFAS	jamescottom300@hotmail.cm	I/We have nothing to disclose	
Jay S. Badell, DPM, FACFAS	jaybadell@gmail.com	I/We have nothing to disclose	

Title

AI Machine Learning assistances for detection and severity grading of Hallux Valgus

Submit Date

10/14/2024

Correspondent

Last Name: Anghthong

Full Name: Chayanin Anghthong

Practice/Company/Residency Program:

Email: angthongboom@gmail.com

Faculty of Medicine, KMITL

Authors

Author 1: Arphakorn Wellchan

Author 2: Chayanin Anghthong

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Little is known about the benefits of image analysis using artificial intelligence (AI) for the detection and classification of this disability. This study is to develop the AI models for visual detection and classification of Hallux Valgus via foot clinical image, and evaluate their performances.

Methodology

AI Roboflow and Teachable Machine platforms are used to develop machine learning models, trained with 285 images from an open-access database. Roboflow data are divided into three groups:train set (70%), valid set (20%) and test set (10%). Teachable Machine divides the data into two groups: train set (85%) and test set (15%). Each foot image was labeled as none or mild or moderate or severe degree of Hallux Valgus deformity based on the Manchester scale using an expert (a fellowship-trained foot and ankle surgeon)'s supervision. The models' performances are then tested to assess their accuracy via accuracy values.

Procedures

Results

Roboflow demonstrates strong performance in detecting mild Hallux Valgus deformity, achieving 78% of accuracy on the test dataset. In contrast, Teachable Machine excels in identifying moderate-severe Hallux Valgus deformity, with accuracy values of 69-86%.

Discussions

Both AI models currently show promising potential for aiding in Hallux Valgus screening within clinical settings. Roboflow shows superior performance for mild deformity detection. On the other hand, Teachable Machine demonstrates superior performances for moderate-severe deformity detection. The combined use of these AI models may assist patients and non-expert physicians in the early detection of Hallux Valgus at its initial to severe stages, improving the chances of timely intervention and better treatment outcomes.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Arphakorn Wellchan	64150003@kmitl.ac.th	I/We have nothing to disclose	
Chayanin Anghthong	angthongboom@gmail.com	I/We have nothing to disclose	

Title

Evaluating Improvements in Perioperative Pain Management in Foot and Ankle Surgery with the Use of Regional Liposomal Bupivacaine Blocks

Submit Date

10/14/2024

Correspondent

Last Name:Loitz

Full Name:JakeEmail:loitz.jake@gmail.com

Practice/Company/Residency Program:Kaiser Vallejo

Authors

Author 1:Jake Loitz

Author 2:Morah D Brown MPH

Author 3:Katherine Dang, M.S.; M.A.S

Author 4:Jessica Sibal DPM, MPH

Author 5:Alexander Byrd, DPM

Author 6:Steven D Sellenriek DPM, FACFAS

Author 7:

Author 8:

Purpose

To evaluate whether perioperative pain management is better controlled through use of regional liposomal bupivacaine (LB) blocks during foot and ankle surgeries.

Methodology

A retrospective study was conducted on patients (≥18 years) who received foot and ankle surgery between January 2018 and June 2021 in Kaiser Permanente Northern California. Chi-square and Wilcoxon rank sum were used to compare categorical and continuous variables. Logistic regression was used to determine the odds of getting an opioid refill within 5-30 days post-surgery between the LB and those who received plain bupivacaine or ropivacaine (PBR).

Procedures

Results

A total of 17,624 patients were included, with 254 in the LB group and 17,370 in the BPR. Those receiving LB had 1.50 times the odds (95% CI 1.14, 1.97) of getting an opioid refill within 5-30 days post-surgery compared to those receiving PBR. After adjustment, those receiving LB were no longer at increased odds of getting an opioid refill (adj OR 1.00; 95% CI 0.75, 1.33). There was no statistical difference in the number of refills dispensed 5-30 days post-surgery (p=0.97) or average refill MME/day (p=0.82) between groups. The LB group received a statistically significant lower average MME/day for their index opioid prescription than PBR (p=0.01).

Discussions

The study limitations include the sample size of the LB cohort, and the retrospective nature of the study. The LB group was noted to have no statistically significant difference in refills, while reporting a lower average MME/day for index opioid prescription. Further studies should include larger sample sizes to evaluate the true efficacy of LB.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jake Loitz	loitz.jake@gmail.com	I/We have nothing to disclose	
Morah D Brown MPH	morah.d.brown@kp.org	I/We have nothing to disclose	
Katherine Dang, M.S.; M.A.S	katherine.t.dang@kp.org	I/We have nothing to disclose	
Jessica Sibal DPM, MPH	jessica.x.sibal@kp.org	I/We have nothing to disclose	
Alexander Byrd, DPM	alexander.x.byrd@kp.org	I/We have nothing to disclose	
Steven D Sellenriek DPM, FACFAS	steven.d.sellenriek@kp.org	I/We have nothing to disclose	

Title

Continous Topical Oxygen Therapy as Part of the Reconstructive Ladder of Limb Salvage: A Case Series

Submit Date

10/13/2024

Correspondent

Last Name: Wielgomas

Full Name: Jacob M. Wielgomas, MSII

Practice/Company/Residency Program:

Email: jwielgom@kent.edu

Kent State University College of Podiatric Medicine

Authors

Author 1: Edward Kormylo, DPM

Author 2: Windy Cole, DPM, CWSP

Author 3: Jacob M. Wielgomas, M.A.

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Clinicians are inclined to choose active wound therapies to promote an optimal wound healing environment. Continuous topical oxygen therapy (cTOT) has high-level evidence of supporting wound healing in complex, hypoxic wounds. This report is the first to examine the feasibility of using a cTOT device as part of a treatment algorithm to treat surgical wound dehiscence (SWD) of the lower extremity.

Methodology

This is a single-center, retrospective analysis of lower extremity SWD treated with cTOT. A third-party group performed a retrospective chart review on nine patients to collect data on lower extremity SWD for six months. Each dehiscence was graded using the WUWHS SWD Sandy Grading System and were considered infected per ISDA guidelines. All dehisced surgical sites were treated with standard of care, and cTOT was applied directly to the SWD per manufacturer guidelines and covered with a semi-permeable dressing. Statistical analysis was descriptive of patient demographics and wound metrics.

Procedures

Results

In this cohort, patients who are current smokers with signs of post-operative infection had uncomplicated healing outcomes with the use of cTOT. This suggests that patients who do not have clinically significant hinderances in wound dehiscence healing may benefit from cTOT.

Discussions

The outcomes suggest that cTOT is an effective treatment in the management of SWD, regardless of specific surgical intervention. All SWD were treated with cTOT had wound closure without further hospitalization or procedures. Using cTOT for early intervention of lower extremity SWD can potentially lessen the overall cost of care in these patients.

Format

Scientific

Case Rpt Followup

6

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Edward Kormylo, DPM	ekormylo@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Stryker; KOL for NATROX
Windy Cole, DPM, CWSP	wcole4@kent.edu	Consultant/Advisor/Speaker (List all affiliations)	Clinical Advisory Board NATROX Wound Care
Jacob M. Wielgomas, M.A.	jwielgom@kent.edu	I/We have nothing to disclose	

Title

Effect of Skin Adhesive on Incision Healing for Diabetic Foot and Ankle Surgery

Submit Date

10/04/2024

Correspondent

Last Name: King

Full Name: Bennett J. King, DPM, AACFAS

Email: bennett2013@live.com

Practice/Company/Residency Program: NOMS Ankle & Foot Care Centers Fellowship

Authors

Author 1: Bennett J. King, DPM, AACFAS

Author 2: Lawrence DiDomenico, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

In this study, we aimed to evaluate whether the use of skin adhesive overlying a closed incision reduced infection and dehiscence rates in our diabetic patient population.

Methodology

The senior surgeon began to regularly use tissue adhesive following complete closure of surgical incisions starting on September 8th of 2023. Retrospective chart review was utilized to evaluate consecutive surgical cases on and past this date for patient inclusion criteria consisting of a diagnosis of diabetes and the use of skin adhesive or skin glue within the operative note. Chart review also included surgical cases prior to this date to evaluate diabetic surgical cases without the use of skin adhesive, or skin glue. Surgical cases were excluded that involved an infected open wound, and inpatient infection cases. If a patient had staged reconstructive surgeries during the time only the initial surgery was included. Charts were evaluated for dehiscence and infection.

Procedures

Results

Of the 20 patients that received skin adhesive with skin closure, 10/20 developed dehiscence and 7/20 developed infection. Of the 20 patients that did not receive skin adhesive with skin closure closure, 13 of 20 developed dehiscence and 10 of 20 developed infection.

Discussions

The use of skin adhesive reduced infection and dehiscence rates in our diabetic surgical patients by 15 percent. In conclusion, we have found that in our patient population skin adhesive reduces infection and dehiscence rates.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Diabetic Foot

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Bennett J. King, DPM, AACFAS	bennett2013@live.com	I/We have nothing to disclose	
Lawrence DiDomenico, DPM, FACFAS	ld5353@aol.com	I/We have nothing to disclose	

Title

Achilles Tendon Rupture versus Limb Dominance: A Retrospective Cohort Study

Submit Date

10/13/2024

Correspondent

Last Name: Henry

Full Name: Kaitlin A. Henry, BS

Practice/Company/Residency Program:

Email: kaahenry@wakehealth.edu

Wake Forest University School of Medicine

Authors

Author 1: Kaitlin A. Henry, BS

Author 2: Garrett S. Bullock, PhD, DPT

Author 3: Clark K. Brackney, DPM

Author 4: Robert D. Teasdall, MD

Author 5: Aaron T. Scott, MD

Author 6: Paula Gangopadhyay, DPM, FACFAS

Author 7: Kerry A. Danelson, PhD, MS, MBA

Author 8:

Purpose

While Achilles tendon ruptures (ATRs) are a common and significant cause of morbidity for patients, limited research exists exploring the relationship between upper and lower extremity dominance and laterality of rupture. This study aims to investigate the relationship between ATR laterality and hand or leg dominance, with the goal of better understanding risk factors involved.

Methodology

With IRB approval, ATRs treated from 2008-2018 by three surgeons within a single health system were identified using CPT and ICD codes. Medical records were reviewed for demographic information, and patients were interviewed by telephone to ascertain hand and leg dominance through a brief survey. 74 patients met inclusion criteria. Odds ratio with 95% CI was utilized to compare ATR laterality with limb dominance.

Procedures

Results

55% of patients sustained an Achilles rupture ipsilateral to hand dominance. 45% of patients sustained an Achilles rupture ipsilateral to leg dominance. When controlling for age, body mass index, and previous Achilles injury, patients had 8.9 greater odds of sustaining an Achilles injury ipsilateral to hand dominance. Unadjusted models demonstrated no difference in odds of sustaining an Achilles rupture ipsilateral to hand or leg dominance.

Discussions

To the authors' knowledge, there is no previously published literature that specifically examines upper and lower extremity dominance with the laterality of an ATR. In an adjusted model, our study identified a greater odds of sustaining an Achilles injury ipsilateral to hand dominance. This underscores the need for further research to refine our understanding of the risk and prognostic factors associated with Achilles tendon ruptures.

Format

Scientific

Case Rpt Followup

Student Club

Biomechanics and Anatomy

Classification

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kaitlin A. Henry, BS	kaahenry@wakehealth.edu	I/We have nothing to disclose	
Garrett S. Bullock, PhD, DPT	gbullock@wakehealth.edu	I/We have nothing to disclose	
Clark K. Brackney, DPM	brackneyck@gmail.com	I/We have nothing to disclose	
Robert D. Teasdall, MD	teasdall@wakehealth.edu	I/We have nothing to disclose	
Aaron T. Scott, MD	aascott@wakehealth.edu	Grant/Research funding	Department of Defense
Paula Gangopadhyay, DPM, FACFAS	pgangopa@wakehealth.edu	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	North Carolina Foot and Ankle Society
		Grant/Research funding	Department of Defense
Kerry A. Danelson, PhD, MS, MBA	kdanelso@wakehealth.edu	Grant/Research funding	Department of Defense, National Institutes of Health

Title

Incidence of Interstitial Plantar Fascial Tears in Patients with Heel Pain

Submit Date

10/09/2024

Correspondent

Last Name:Verdoni

Full Name:Tyler J. Verdoni, DPM, AACFAS

Practice/Company/Residency Program:

Email:tyler.verdoni@gmail.com

Florida Orthopedic Foot and Ankle Center (FLOFAC)

Authors

Author 1:Tyler J. Verdoni, DPM, AACFAS

Author 2:James M. Cottom, DPM, FACFAS

Author 3:Jay S. Badell, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To identify the incidence of interstitial plantar fascial tears for patients presenting with heel pain

Methodology

In our practice, we routinely see patients with heel pain who have tried conservative therapies with no relief of symptoms. MRIs are obtained in which we have observed interstitial plantar fascia tears, which may have been missed on initial evaluation. We performed retrospective chart review of 118 patients who were diagnosed with plantar fascial fibromatosis (ICD-10 M72.2) over a 1 year time period. Patients who did not get an MRI were excluded from the study bringing the total patients to 98. Patient age, laterality, duration of symptoms and if they required surgery were all recorded. MRI was reviewed by both a musculoskeletal training radiologist and a foot and ankle surgical fellow and the plantar fascia was inspected for any interstitial tearing along the insertion. Patient demographics were averaged.

Procedures

Results

We observed an incidence of 36.73% (36/98) of patients with an interstitial plantar fascia tear in this cohort over the 1 year time period.

Discussions

In our study we identified that the rate of plantar fascia tearing was 36.73%. The incidence of plantar fascial tearing has not been documented to date in the literature. This is the first study of its kind to identify the rate of interstitial plantar fascia tears. We hope our results are utilized by physicians to keep this diagnosis on their radar when encountering patients with heel pain, as the treatment algorithm for interstitial tears is different when compared to acute plantar fasciitis.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Tyler J. Verdoni, DPM, AACFAS	tyler.verdoni@gmail.com	I/We have nothing to disclose	
James M. Cottom, DPM, FACFAS	jamescottom300@hotmail.com	I/We have nothing to disclose	
Jay S. Badell, DPM, FACFAS	jaybadell@gmail.com	I/We have nothing to disclose	

Title

Union Rates Following Power Rasp Joint Preparation for Foot and Ankle Arthrodesis:
A Retrospective Study of 418 Fusion Attempts

Submit Date

10/08/2024

Correspondent

Last Name:Verdoni

Full Name:Tyler J. Verdoni, DPM, AACFAS

Practice/Company/Residency Program:

Email:tyler.verdoni@gmail.com

Florida Orthopedic Foot and Ankle Center (FLOFAC)

Authors

Author 1:Tyler J. Verdoni, DPM, AACFAS

Author 2:Jay S. Badell, DPM, FAFAS

Author 3:James M. Cottom, DPM, FAFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To present an update on our outcomes with power rasp joint preparation for arthrodesis in the foot and ankle

Methodology

Power rasp instrumentation presents a potential alternative for the surgeon to not only improve operating room efficiency, but also provide fast, reproducible, and adequate joint preparation thereby yielding excellent union rates. This study retrospectively analyzed 408 total arthrodesis attempts performed on 198 patients. Procedures included Lapidus bunionectomy/1st tarsometatarsal joint (TMTJ) fusion, midfoot fusions involving more than one TMTJ, isolated subtalar joint fusions (STJ), isolated talonavicular fusions (TNJ), and triple arthrodeses (STJ, TNJ, CCJ). The procedures were performed at a single institution with power rasp joint preparation (PJR) as the primary tool for debridement of all cartilage from the articular surfaces of the joint in question. Minimum follow-up was 12 months. Radiographic union was defined on X-rays with osseous bridging and trabeculation across the fusion site using standard weightbearing foot radiographs taken at 3, 6, and 12 month intervals postoperatively.

Procedures

Results

4.5% of all arthrodesis attempts went on to develop a radiographic nonunion after 12 months (19/418).

Discussions

Across our patient cohort, we observed a 95.5% arthrodesis rate with use of power rasp joint preparation. Previous studies have found great success with power rasp joint preparation with no difference in joint union, decreased surgical time, and decreased operative costs when compared to typical joint preparation methods. We hope our updated results on this joint preparation method add to the body of literature to show the efficacy of power rasp joint preparation.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Tyler J. Verdoni, DPM, AACFAS	tyler.verdoni@gmail.com	I/We have nothing to disclose	
Jay S. Badell, DPM, FAFAS	jaybadell@gmail.com	I/We have nothing to disclose	
James M. Cottom, DPM, FAFAS	jamescottom300@hotmail.com	I/We have nothing to disclose	

Title

Outcomes of Calcanectomy as an Approach to Limb Salvage

Submit Date

10/15/2024

Correspondent

Last Name: Lahiri

Full Name: Rajat K Lahiri, DPM

Practice/Company/Residency Program:

Email: rajat.lahiri@live.com

Swedish Medical Center Residency

Authors

Author 1: Rajat K Lahiri, DPM

Author 2: Kaj H Johansen, MD, PHD

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Calcanectomy is often performed in cases of severe foot infections or ulcerations and an option towards preserving the limb. The purpose of this study is to evaluate its viability as a reliable option for limb salvage.

Methodology

This study is a retrospective chart review case series involving a group of 21 patients who underwent either Syme amputation or subtotal calcanectomy between 2010 and 2019. The average age of patients at the time of surgery was 68 years, comprising 12 males and 9 females. All procedures were performed by a single surgeon. The primary focus of the study was to analyze two key variables: time to below-knee amputation (BKA) and time to death.

Procedures

Results

52.4% of the patients in the study underwent BKA. The average time to BKA after initial surgery was 182 days (range=7-1315). The average time to death after initial surgery was 563 days (range=31-1488).

Discussions

This study found that over half of the patients (52.4%) required below-knee amputation following calcanectomy, with an average time to BKA of 182 days. The results demonstrated significant variability in patient outcomes. These results underscore the necessity of evaluating calcanectomy as a potential limb salvage option, particularly as it may provide a viable strategy for delaying limb loss in certain patients. However, calcanectomies carry risks of ulceration and can result in limitations in mobility. Various studies suggest that the time to death following BKA are comparable to those observed in this study regarding calcanectomies, reinforcing the need for consideration of this limb-sparing procedure as an option.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Diabetic Foot

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Rajat K Lahiri, DPM	rajat.lahiri@live.com	I/We have nothing to disclose	
Kaj H Johansen, MD, PHD	kjohansen45@icloud.com	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Washington State Chapter of the American College of Surgeons, Western Vascular Society

Title

Radiographic Evaluation of Manual vs. Jig Assisted Reduction of Hallux Abducto Valgus in Modified Lapidus Procedure

Submit Date

10/07/2024

Correspondent

Last Name:Regal

Full Name:Andrew, J, Regal, DPM AACFASEmail:Regal.dpm@gmail.com

Practice/Company/Residency Program:Indy foot and ankle reconstructive surgery fellowship

Authors

Author 1:Andrew Regal, DPM AACFASAuthor 2:Kalen Farr, DPM AACFAS

Author 3:Donald McDonald, DPM AACFASAuthor 4:Zachary Hill, DPM AACFAS

Author 5:J. Michael Miller, DPM FACFASAuthor 6:Scott Hoffman, DPM FACFAS

Author 7:Kierstin Catlett, PHDAuthor 8:Douglas Blackledge, DPM FACFAS

Purpose

Hallux abducto valgus (HAV) deformity is an exceedingly common ailment treated by foot and ankle surgeons. The modified Lapidus procedure is a frequently performed and well documented procedure to address HAV. Multiple reduction systems, known as jigs, have been developed to assist in reduction of deformity. This study aims to evaluate the difference in radiographic outcome between manual reduction and jig- assisted reduction at initial post operative weightbearing.

Methodology

This is an IRB-exempt retrospective analysis of patients who underwent a Lapidus procedure by one of 5 surgeons at a single institution from 7/2023-12/2023. Radiographic analysis was performed pre-operatively and again at 6 weeks, when full weight-bearing post-operative films were taken. Intermetatarsal 1-2 (IM 1-2) angle and tibial sesamoid position were used for measurement. Statistical analyses were performed utilizing R (v4.1) with significance set at p<0.05.

Procedures

Results

90 patients (55 manual, 35 jig assisted) met inclusion criteria. Jig and manual reduction groups exhibited a statistically significant improvement in IM 1-2 and tibial sesamoid positions from pre-op to post-op (p<0.01). The jig assisted group was found to have a larger reduction in IM 1-2 than the manual (p<0.01). There was no difference in tibial sesamoid position reduction between the two groups (p=0.12).

Discussions

Adequate correction of HAV deformity can be obtained through manual or jig-assisted reduction. Increased correction of IM 1-2 angle was noted in jig assisted group compared to manual reduction group. No difference in tibial sesamoid position correction was found.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Andrew Regal, DPM AACFAS	regal.dpm@gmail.com	I/We have nothing to disclose	
Kalen Farr, DPM AACFAS	kalen_farr@ahni.com	I/We have nothing to disclose	
Donald McDonald, DPM AACFAS	donald_mcdonald@ahni.com	I/We have nothing to disclose	
Zachary Hill, DPM AACFAS	zachary_hill@ahni.com	I/We have nothing to disclose	
J. Michael Miller, DPM FACFAS	michael_miller@ahni.com	Consultant/Advisor/Speaker (List all affiliations)	Fusion orthopedics
Scott Hoffman, DPM FACFAS	scott_hoffman@ahni.com	I/We have nothing to disclose	
Kierstin Catlett, PHD	kierstin_catlett@ahni.com	I/We have nothing to disclose	
Douglas Blackledge, DPM FACFAS	douglas_blackledge@ahni.com	Consultant/Advisor/Speaker (List all affiliations)	Paragon28

Title

An Examination of Human Skin Microbiome in Diabetic and Non-diabetic Subjects

Submit Date

10/09/2024

Correspondent

Last Name:Clark

Full Name:Sierra

Practice/Company/Residency Program:

Email:sclark81@kent.edu

Kent State University College of Podiatric Medicine

Authors

Author 1:Windy Cole, DPM, CWSP

Author 2:Nicholas Butler, DPM

Author 3:Nina Kovolyan, CRC

Author 4:Sierra Clark, MPH

Author 5:Paola Peña, BS

Author 6:

Author 7:

Author 8:

Purpose

This study was conducted to identify differences in the microbiomes of individuals with and without diabetes and if these variations lead to a higher risk of developing skin and soft tissue infections in diabetics.

Methodology

The right plantar forefoot and interdigital spaces (IDS) were swabbed in 100 subjects to compare the cutaneous microbiome. This was conducted as a single-center analytical, cross-sectional study with N=50 with and N=50 without diabetes. To identify and quantify bacterial sequences Next Generation Sequencing (NGS) was used.

Procedures

Results

When comparing both sampling sites (IDS and plantar region) in non-diabetics and diabetics it was found that the microbiomes were substantially similar when considering the frequency of detection and relative abundance. The most frequently detected microbiome amongst all cohorts was Corynebacterium pseudogenitalium-tuberculoearicum found in 98% of IDS healthy samples (with an average of 13.58% relative abundance) and plantar healthy samples (with a relative abundance of 4.92%) and 96% of IDS diabetic samples (with a relative abundance of 14.82%) and plantar diabetic samples (with a relative abundance of 5.47%). The most frequently detected bacterial species across all cohorts was Staphylococcus pettenkoferi. Cutebacterium acnes was significantly decreased in healthy individuals.

Discussions

To improve our understanding of the complexity of the human cutaneous microbiome and improve our knowledge of skin health management further study is needed. Regular skin and wound hygiene practices are supported by this study to be part of holistic wound prevention and management protocols.

Format

Scientific

Case Rpt Followup

0

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Windy Cole, DPM, CWSP	wcole4@kent.edu	I/We have nothing to disclose	
Nicholas Butler, DPM	nbutler5@kent.edu	I/We have nothing to disclose	
Nina Kovolyan, CRC	nkovolya@kent.edu	I/We have nothing to disclose	
Sierra Clark, MPH	sclark81@kent.edu	I/We have nothing to disclose	
Paola Peña, BS	ppenal@kent.edu	I/We have nothing to disclose	

TitleEffect of Hemoglobin A1c on Union Rates in Foot and Ankle Surgery

Submit Date10/09/2024

Correspondent

Last Name:BurandtFull Name:Madison, K, BurandtEmail:madison.burandt12@gmail.comPractice/Company/Residency Program:West Penn Hospital Foot and Ankle Institute

Authors

Author 1:Madison, K, Burandt, DPMAuthor 2:Michael, A, Savisky, DPM, AACFASAuthor 3:Jenna, D, Li, MSAuthor 4:Alan, R, Catanzariti, DPM, FACFASAuthor 5:Author 6:Author 7:Author 8:

PurposeThe purpose of this study was to evaluate union rates in patients with diabetes mellitus to identify if there is an optimal preoperative hemoglobin A1c value associated with a reduced risk of nonunion/ malunion.

MethodologyThis study included 106 patients. Inclusion criteria: adults 18+, diabetes mellitus, foot or ankle arthrodesis/osteotomy/open reduction internal fixation between 01/01/2015- 05/01/2020, pre-operative hemoglobin A1c, preoperative/postoperative radiographs, and 11 months minimum follow up. Exclusion criteria: no diabetes mellitus diagnosis, no documented preoperative hemoglobin A1c or diagnosis of Charcot neuroarthropathy. BMI and location of procedure (forefoot, midfoot or hindfoot) were also assessed.

Procedures

Results86 patients had radiographic union; 19 had a nonunion/malunion demonstrated by CT. No significant mean differences were found between union and malunion/nonunion patient's for preoperative hemoglobin A1c, last known hemoglobin A1c or the difference between last hemoglobin A1c and preoperative hemoglobin A1c. For the demographic variables, only weight/BMI were found to be significant. No statistically significant differences were found in union versus nonunion/malunion when looking at age, height, gender or area of the foot/ankle the procedure was performed on.

DiscussionsDomek et al, in 2016, demonstrated that a 1% increase in HbA1c, increased the risk of developing a complication by 5%. We found no significant differences in union versus nonunion/malunion related to hemoglobin A1c levels in this study. We did find a significant difference in BMI related to union versus nonunion rates. This is a modifiable risk factor that can be addressed prior to surgery.

FormatScientificCase Rpt Followup11Student ClubDiabetic FootClassificationLevel III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Madison, K, Burandt, DPM	madison.burandt12@gmail.com	I/We have nothing to disclose	
Michael, A, Savisky, DPM, AACFAS	michael.savisky@ahn.org	I/We have nothing to disclose	
Jenna, D, Li, MS	jenna.li@ahn.org	I/We have nothing to disclose	
Alan, R, Catanzariti, DPM, FACFAS	alan.catanzariti@ahn.org	I/We have nothing to disclose	

Title

Association Between Minimally Invasive Osteotomy Techniques and Bunion Correction Outcomes

Submit Date

10/07/2024

Correspondent

Last Name: Lowe

Full Name: Daniel Lowe, DPM

Practice/Company/Residency Program:

Email: lowe.da34@gmail.com

Trinity Health

Authors

Author 1: Daniel D Lowe

Author 2: Leonard Rosefigura, DPM

Author 3: Jade Henckel, DPM

Author 4: Vanessa Adelman, DPM

Author 5: Ronald Adelman, DPM

Author 6:

Author 7:

Author 8:

Purpose

Bunion pathology is associated with increased medial bone, known as the medial eminence. Minimally invasive surgery (MIS) with distal osteotomy may use this eminence to enhance bone shift and correction. This study aims to evaluate (1) whether MIS distal osteotomy improves hallux abducto valgus (HAV) radiographic outcomes, and (2) if specific radiographic parameters are linked to changes in the HAV angle and forefoot width.

Methodology

A retrospective analysis of 20 patients who underwent MIS bunion correction was conducted, comparing pre- and post-operative radiographs. Pearson correlation assessed univariate correlations, while multivariable linear regression analyzed the relationship between surgical technique and radiographic measures for HAV and forefoot width reduction (FWR).

Procedures

Results

Significant correlations were found between the angulation of 1st metatarsal head and FWR ($r = -0.450$, $p = 0.047$), as well as between DMAA and HVA ($r = 0.883$, $p < .001$). Other correlations included DMAA and IMA ($r = 0.573$, $p = 0.008$), HVA and shift percent ($r = 0.541$, $p = 0.014$), and HVA and sesamoid position ($r = 0.530$, $p = 0.016$). However, the location and angle of the osteotomy cut were not significantly correlated with HAV correction or FWR. For the multivariable linear regression model only DMAA was significantly associated HAV correction ($\beta = 0.670$, $p < 0.001$) and angulation of 1st metatarsal head and shift percent were associated with FWR ($\beta = -0.514$, $p = 0.017$ and $\beta 0.533$, $p = 0.016$)

Discussions

This study shows that the location and angle of the osteotomy in MIS bunion correction are not significantly associated with HAV correction or forefoot width reduction (FWR). Additionally, utilizing the medial eminence to increase the surface area for capital fragment translation does not appear to improve outcomes.

Format

Scientific

Case Rpt Followup

0

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Daniel D Lowe	lowe.da34@gmail.com	I/We have nothing to disclose	
Leonard Rosefigura, DPM	leonard.rosefigura@my.rfums.org	I/We have nothing to disclose	
Jade Henckel, DPM	jade.henckel@trinity-health.org	I/We have nothing to disclose	
Vanessa Adelman, DPM	vanessaadelman@yahoo.com	I/We have nothing to disclose	
Ronald Adelman, DPM	ronald_adelman@ihacares.com	I/We have nothing to disclose	

TitleRadiographic Incidence of Deltoid Insufficiency in Patients Undergoing Hindfoot Arthrodesis

Submit Date10/14/2024

CorrespondentLast Name: Litarov
Full Name: ArinaEmail: arina.litarov@ahn.org
Practice/Company/Residency Program: Western Pennsylvania Hospital/ Allegheny Health Network

AuthorsAuthor 1: Jacob G. Gross, DPMAuthor 2: Arina Litarov, DPM
Author 3: Alan R. Catanzariti, DPM, FACFASAuthor 4: Vincent Vacketta, DPM, AACFAS
Author 5: Jacob Jones, DPM, AACFASAuthor 6: Jonathan Nigro, DPM, AACFAS
Author 7: Brandon M. Schooley, MDAuthor 8:

PurposeThe purpose of this study is to determine reliability of preoperative radiographs and MRI in diagnosing deltoid insufficiency, and to determine the true incidence of deltoid insufficiency in patients with stage IIA-D Progressive collapsing foot deformity (PCFD) undergoing hindfoot arthrodesis.

MethodologyWe retrospectively examined the deltoid ligament of patients with diagnosed stage IIA-D PCFD by evaluating preoperative MRI studies and intra-operative stress ankle radiographs. A total of 37 patients that underwent hindfoot arthrodesis for treatment of stage IIA-D PCFD correction who had pre-operative MRI's and intra-operative stress ankle radiographs were included in this study. MRI results were read by a single fellowship trained musculoskeletal radiologist. All stress radiographs and arthrodesis procedures were performed by a single surgeon. We ran sensitivity and specificity tests as well as odds ratio.

Procedures

Results7 patients were positive for deltoid disruption on both MRI and intra-operative stress exam. 13 patients were negative for deltoid disruption on both MRI and stress exam. 4 patients were positive for deltoid disruption on MRI but negative on stress exam. 13 patients were negative on MRI but positive for deltoid disruption on stress exam. MRI sensitivity found to be 35%. MRI specificity found to be 76.5%. Odd ratio found to be 1.75

DiscussionsThe goal of this study was to evaluate the reliability of MRI to detect deltoid insufficiency prior to reconstruction of end stage PCFD. Our study found that MRI alone was not sufficient in determining deltoid disruption in end stage PCFD.

FormatScientific

Case Rpt Followup

Student Club
ClassificationRearfoot and Ankle Reconstruction

Level of EvidenceLevel III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Jacob G. Gross, DPM	jacob.gross@ahn.org	I/We have nothing to disclose	
Arina Litarov, DPM	arina.litarov@ahn.org	I/We have nothing to disclose	
Alan R. Catanzariti, DPM, FACFAS	alan.catanzariti@ahn.org	I/We have nothing to disclose	
Vincent Vacketta, DPM, AACFAS	vvacketta@gmail.com	I/We have nothing to disclose	
Jacob Jones, DPM, AACFAS	jones.jacobmichael@gmail.com	I/We have nothing to disclose	
Jonathan Nigro, DPM, AACFAS	jonnigro18@gmail.com	I/We have nothing to disclose	
Brandon M. Schooley, MD	Brandon.Schooley@ahn.org	I/We have nothing to disclose	

Title

Determining the accuracy of plantar fasciitis injection placement in a cadaveric model: ultrasound vs palpation guided approach

Submit Date

10/08/2024

Correspondent

Last Name: Luetngen

Full Name: Sarah

Practice/Company/Residency Program:

Email: sunfish01@gmail.com

Swedish Medical Center

Authors

Author 1: Hargun Oberai, DPM

Author 2: Eyad Xoubi, DPM

Author 3: Sagar Shah, DPM

Author 4: Sarah Luetngen, DPM

Author 5: Alicia Knee, DPM

Author 6:

Author 7:

Author 8:

Purpose

To determine whether ultrasound-guided (USG) or palpation guided (PG) injections of the deep plantar fascia (PF) results in a more accurate placement of injectate.

Methodology

10 paired feet from 5 cadavers were randomized into two groups, USG and PG. The injectate consisted of 1 cc methylene blue dye. Injections were aimed towards the anterior margin of the medial calcaneal tuberosity. The specimens were dissected to analyze the absence or presence of dye at predetermined anatomic landmarks, along with distribution.

Procedures

Results

In n=5 (100%) of specimens in both groups, the medial and central PF band were dyed. The lateral band in each group, n=1 (20%) was also dyed. For USG n=4 (80%) specimens had dye located deep to the PF and the PG group had n=3 (60%). The USG group had dye located in the fat pad for n=2 (40%) and PG had n=0. The dye distribution had a larger variability between the individual cadavers (8mm to 20 mm) than between the USG and PG of the same specimen (~1 mm to 3 mm).

Discussions

There is no clear consensus in literature as to whether USG or PG technique provides a more accurate placement of the injectate. This study did not show a difference between the two groups for accuracy of placement. The results did show that only the USG group had dye located in the fat pad, an area generally avoided to prevent atrophy. These results warrant further investigation.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Biomechanics and Anatomy

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Hargun Oberai, DPM	hargunoberai@gmail.com	I/We have nothing to disclose	
Eyad Xoubi, DPM	eyadxoubi@gmail.com	I/We have nothing to disclose	
Sagar Shah, DPM	sagarvivek@gmail.com	I/We have nothing to disclose	
Sarah Luetngen, DPM	sunfish01@gmail.com	I/We have nothing to disclose	
Alicia Knee, DPM	Alicia_Knee@sbcglobal.net	I/We have nothing to disclose	

Title

Site-Specific Structural Allograft with Bone Marrow Aspirate: Fusion Rates in First Metatarsophalangeal Joint Arthrodesis

Submit Date

10/11/2024

Correspondent

Last Name: Moon

Full Name: Zohaib

Practice/Company/Residency Program:

Email: zohaibmoon3@gmail.com

Orthopedic Center of Florida

Authors

Author 1: Zohaib Moon, DPM, AACFAS

Author 2: Maria Hidalgo, BS

Author 3: Andrew Belis, DPM, FACFAS

Author 4: Michael Black, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study is to evaluate the fusion rates in first metatarsophalangeal joint (MTPJ) arthrodesis when using bone marrow aspirate (BMA) soaked site-specific structural allografts. The rationale is to determine if the addition of a BMA-soaked structural allograft can allow for the maintenance of length and structural integrity without compromising arthrodesis rates and clinical outcomes when compared to traditional primary (end-to-end) joint fusion techniques.

Methodology

A retrospective review of patients who underwent first MTPJ arthrodesis by two experienced surgeons at our institution using a dorsal plate and screw construct. Patients with greater than one year follow-up were included. Demographic information, indication for fusion, allograft length, fusion rates, and time to fusion were evaluated. Fusion rates and time to fusion were evaluated using postoperative weight-bearing radiographs at 1 week, 6 weeks, 3 months, 6 months, and 1 year.

Procedures

Results

The sample included 22 patients (11 primary fusions, 11 revision surgeries), with an average age of 69.6 years and an average BMI of 27.4. The overall fusion rate was 90.9% (20/22). Both non-unions occurred in the revision group, one asymptomatic and one symptomatic requiring reoperation. The average allograft length was 19.8mm. The average time to fusion was 81.85 days.

Discussions

The use of BMA-soaked structural allografts in first MTPJ arthrodesis resulted in a high overall fusion rate, comparable to traditional end-to-end fusion rates in the literature. This supports the hypothesis that BMA-soaked structural allografts can provide length at varying levels and mechanical support without sacrificing healing rates to the arthrodesis site.

Format

Scientific

Case Rpt Followup

12

Student Club

Forefoot Reconstruction

Classification

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Zohaib Moon, DPM, AACFAS	zohaibmoon3@gmail.com	I/We have nothing to disclose	
Maria Hidalgo, BS	mariaphidalgo05@gmail.com	I/We have nothing to disclose	
Andrew Belis, DPM, FACFAS	abelis@ocfla.net	I/We have nothing to disclose	
Michael Black, DPM, FACFAS	mblack@ocfla.net	I/We have nothing to disclose	

TitleRadiographic Incidence of Syndesmosis Insufficiency in Patients Undergoing Hindfoot Arthrodesis

Submit Date10/12/2024

CorrespondentLast Name: Kline
Full Name: Isaac M Kline, DPMEmail: isaac.kline@ahn.org
Practice/Company/Residency Program: West Penn Hospital/Allegheny Health Network

AuthorsAuthor 1: Isaac Kline, DPMAuthor 2: Alan Catanzariti, DPM , FACFAS
Author 3: Brandon Schooley, MDAuthor 4:
Author 5:Author 6:
Author 7:Author 8:

PurposeThe primary objective of this study is to determine the radiographic incidence of ankle syndesmosis insufficiency in patients undergoing hindfoot arthrodesis for end-stage progressive collapsing foot deformity (Stage II A through D).

MethodologyThe study will collect patient demographics, preoperative diagnoses, surgical procedures, and complications. Fisher's exact test will analyze the correlation between syndesmotomic and deltoid disruption. The sample includes all consecutive cases within the study window. Of 85 patients from a single surgeon, 69 with preoperative MRIs were included. A fellowship-trained musculoskeletal radiologist independently reviewed all MRIs.

Procedures

Results13 of 69 (18.8%) had disruption of the syndesmosis prior to surgery. 23 of 69 (33.33%) had deltoid ligament attenuation. 1 of 69 (1.4%) had a complete deltoid rupture. 9 patients (13.04%) had both syndesmotomic and deltoid disruption. A Fisher's exact test was performed and found an odds ratio of 6.75 (p-value: 0.0021) i.e. those with deltoid attenuation have a 6.75 times higher chance of syndesmosis disruption than those without.

DiscussionsTibiotalar valgus frequently occurs after late-stage PCFD reconstruction, despite proper hindfoot alignment. Multiple factors contribute to tibiotalar valgus. Research suggests that addressing forefoot varus and repairing deltoid and spring ligaments may reduce its incidence. Given the syndesmosis' role in ankle stability, particularly in the frontal plane, considering structures proximal to the tibiotalar joint during PCFD reconstruction is important. The authors propose investigating whether prophylactic syndesmotomic fixation in patients with MRI-evident syndesmosis attenuation or disruption could reduce tibiotalar valgus following end-stage PCFD reconstruction.

FormatScientific

Case Rpt Followup

Student Club

ClassificationRearfoot and Ankle Reconstruction

Level of EvidenceLevel III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Isaac Kline, DPM	isaac.kline@ahn.org	I/We have nothing to disclose	
Alan Catanzariti, DPM , FACFAS	alan.catanzariti@ahn.org	I/We have nothing to disclose	
Brandon Schooley, MD	brandon.schooley@ahn.org	I/We have nothing to disclose	

Title

Comparative Analysis of Closure Techniques in Transmetatarsal Amputations: Impact on Healing and Complications

Submit Date

10/10/2024

Correspondent

Last Name:Waller

Full Name:Justin J. Waller, DPMEmail:jjwaller@wakehealth.edu

Practice/Company/Residency Program:Atrium Health Wake Forest Baptist

Authors

Author 1:Justin J. Waller, DPM

Author 2:Alec R. Wroblewski, DPM

Author 3:Paula Gangopadhyay, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Transmetatarsal amputation (TMA) is a crucial limb salvage procedure for severe foot complications in diabetic patients and often the final procedure executed with hopes of avoiding below knee amputation. Despite its benefits, TMAs are often associated with variable healing rates and complications, necessitating further investigation into optimizing surgical outcomes. To our knowledge, this is the first study to directly compare nylon, prolene, and staples for closure of TMA and assess the rate of wound dehiscence and infection.

Methodology

This retrospective study reviewed 108 TMA cases over a period of nine years, assessing outcomes based on closure materials (nylon sutures, polypropylene [Prolene™] sutures, staples). Data included demographics, comorbidities, closure methods, and outcomes (wound healing and infections). Statistical analysis employed Fisher's Exact Test and logistic regression.

Procedures

Results

Wound development occurred in 64.8% of patients, with no significant difference observed among closure materials (p = 0.34). Infections occurred in 9.3%, also showing no significant difference (p = 0.73). Logistic regression confirmed no material-specific impact on outcomes (p > 0.05). Comorbidities such as BMI significantly influenced outcomes (p = 0.03).

Discussions

While closure material did not significantly affect TMA outcomes in this study, patient-specific factors, particularly BMI played a crucial role. Despite the prevalence of PAD, high A1c levels, and varying closure techniques (layered vs single layer closure) within our population, there were no significant correlations with wound complications noted. These findings emphasize the need for tailored preoperative management to enhance TMA outcomes. Future research should explore other perioperative variables influencing wound healing in TMAs.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Justin J. Waller, DPM	jjwaller@wakehealth.edu	I/We have nothing to disclose	
Alec R. Wroblewski, DPM	awroblew@wakehealth.edu	I/We have nothing to disclose	
Paula Gangopadhyay, DPM, FACFAS	pgangopa@wakehealth.edu	Member of a medical publication or editorial governing board	North Carolina Foot and Ankle Society
		Grant/Research funding	Department of Defense

Title

Nitinol staples for Lapidus Arthrodesis in Hallux valgus

Submit Date

10/10/2024

Correspondent

Last Name: Huetter

Full Name: Konstanze K. Huetter, MD

Email: konstanze.huetter@medunigraz.at

Practice/Company/Residency Program: Medical University of Graz

Authors

Author 1: Viktor Labmayr, MD

Author 2: Marlene Martinelli

Author 3: Konstanze K. Huetter, MD

Author 4: Martin Ornig, MD

Author 5: Patrick Holweg, MD, PhD

Author 6:

Author 7:

Author 8:

Purpose

This study investigates postoperative outcomes after Lapidus arthrodesis for hallux valgus using two nitinol staples, focusing on fusion rates, reoperation rates, and patient satisfaction.

Methodology

A retrospective cohort study was conducted to analyze 66 cases (62 patients) who underwent Lapidus arthrodesis between June 2018 and June 2022. Two commercially available nitinol staples were utilized for the fusion of the first tarsometatarsal joint (TMT1) in all surgical interventions. Among the cases, 44 involved concomitant surgical procedures, while 22 were classified as isolated TMT1 arthrodesis cases. Data were collected through a comprehensive review of medical records, radiographic imaging, and a structured telephone survey conducted in September 2023, resulting in a median follow-up period of 37 months (range: 15–64 months). Preoperative and postoperative measurements of the hallux valgus angle (HVA) and intermetatarsal angle (IMA) were performed using weight-bearing dorsoplantar radiographs. Functional outcomes were assessed using the Foot and Ankle Ability Measure - Activities of Daily Living (FAAM-ADL) subscale, which quantifies self-reported function across daily activities.

Procedures

Results

The fusion rate for TMT1 was 97%, with an overall reoperation rate of 15%, including a 3% staple breakage rate. Radiographically, the IMA improved significantly from 16.1° to 9.1° ($p < 0.001$), and the HVA decreased from 38.2° to 19.1° ($p < 0.001$). The mean FAAM-ADL score was 81.7 out of 84, and 91% of patients reported being either very satisfied or satisfied with the outcomes.

Discussions

The use of two nitinol staples for Lapidus arthrodesis demonstrates high rates of fusion and patient satisfaction.

Format

Scientific

Case Rpt Followup

Student Club

Forefoot Reconstruction

Classification

Level III

Level of Evidence

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Viktor Labmayr, MD	viktor.labmayr@medunigraz.at	I/We have nothing to disclose	
Marlene Martinelli	marlene.martinelli@stud.medunigraz.at	I/We have nothing to disclose	
Konstanze K. Huetter, MD	konstanze.huetter@medunigraz.at	I/We have nothing to disclose	
Martin Ornig, MD	Martin.Ornig@uniklinikum.kages.at	I/We have nothing to disclose	
Patrick Holweg, MD, PhD	p.holweg@medunigraz.at	I/We have nothing to disclose	

Title

Does Timing Of Hardware Removal Following Lisfranc ORIF Affect Loss of Correction?

Submit Date

10/13/2024

Correspondent

Last Name: Sehgal

Full Name: Ashita

Email: ashita.x.sehgal@kp.org

Practice/Company/Residency Program: Kaiser SF Bay Area

Authors

Author 1: Ashita Sehgal, DPM

Author 2: Jason Pollard, DPM

Author 3: Miranda Weintraub, PhD, MPH

Author 4: Sheng-Feng Jiang, MS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The primary aim of this study was to determine whether TMTJ loss of correction (displacement >2 mm) after Lisfranc ORIF hardware removal is associated with timing of hardware removal (lesser or greater than 4 months post ORIF). There is no consensus on when to remove hardware and what effects this may have on maintaining correction of the TMTJ.

Methodology

We performed a retrospective chart review on all patients in Northern California Kaiser Permanente that underwent a Lisfranc ORIF between the dates of January 1, 2007, and December 31, 2019. We identified TMTJ injuries that were treated with ORIF with subsequent hardware removal using electronic medical records, via searching for associated ICD and CPT codes. 800 patients were identified that were suitable data points for our study. Patients were separated into two groups, the first being HWR < 120 days and the second being HWR > 120 days. Loss of correction was defined as >2 mm of displacement at final WB radiographs or >1 mm of displacement if contralateral WB radiographs were present. The first, second, and third tarsometatarsal joints were evaluated.

Procedures

Results

Thus far, we have found that most of the patients in our study had greater loss of correction if their hardware removal was less than 4 months after their index ORIF.

Discussions

The final data analysis is still in process. We hypothesized that there would be greater loss of correction in the Lisfranc ORIF group who had their hardware removal less than 4 months after surgery vs those that had their hardware removed greater than 4 months after surgery.

Format

Scientific

Case Rpt Followup

0

Student Club

Classification

Trauma

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Ashita Sehgal, DPM	ashita.x.sehgal@kp.org	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	San Francisco, CA
Jason Pollard, DPM	jason.pollard@kp.org	I/We have nothing to disclose	
Miranda Weintraub, PhD, MPH	miranda.l.weintraub@kp.org	I/We have nothing to disclose	
Sheng-Feng Jiang, MS	sheng-fang.jiang@kp.org	I/We have nothing to disclose	

Title

Impact of Consultation Time to the Primary Surgical Service on Length of Stay at a Tertiary Care Center

Submit Date

10/10/2024

Correspondent

Last Name: Reardon

Full Name: Brennan, K, Reardon, DPM, AACFAS

Email: brennan.reardon@gmail.com

Practice/Company/Residency Program: Wake Forest Baptist Health

Authors

Author 1: Brennan, K, Reardon, DPM, AACFAS

Author 2: Hayden, M, Bush, DPM

Author 3: Nicholas, S, Powers, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To evaluate the impact of emergency department consultation time to the primary surgical service, for foot-related disease, on the inpatient length of stay at a tertiary care center. Independent factors which may increase length of stay were also assessed.

Methodology

Data was extracted for procedures including, incision and drainage, debridement, and amputation of the lower extremity following inpatient admission from June 2015 through December 2020. Time to consultation, inpatient admission, first surgical intervention and length of stay were collected. Surgical teams, American Society of Anesthesia classification, number of surgeries, intensive care unit admissions and outcomes of major amputations were also collected to evaluate for any independent predictors of prolonged length of stay. To assess the association of time from emergency department to consultation to primary surgical service and limb amputation, logistic regressions was performed. To assess the association of time from emergency department to consultation to primary surgical service and length of stay, Poisson regressions were performed. All models controlled for diagnosis of diabetes mellitus and ASA score. A total of 122 patients were included in the study.

Procedures

Results

After controlling for diagnosis of diabetes mellitus and ASA score, there was no association between time from emergency department consultation to surgical services to amputation, or length of hospital stay.

Discussions

With rising cost burden and prevalence of diabetes, all factors related to care for these patients should be examined for optimization. This study found that there was no association between time from ED consultation to amputation. This highlights the effectiveness of interdepartmental cooperation.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Epidemiology/Population Study

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Brennan, K, Reardon, DPM, AACFAS	brennan.reardon@gmail.com	I/We have nothing to disclose	
Hayden, M, Bush, DPM	haydenbush91@gmail.com	I/We have nothing to disclose	
Nicholas, S, Powers, DPM	nspowers@wakehealth.edu	I/We have nothing to disclose	

TitleSurgical Site Infection Rate from Office-Based Foot and Ankle Surgeries; A Retrospective Analysis

Submit Date10/15/2024

CorrespondentLast Name: Adams
Full Name: Lucas S AdamsEmail: adamsls1809@gmail.com
Practice/Company/Residency Program: Mercy Health St. Vincents Medical Center

AuthorsAuthor 1: Lucas S Adams, DPMAuthor 2: Nevin Joseph, DPM
Author 3: Mark Razzante, DPMAuthor 4: Christina Pratt, DPM
Author 5: Author 6:
Author 7: Author 8:

PurposeOffice based procedures continue to rise in podiatric clinics in the hope to mitigate healthcare costs while providing a convenience to patients. There is scant literature surrounding the infection rate of office based podiatric procedures. This study aimed to present data about the incidence of postoperative infections following procedures performed in a podiatric office setting.

MethodologyA retrospective review of 121 patients who underwent 205 elective podiatric procedures in an office setting was conducted. We performed a wide array of procedures from soft tissue to osseous within the foot and ankle (See Table). Additionally, we evaluated variables such as age, sex, history of diabetes mellitus, peripheral neuropathy, development of postoperative infection, severity of infection, follow-up time, and prophylactic antibiotic use and its use post-operatively.

Procedures

ResultsThe overall infection rate for this study was 1.95% (4/205), all of which were superficial infections. Infection occurred in one patient with the observed co-morbidities of diabetes mellitus with or without peripheral neuropathy, while the other three infections did not have an observable comorbidity. The most common procedures performed were digital tenotomies, hardware removal, and interphalangeal joint arthroplasties. When excluding tenotomies, the overall infection rate was 3.3%.

DiscussionsCompared to current literature, the infection rate in our study is similar if not lower than reported infection rates within a hospital or surgery center. We propose that performing an array of in-office surgical procedures under typical sterile technique is a relatively safe, efficient and cost-effective option for patients.

FormatScientific

Case Rpt Followup24

Student Club

ClassificationWound Care/Infectious Diseases

Level of EvidenceLevel III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lucas S Adams, DPM	adamsls1809@gmail.com	I/We have nothing to disclose	
Nevin Joseph, DPM	kmckraysmith@toledoclinic.com	I/We have nothing to disclose	
Mark Razzante, DPM	adamsls1809@gmail.com	I/We have nothing to disclose	
Christina Pratt, DPM	adamsls1809@gmail.com	I/We have nothing to disclose	

Title

Shoegear Effect on Hindfoot Position and Stability in Collegiate Athletes

Submit Date

10/15/2024

Correspondent

Last Name:Kerns

Full Name:Makenzie

Practice/Company/Residency Program:

Email:kernsmakenzie94@gmail.com

Kentucky Indiana Foot & Ankle Specialists Reconstructive Foot and Ankle Surgery

Authors

Author 1:Makenzie Kerns

Author 2:Neil Patel, DPM, AACFAS

Author 3:Paul Klutts, DPM, FACFAS

Author 4:Amanda Denzik, DPM, FACFAS

Author 5:Chad Miller, M.A.

Author 6:

Author 7:

Author 8:

Purpose

Instability at the subtalar joint (STJ) has been implicated in the incidence of injuries among athletes. The objective of this study is to investigate the impact of different types of footwear on STJ stability. Specifically, this research aims to compare the stability provided by a square toe shoe against that of the more commonly used narrow toe shoe.

Methodology

64 collegiate baseball players were assessed for the frequency of STJ wobbles, or alteration in angle, over 20-second intervals. Participants maintained a unilateral stance while videographic analysis quantified the number of wobbles. Each participant's legs, as well as two distinct shoes, were examined. This study was blinded and prospective. Participant age range 18-23 years and dominant side recorded.

Procedures

Results

The right leg had 7.26 wobbles in the narrow toe shoe compared to 4.89 wobbles in the square toe shoe for improvement of 2.37. On the left, there were 7.98 wobbles in the narrow toe shoe compared to 5.62 wobbles in the square toe shoe for improvement of 2.36. There was a 32.64% improvement on the right and 29.57% improvement on the left.

Discussions

This study concludes that the square toe shoe is significantly better when evaluating the stability at the subtalar joint. Prior studies show that instability at the subtalar joint puts athletes at higher risk of inversion ankle sprains and chronic ankle instability suggesting that the type of shoe gear worn by athletes may decrease the number of injuries among players.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Orthotics/Prosthetics/Pedorthics

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Makenzie Kerns	kernsmakenzie94@gmail.com	I/We have nothing to disclose	
Neil Patel, DPM, AACFAS	npatel@kyinfas.com	I/We have nothing to disclose	
Paul Klutts, DPM, FACFAS	pklutts@kyinfas.com	Consultant/Advisor/Speaker (List all affiliations)	Sqairz
Amanda Denzik, DPM, FACFAS	adenzik@kyinfas.com	I/We have nothing to disclose	
Chad Miller, M.A.	chadmiller7@icloud.com	Consultant/Advisor/Speaker (List all affiliations)	Sqairz

Title

Diabetic education and initiation of podiatric medical care: A survey of podiatrists, endocrinologists, and internal medicine & primary care professionals

Submit Date

10/10/2024

Correspondent

Last Name: Cohen

Full Name: Rebecca E. Cohen, MPH

Practice/Company/Residency Program:

Email: rcohen2025@nycpm.edu

New York College of Podiatric Medicine/Icahn School of Medicine at Mount Sinai

Authors

Author 1: Bryan C. Markinson, DPM

Author 2: Anthony R. Iorio, DPM, MPH

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Diabetes mellitus is a chronic disease that continues to increase in prevalence globally. Diabetics can develop foot-related issues including infections, ulcerations, and gangrene, which can result in amputation or death. There is existing medical literature for recommendations of podiatric referral, however there are differences amongst medical fields about when diabetics should be referred to podiatry and how to best educate these patients about their healthcare.

Methodology

This quality improvement study design involved a survey of medical professionals in internal medicine/primary care, endocrinology, and podiatry. The eligible participants were contacted via email to complete the survey.

Procedures

Results

Fifty-one medical professionals completed the survey: 33/51 (64.7%) podiatry, 14/51 (27.5%) internal medicine/primary care, and 4 (7.8%) endocrinology. Responses included 41/51 (80.4%) that diabetic patients should be referred to podiatry for a routine diabetic foot check, but answers varied for how soon these patients should be referred to podiatry. The majority of respondents answered that the best way to educate patients about healthcare included verbal discussions and 24/51(47.1%) answered that they use the teach-back method to confirm patient understanding.

Discussions

Results of the survey were shared with the participants as a quality improvement project with recommendations about the importance of early referral to podiatry for health promotion and disease prevention of diabetes.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Diabetic Foot

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Bryan C. Markinson, DPM	bryan.markinson@mountsinai.org	I/We have nothing to disclose	
Anthony R. Iorio, DPM, MPH	aiorio@nycpm.edu	I/We have nothing to disclose	

Title

Enhancing Surgical Outcomes: A Comparative Study of UHMWPE and PUUR Implants for Lateral Ankle Stabilization

Submit Date

10/14/2024

Correspondent

Last Name: Clellen

Full Name: Samuel B Clellen, DPM, MBA

Practice/Company/Residency Program:

Email: samclellen@gmail.com

Martin Foot and Ankle

Authors

Author 1: Samuel Clellen, DPM, MBA, AACFAS

Author 2: Rachel Warner, DPM, AACFAS

Author 3: Michael Younes, DPM, MBA, FACFAS

Author 4: Jennifer Mulhern, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study is to evaluate the revision rates and complications associated with two implant materials used in lateral ankle stabilization procedures performed by a single surgeon over a five-year period. By comparing Ultra-High Molecular Weight Polyethylene (UHMWPE) implants and degradable co-polymer polycaprolactone and polyurethane-urea (PUUR) implants, this research aims to identify the impact of implant material on surgical outcomes, particularly focusing on rates of hypersensitivity and recurrent lateral ankle instability. The findings intend to enhance understanding of material selection in surgical practice and ultimately improve patient outcomes.

Methodology

The chi-square test was utilized to analyze differences in complication rates and recurrence of instability between the two groups. The results indicated statistically significant differences in both hypersensitivity ($p < 0.05$) and recurrence rates ($p < 0.01$) between the UHMWPE and PUUR groups.

Procedures

Results

This study reviewed 200 lateral ankle stabilization procedures and found significant differences between two implant types. The UHMWPE group had a 5% incidence of hypersensitivity and a 10% recurrence rate of instability, while the PUU group showed no hypersensitivity and only a 1.3% recurrence rate. These results suggest that the choice of implant material critically affects outcomes.

Discussions

Statistical analysis indicates that the choice of implant material significantly influences outcomes in lateral ankle stabilization procedures. The PUUR implant was associated with lower rates of complications and recurrence compared to the UHMWPE implant. These findings underscore the importance of material selection and highlight the need for further investigation into the long-term performance of these implants.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Samuel Clellen, DPM, MBA, AACFAS	samclellen@gmail.com	I/We have nothing to disclose	
Rachel Warner, DPM, AACFAS	warnrac@gmail.com	I/We have nothing to disclose	
Michael Younes, DPM, MBA, FACFAS	younes.mike@gmail.com	I/We have nothing to disclose	
Jennifer Mulhern, DPM, FACFAS	jlmulhern@gmail.com	I/We have nothing to disclose	

Title

Evaluating the Impact of Preoperative Deformity and Graft Size on Calcaneocuboid Joint Nonunion Rates

Submit Date

10/14/2024

Correspondent

Last Name: Clellen

Full Name: Samuel B Clellen, DPM, MBA

Practice/Company/Residency Program:

Email: samclellen@gmail.com

Martin Foot and Ankle

Authors

Author 1: Samuel Clellen, DPM, MBA, AACFAS

Author 2: Rachel Warner, DPM, AACFAS

Author 3: Michael Younes, DPM, MBA, FACFAS

Author 4: Jennifer Mulhern, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Achieving arthrodesis of the calcaneocuboid joint (CCJ) in hindfoot reconstruction is challenging, particularly due to significant preoperative deformities. This study investigates risk factors for nonunion at the CCJ following hindfoot reconstruction, hypothesizing that greater preoperative deformity, indicated by larger CCJ angles, and larger structural graft sizes would lead to higher nonunion rates.

Methodology

A retrospective chart review was conducted on 39 patients who underwent hindfoot reconstruction. Preoperative CCJ angles were categorized as mild (<10°), moderate (11-20°), and severe (>21°). Nonunion rates were analyzed for graft (8 cases) and nongraft (31 cases) techniques using a chi-square test to assess differences in outcomes.

Procedures

Results

Data analysis revealed nonunion in 1 of 2 mild cases (50%), 0 of 8 moderate cases (0%), and 10 of 29 severe cases (34.5%). The average age of patients with nonunion was 55.7 years, compared to 60.5 years for those achieving union. Among graft cases, 2 of 8 resulted in nonunion, yielding a 75% union rate, while nongraft cases had 9 of 31 resulting in nonunion, leading to a 71% union rate.

Discussions

Contrary to our hypothesis, neither the severity of preoperative deformity nor graft size significantly influenced nonunion rates ($p > 0.05$). These findings suggest that other factors, such as patient-specific variables and biological aspects, may play a more crucial role in determining postoperative outcomes. Further research is needed to explore additional variables affecting success in flatfoot hindfoot reconstruction, aiming to refine surgical techniques and improve overall patient prognoses.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Samuel Clellen, DPM, MBA, AACFAS	samclellen@gmail.com	I/We have nothing to disclose	
Rachel Warner, DPM, AACFAS	warnrac@gmail.com	I/We have nothing to disclose	
Michael Younes, DPM, MBA, FACFAS	younes.mike@gmail.com	I/We have nothing to disclose	
Jennifer Mulhern, DPM, FACFAS	jlmulhern@gmail.com	I/We have nothing to disclose	

Title

Comparison of Plate Versus Intramedullary Screw Fixation for Fibular Fractures with Associated Pilon Injuries: A Retrospective Study

Submit Date

10/13/2024

Correspondent

Last Name:Williams

Full Name: Briana E Williams, DPM

Practice/Company/Residency Program:

Email: bwilliams2@carilionclinic.org

Carilion Clinic

Authors

Author 1: Briana Williams, DPM

Author 2: Henry Emmanuel-Ajudua, DPM

Author 3: Nicole Schultz, DPM

Author 4: Sarah Mansager, DPM

Author 5: Kelly Kugach, DPM, AACFAS

Author 6: Youngjae Lee, PhD

Author 7: Franco Coniglione, DO

Author 8:

Purpose

Fibular fractures occur in about 90% of pilon injuries, with plating historically being the standard method for fixation. However, plating can be associated with wound complications due to extensive soft tissue manipulation. Percutaneous intramedullary (IM) screw fixation has been implemented to alleviate this issue by minimizing tissue disruption. Current research has evaluated IM screw fixation in ankle fractures, however, it remains less explored in associated pilon injuries. This retrospective study compares complication rates between fibular plating and IM screw fixation in patients with concomitant pilon fractures.

Methodology

Designed as a retrospective case control series, a total of 191 patients were included who had suffered fibular fractures and associated pilon injury, with 130 undergoing fibular plating and 61 receiving IM screw fixation. Chi-square and Fisher's exact tests were used for statistical analysis.

Procedures

Results

Results indicated a 15.3% higher hardware removal rate in the IM screw group compared to the plating group. However, no significant differences were found in union rates, surgical site dehiscence, postoperative infections, or reoperations within 30 days.

Discussions

Despite the increased rate of hardware removal in the IM screw group, overall clinical outcomes were comparable between the two fixation methods. Future investigation will include use of a logistic regression model with incorporation of multiple covariates to allow for a more detailed assessment of the study. These preliminary results illustrate that use of percutaneous IM screw for fibular fixation during pilon fracture management can allow for similar postoperative outcomes and rates of complications, while potentially reducing soft tissue insult, when compared to standard plating methods.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Trauma

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Briana Williams, DPM	bwilliams2@carilionclinic.org	I/We have nothing to disclose	
Henry Emmanuel-Ajudua, DPM	cohenryajudua@carilionclinic.org	I/We have nothing to disclose	
Nicole Schultz, DPM	nschultz@carilionclinic.org	I/We have nothing to disclose	
Sarah Mansager, DPM	samansager@carilionclinic.org	I/We have nothing to disclose	
Kelly Kugach, DPM, AACFAS	kkugach@carilionclinic.org	I/We have nothing to disclose	
Youngjae Lee, PhD	ylee1@carilionclinic.org	I/We have nothing to disclose	
Franco Coniglione, DO	fmconiglione@carilionclinic.org	I/We have nothing to disclose	

Title

Charcot Neuroarthropathy: A Novel Standardized Radiographic Technique for Calculating Wedge Size and Placement

Submit Date

10/11/2024

Correspondent

Last Name: Ayvazov

Full Name: Sarah, L, Ayvazov, DPM

Practice/Company/Residency Program: Jefferson Health New Jersey

Email: sarah.ayvazov@gmail.com

Authors

Author 1: Sarah, L, Ayvazov, DPM

Author 2: Alyssa, N, Kellmyer, DPM

Author 3: Margaret, G, Schadegg, DPM

Author 4: Ryan, K, Andrews, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To standardize a radiograph-based technique and measured approach to determine the size and placement of an osseous wedge resection for realignment of isolated midfoot Charcot Neuroarthropathy (CN) deformity. We hypothesize that this method can be a standardized approach to adequately correct midfoot CN deformity.

Methodology

7 patients with midfoot CN who received a wedge resection were included in our study to demonstrate sufficient correction and validation of the novel radiographic measurement technique. A standardized measurement is determined using the bisection of the first metatarsal and talus on the lateral view and the bisection of the second metatarsal and talus on the dorsoplantar view. These measurements are translated to incorporate the pathologic osseous structures to create a pre-determined wedge which will be excised intra-operatively for correction. All measurements and procedures were performed by a single surgeon.

Procedures

Results

Using our novel wedge resection measurement technique, pre and post-operative angles were determined. Average pre-operative dorsoplantar measurement was 16 degrees, and average post-operative measurement was 6 degrees (10 degrees of reduction). Average lateral measurement was 20 degrees pre-operatively and 8 degrees post-operatively (12 degrees of reduction). All 7 patients demonstrated adequate angular deformity correction post-operatively.

Discussions

Wedge resection is a well-documented treatment for midfoot CN, however, there is no standardized method for determining wedge size and placement. Using this technique, our radiographic measurements were shown to be reproducible in removing the necessary pathology to create a well-aligned, plantigrade foot in patients with midfoot CN.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Sarah, L, Ayvazov, DPM	sarah.ayvazov@gmail.com	I/We have nothing to disclose	
Alyssa, N, Kellmyer, DPM	alyssa.kellmyer@temple.edu	I/We have nothing to disclose	
Margaret, G, Schadegg, DPM	margaret.schadegg@jefferson.edu	I/We have nothing to disclose	
Ryan, K, Andrews, DPM	rkandrews87@gmail.com	I/We have nothing to disclose	

Title

The Role of Deltoid Ligament Repair in Medial Malleolus Ankle Fractures: A Retrospective Analysis

Submit Date

10/11/2024

Correspondent

Last Name: Sy

Full Name: Edgar

Practice/Company/Residency Program:

Email: EdgarFSy@gmail.com

Barry University School of Podiatric Medicine

Authors

Author 1: Edgar Sy, DPM, AACFAS

Author 2: Julio Kessel, DPM

Author 3: Joy Latif, DPM

Author 4: Calimar Rodriguez Monsanto

Author 5: Lisa Mesa

Author 6: Veronica Ramos

Author 7:

Author 8:

Purpose

This study investigates outcomes of primary deltoid ligament repair in ankle fractures and its influence on stability and function. The necessity of deltoid ligament repair in such cases remains a topic of debate.

Methodology

A retrospective analysis of 50 ankle fractures, comprising 16 bimalleolar and 34 trimalleolar fractures, was performed. CT scans confirmed fracture patterns, and deltoid ligament injury was defined by a medial clear space greater than 4mm. Medial malleolus, posterior malleolus, and syndesmotic repairs were performed as indicated. AOFAS scores were used to assess functional outcomes.

Procedures

Results

Patients who underwent open reduction internal fixation (ORIF) of the medial malleolus had an average AOFAS score of 84.2, with 2-screw fixation scoring 88.3, 1-screw fixation scoring 81.1, and plate fixation scoring 83.4. Patients without medial malleolus fractures averaged 81.2, with those receiving flexible rope syndesmotic repair scoring 84.7, suggesting potential indirect deltoid repair. Posterior malleolus fractures were observed in 41 cases, with only 11 undergoing fixation. Posterior malleolar fixation, particularly in fractures exceeding 25% of the articular surface, may have contributed to improved AOFAS scores due to the posterior inferior tibiofibular ligament (PITFL) and the role of indirect reduction in restoring stability.

Discussions

The findings indicate that ORIF of the medial malleolus provides satisfactory outcomes and improves deltoid ligament stability. However, long-term patient satisfaction and stability may be further optimized with ancillary deltoid ligament repair. Additionally, posterior malleolar and syndesmotic fixation contribute to improved outcomes through indirect deltoid stabilization. Further investigation into fixation thresholds and ancillary repair techniques is warranted to enhance long-term outcomes.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Trauma

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Edgar Sy, DPM, AACFAS	EdgarFSy@gmail.com	I/We have nothing to disclose	
Julio Kessel, DPM	juliokessel5@gmail.com	I/We have nothing to disclose	
Joy Latif, DPM	joylatif9@gmail.com	I/We have nothing to disclose	
Calimar Rodriguez Monsanto	calimarrodriguez@gmail.com	I/We have nothing to disclose	
Lisa Mesa	lisammesa1@gmail.com	I/We have nothing to disclose	
Veronica Ramos	veronicaramos.ca@gmail.com	I/We have nothing to disclose	

Title

Syndesmotic Repair in Trimalleolar and Bimalleolar Ankle Fractures: A Comparison of Flexible vs. Rigid Fixation and Patient Satisfaction Outcomes

Submit Date

10/11/2024

Correspondent

Full Name: Edgar

Practice/Company/Residency Program:

Email: EdgarFSy@gmail.com

Barry University School of Podiatric Medicine/ Jackson North Medical Center

Authors

Author 1: Edgar Sy, DPM, AACFAS

Author 2: Joy Latif, DPM

Author 3: Julio Kessel, DPM

Author 4: Veronica Ramos, MS-2

Author 5: Lisa Mesa, MS-2

Author 6: Calimar Rodriguez, MS-2

Author 7:

Author 8:

Purpose

Syndesmotic injuries are common in ankle fractures, particularly in trimalleolar and bimalleolar. The choice between flexible and rigid fixation remains controversial, especially regarding patient outcomes and satisfaction. This study aims to compare flexible and rigid syndesmotic fixation in patients with trimalleolar and bimalleolar fractures, focused on the American Orthopaedic Foot & Ankle Society (AOFAS) satisfaction rates.

Methodology

A retrospective analysis was conducted on 50 patients, 34 trimalleolar and 16 bimalleolar fractures. Syndesmotic fixation was performed in 22 patients: 10 received flexible, and 12 received rigid fixation. The AOFAS scores were used to measure patient satisfaction, with an emphasis on differences in outcomes between flexible and rigid fixation in both fracture types. The average follow-up period was 12 months.

Procedures

Results

Among patients with syndesmotic injuries, those treated with flexible fixation demonstrated a higher mean AOFAS score (88.3) compared to those treated with rigid fixation (81.3). In tri-malleolar, flexible (n=7) AOFAS of 84.1 vs rigid (n=8) 87.6. However, bi-malleolar flexible (n=3) AOFAS 88.7 vs rigid (n=4) 83.2. The overall complication rate was comparable between the two groups.

Discussions

Rigid syndesmotic fixation appears to offer improved patient satisfaction, as reflected in higher AOFAS scores, particularly in trimalleolar fractures. These findings suggest that flexible fixation may be a favorable option for patients in bimalleolar ankle fractures, however rigid fixation demonstrated advantageous for trimalleolar setting.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Trauma

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Edgar Sy, DPM, AACFAS	EdgarFSy@gmail.com	I/We have nothing to disclose	
Joy Latif, DPM	joylatif9@gmail.com	I/We have nothing to disclose	
Julio Kessel, DPM	juliokessel5@gmail.com	I/We have nothing to disclose	
Veronica Ramos, MS-2	Veronicaramos.ca@gmail.com	I/We have nothing to disclose	
Lisa Mesa, MS-2	Lisammesa1@gmail.com	I/We have nothing to disclose	
Calimar Rodriguez, MS-2	calimarrodriguez@gmail.com	I/We have nothing to disclose	

Title

Patient Satisfaction with Posterior Malleolus fixation versus Syndesmotic fixation in Trimalleolar Fractures

Submit Date

10/11/2024

Correspondent

Last Name: Sy

Full Name: Edgar

Practice/Company/Residency Program:

Email: EdgarFSy@gmail.com

Barry University School of Podiatric Medicine/ Jackson North

Authors

Author 1: Edgar Sy, DPM. AACAS

Author 2: Joy Latif, DPM

Author 3: Julio Kessel, DPM

Author 4: Lisa Mesa, MS-2

Author 5: Veronica Ramos, MS-2

Author 6: Calimar Rodriguez Monsanto, MS-2

Author 7:

Author 8:

Purpose

Trimalleolar ankle fractures are common injuries that occur, but treatment is usually based on surgical preference. This study aims to assess if fixating the posterior malleolus results in better patient outcomes than when only the syndesmosis is addressed in trimalleolar fractures.

Methodology

41 Trimalleolar fractures were identified and separated into 4 groups; those that only had syndesmotic fixation (SF), those that only had Posterior malleolus fixation (PF), those with both syndesmotic and posterior malleolus fixation (SPF) and those with only lateral and medial malleolar fixation.The syndesmotic group was further divided into rigid versus flexible fixation groups. Patients were then contacted and questioned on their overall satisfaction using the AOFAS scale.

Procedures

Results

Of the 41 trimalleolar fractures, 34.1% of patients had SF (n=14), 21.9% had PF (n=9), 4.8% had SPF (n=2), and 39.0% had only lateral and medial malleolar fixation (n=16). Of the Syndesmotic group, 5 used flexible fixation while 9 used rigid fixation. Average AOFAS scores was 85.2 for the SF group, 87.2 for the PF, 89.3 for SPF, and 81.5 for the group with only lateral and medial malleolar fixation. For those with flexible syndesmotic fixation, their AOFAS was 93.2 while the rigid fixation averaged at 84.3. All patients were ambulatory at time of contact.

Discussions

Our findings show that patients have better outcomes when the posterior malleolus is fixated with an even better outcome when both the syndesmosis and posterior malleolus are fixated. Moreover, patients with flexible syndesmotic fixation had a higher average AOFAS score than those with rigid fixation.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Trauma

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Edgar Sy, DPM. AACAS	EdgarFSy@gmail.com	I/We have nothing to disclose	
Joy Latif, DPM	joylatif9@gmail.com	I/We have nothing to disclose	
Julio Kessel, DPM	juliokessel5@gmail.com	I/We have nothing to disclose	
Lisa Mesa, MS-2	lisammesa1@gmail.com	I/We have nothing to disclose	
Veronica Ramos, MS-2	veronivaramos.ca@gmail.com	I/We have nothing to disclose	
Calimar Rodriguez Monsanto, MS-2	calimarrodriguez@gmail.com	I/We have nothing to disclose	

TitleAn Investigation of Pointe Shoe Fit Principles Among the Elite Level

Submit Date10/11/2024

Correspondent

Last Name: Cohen

Full Name: Lily, S, Cohen, PMS-II

Practice/Company/Residency Program: Midwestern University

Email: lily.cohen@midwestern.edu

Authors

Author 1: Lily, S, Cohen, PMS-II

Author 3: Melanie, Violand, DPM, FACFAS

Author 5: Author 7:

Author 2: Sibella, Campbell, MA, PMS-IV

Author 4: David, Jenkins, DPM, FACFAS, FAAPSM

Author 6: Author 8:

PurposeDancing en pointe places great demands on adolescents' well-being. Research has proven the prevalence of lower extremity injury among this population. The proper fit of pointe shoes is essential for performance success and safety as their training advances. Currently, there is no standard for evaluating pointe shoe fit. The purpose of this study was to examine what factors are valued when fitting for pointe shoes in the elite ballet world.

MethodologyA survey examined the criteria and assessments used to determine proper pointe shoe fit for young dancers among twenty-two elite dance companies in the United States. The Dance Magazine's 2023-2024 Pre-Professional Program Guide was used to select programs. This study was limited to professional institutions.

Procedures

Results81% of programs provide an introductory course on what to look for during a pointe shoe fitting. Crucial qualities of a fitter include: experience, knowledge of different pointe shoes, and awareness of the student's strength. Instructors tend to examine if the dancer can stand up straight in the shoe, shank strength, stability, alignment, and overall fit as their foot develops.

DiscussionsCurrently, no protocol on pointe shoe fit at the elite level. Yet, heightened risk for injury among dancers stresses the vitality that their shoes are suited appropriately. Proper education of students and instructors about shoe fit as the dancer adjusts to increased demand will enhance their performance, minimize injury, and prevent extensive treatment in the future. The ballet community is a significant component of sports medicine that needs to address foot and ankle concerns.

FormatScientific

Case Rpt Followup

Student Club

ClassificationEpidemiology/Population Study

Level of EvidenceLevel V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lily, S, Cohen, PMS-II	lily.cohen@midwestern.edu	I/We have nothing to disclose	
Sibella, Campbell, MA, PMS-IV	sibella.campbell@midwestern.edu	I/We have nothing to disclose	
Melanie, Violand, DPM, FACFAS	mviola@midwestern.edu	I/We have nothing to disclose	
David, Jenkins, DPM, FACFAS, FAAPSM	djenki@midwestern.edu	I/We have nothing to disclose	

Title

Combined arthroereisis with Evans calcaneal osteotomy for selective patients with flatfoot deformity, a retrospective review

Submit Date

10/12/2024

Correspondent

Last Name: Rose

Full Name: Gregory W Rose DPM MPH

Practice/Company/Residency Program:

Email: gwrose2012@gmail.com

Inova Health System

Authors

Author 1: Gregory Rose

Author 2: Anthony Schwab DPM MS

Author 3: Richard Derner DPM FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Arthroereisis of the subtalar joint and the Evans calcaneal osteotomy are each utilized to operatively address symptomatic pediatric flatfoot. These procedures are often directly compared in academic literature however each has differing biomechanical outcomes on the foot and may be done concomitantly in select patients. This retrospective review will demonstrate successful outcomes of these procedures when performed together within the same operation.

Methodology

A retrospective review was performed between April 2024 and October 2024 on patients who received both procedures by a single surgeon at our institution.

Procedures

Results

A total of 24 patients were identified with an average follow up of 7.2 years (range 6.5-8.9). At final follow up there was one reported incidence of removal of hardware of the arthroereisis implant (4.1%) and zero incidence of infection. All radiographic measurements saw statistically significant improvement. Average Kite's angle improved from 8.75 to 1.46 degrees ($p<0.001$), cuboid abduction angle from 50.63 to 32.08 degrees ($p<0.001$), Meary's angle from 50.63 to 32.08 degrees ($p<0.001$) and talar declination from 31.75 to 19.96 degrees ($p<0.001$).

Discussions

Patients with severe transverse plane deformity and flexible heel valgus may benefit from having these procedures performed in conjunction due to their differing biomechanical impacts on the foot. The Evan's procedure provides a triplanar correction most significantly impacting the transverse plane. Subtalar arthroereisis primarily serves to restrict subtalar joint eversion and shift peak pressures during weight bearing. We hope to add to the current body of scarce literature that these procedures can be used in concert while demonstrating excellent survivorship and low complication rate in the pediatric population.

Format

Scientific

Case Rpt Followup

49

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Gregory Rose	gwrose2012@gmail.com	I/We have nothing to disclose	
Anthony Schwab DPM MS	anthonyjschwab7@gmail.com	I/We have nothing to disclose	
Richard Derner DPM FACFAS	richd87@me.com	I/We have nothing to disclose	

Title

Effect of a Potent Nitrogenous Bisphosphonate on Cell Viability in Diabetic Conditions: An In Vitro Study on Human Fibroblasts and Pre-Osteoblasts

Submit Date

10/14/2024

Correspondent

Last Name: Cantu

Full Name: Denae

Practice/Company/Residency Program:

Email: denae.cantu01@utrgv.edu

The University of Texas Rio Grande School of Podiatric Medicine

Authors

Author 1: Denae Cantu

Author 3: Deborah Rocha Seixas, DDS, MSc, PhD

Author 5:

Author 7:

Author 2: Bryan Liu

Author 4: Claudia C. Biguetti, DDS, MSc, PhD

Author 6:

Author 8:

Purpose

Zoledronate (Zol) is a nitrogenous bisphosphonate (nBP) used to treat osteoporosis, bone metastases, and Charcot foot. Despite its efficacy in preventing fractures, concerns exist about its side effects on mesenchyme-origin cells and impaired wound healing. We hypothesize that Zol may impair the responses of human fibroblasts (hF) and pre-osteoblasts (MC3T3), potentially compromising tissue healing in the lower extremities of patients with diabetes.

Methodology

MC3T3 cells and hF were cultured in 96-well plates at a density of 2.5 x 10³ cells for 48 and 72 hours, respectively. Cells were subjected to normal glucose, high glucose, and high oxidative stress conditions (0.2 mM to 0.4 mM H₂O₂) and exposed to various Zol concentrations (0.1 to 100 µM). Viability was assessed using a tetrazolium compound assay with absorbance at 490 nm. Quantitative data were analyzed using One-Way ANOVA followed by Tukey's test, with a significance level set at 0.05%.

Procedures

Results

Zol treatment reduced hF and MC3T3 viability significantly from concentrations of 1 and 5 µM upwards, respectively. It also lowered hF viability in normal and high glucose environments, reducing to as low as 11% under 0.2 mM H₂O₂ across all conditions. No significant changes were observed in MC3T3 cell proliferation under high glucose conditions.

Discussions

Our preliminary findings suggest that Zol may impair the viability and proliferation of mesenchymal-derived cells, potentially affecting wound healing, particularly in diabetic conditions. Additional studies are needed to explore these effects further and at lower dosages of H₂O₂ in these cells as they are exposed to nBPs.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Diabetic Foot

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Denae Cantu	denae.cantu01@utrgv.edu	I/We have nothing to disclose	
Bryan Liu	bryan.liu01@utrgv.edu	I/We have nothing to disclose	
Deborah Rocha Seixas, DDS, MSc, PhD	deborahrocha@usp.br	I/We have nothing to disclose	
Claudia C. Biguetti, DDS, MSc, PhD	claudia.biguetti@utrgv.edu	I/We have nothing to disclose	

Title

Platelet Rich Plasma as an Adjunctive Therapy for Incisional Healing for Total Ankle Replacements: A Retrospective Analysis

Submit Date

10/13/2024

Correspondent

Last Name: Katmeh

Full Name: Firas Katmeh, DPM, MSH

Email: firas.g.katmeh@gmail.com

Practice/Company/Residency Program: UF Health - Jacksonville

Authors

Author 1: Firas Katmeh, DPM, MSH

Author 2: Jason A. Piraino, DPM, MS, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Surgical dehiscence with total ankle replacements (TAR) is a devastating consequence. A plethora of literature exists regarding platelet rich plasma (PRP). However, little exists on the use of PRP for incisional healing, specifically in TARs. We sought to evaluate the efficacy of PRP on patients undergoing a TAR at our institution.

Methodology

A retrospective chart review of 25 patients who underwent a TAR from 2019 – 2024 was conducted. Patients were dichotomized into 2 groups with paired t-tests: 12 in the PRP group and 13 in the No PRP group. Incisions were considered healed within 21 days of index surgery. 5cc of PRP was used on the anterior incision. Patient demographics, average tourniquet time, adjunctive procedures and type of implant were collected and analyzed.

Procedures

Results

7 patients in the PRP and 7 in the No PRP groups healed their incisions. Average days to heal was 23.6 days with PRP and 55.5 days with No PRP (P=0.820). 56% of patients healed within 21 days while 44% took greater than 21 days (p=0.075). Average tourniquet time was 125.58 minutes in the PRP group and 115.07 minutes in the No PRP group (P=0.029). Adjunctive procedures were not statistically significant (P=0.789).

Discussions

Our data revealed an improved duration of incision healing with PRP but did not show statistical significance upon analysis or when compared to the No PRP group. Higher powered and more standardized studies are necessary to truly determine the effects PRP has on incisional healing in TARs.

Format

Scientific

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Firas Katmeh, DPM, MSH	firas.g.katmeh@gmail.com	I/We have nothing to disclose	
Jason A. Piraino, DPM, MS, FACFAS	jason.piraino@jax.ufl.edu	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Board of Directors for ACFAS

TitleComparative Outcomes of Fibular Repair: Open Reduction Internal Fixation vs. Monorail External Fixation

Submit Date10/14/2024

CorrespondentLast Name: Ocasio-Martinez
Full Name: Gabriel A. Ocasio-Martinez, B.S. Email: gabriel.ocasiomartinez@mymail.barry.edu
Practice/Company/Residency Program: Barry University School of Podiatric Medicine

AuthorsAuthor 1: Gabriel A. Ocasio-Martinez, B.S. Author 2: Timmer Hoffmeister, B.S.
Author 3: Dunia Águila-Leiva, B.S. Author 4: Maria Torrealba, M.Sc., B.S.
Author 5: Liset Perez, DPM Author 6: Enrique Rosario-Aloma, DPM, PhD
Author 7: Author 8:

PurposeThis retrospective study aimed to compare outcomes of fibular repair using two surgical techniques: open reduction and internal fixation (ORIF) and monorail external fixation.

MethodologyWe analyzed 25 cases of fibular repair using ORIF and 22 cases using monorail external fixation, all performed within the last three years. Key metrics assessed included postoperative pain, operating room (OR) time, rates of postoperative infection or dehiscence, and the timeline for weightbearing and full recovery.

Procedures

ResultsThe external fixation group demonstrated a significant reduction in postoperative pain, attributed to the less invasive percutaneous approach. Additionally, the OR time was significantly shorter in the external fixation cohort. Notably, there were no recorded instances of infection or dehiscence in the external fixation group. Patients in this group also experienced a quicker return to weightbearing and achieved full recovery sooner compared to those who underwent ORIF. We performed a statistical analysis to evaluate our results using the Chi-square t-test to compare the categorical outcomes between the two groups, with an accepted P value of

DiscussionsMonorail external fixation for fibular repair offers significant advantages over traditional ORIF, including reduced postoperative pain, shorter OR times, and improved recovery metrics, with no complications related to infection or wound dehiscence. These findings suggest that external fixation may be a superior approach for fibular repair.

FormatScientific

Case Rpt Followup

Student Club

ClassificationTrauma

Level of EvidenceLevel III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Gabriel A. Ocasio-Martinez, B.S.	gabriel.ocasiomartinez@mymail.barry.edu	I/We have nothing to disclose	
Timmer Hoffmeister, B.S.	timmer.hoffmeister@mymail.barry.edu	I/We have nothing to disclose	
Dunia Águila-Leiva, B.S.	dunia.aguilaleiva@mymail.barry.edu	I/We have nothing to disclose	
Maria Torrealba, M.Sc., B.S.	maria.torrealba@mymail.barry.edu	I/We have nothing to disclose	
Liset Perez, DPM	lperez@barry.edu	I/We have nothing to disclose	
Enrique Rosario-Aloma, DPM, PhD	erosarioaloma@barry.edu	I/We have nothing to disclose	

Title

Ganglion Cyst: Common Pathology or Potential Misdiagnosis?

Submit Date

10/15/2024

Correspondent

Last Name: Moon

Full Name: Angela S. Moon DPM

Practice/Company/Residency Program:

Email: angela.moon@emory.edu

Emory University School of Medicine

Authors

Author 1: Angela S. Moon DPM

Author 2: Steven M. Hogan DPM

Author 3: Kiara E. Francis DPM

Author 4: Joshua C. Magno DPM

Author 5: Shivani J. Patel DPM

Author 6: Kush H. Patel DPM

Author 7: Chandler J. Ligas DPM FACFAS

Author 8:

Purpose

Soft tissue sarcomas can mimic benign lesions, most commonly ganglion cysts. The purpose of this review is to highlight the rate at which synovial sarcomas may be seen and emphasize the importance of ruling out more aggressive tumors when evaluating any foot and ankle mass.

Methodology

A systematic review of studies published in PubMed and Medline databases from 2019 to 2024 was conducted to identify articles discussing the misdiagnosis of soft tissue sarcomas. Search terms included “misdiagnosis,” “soft tissue sarcoma,” and “ganglion cyst.” A standard methodology for performing a systematic review was followed using PRISMA guidelines.

Procedures

Results

Patient data for 766 biopsies were available. Ganglion cysts comprised 10.8% of the histopathologic diagnoses while synovial sarcomas were diagnosed in 2.7%. The rate of synovial sarcomas was higher in this review, which may suggest these tumors are underdiagnosed. In masses that were clinically misdiagnosed that were determined to be synovial sarcomas, 40% (187/468) were not completely resected and required further intervention.

Discussions

A biopsy should be done prior to surgery to avoid misdiagnosis. Misdiagnosis can lead to incomplete resection and a delay in definitive care including chemotherapy, radiation treatments and further OR debridements.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Soft Tissue/Tumor

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Angela S. Moon DPM	angela.moon@emory.edu	I/We have nothing to disclose	
Steven M. Hogan DPM	steven.hogan@emory.edu	I/We have nothing to disclose	
Kiara E. Francis DPM	kiara.francis@emory.edu	I/We have nothing to disclose	
Joshua C. Magno DPM	joshua.magno@emory.edu	I/We have nothing to disclose	
Shivani J. Patel DPM	spat366@emory.edu	I/We have nothing to disclose	
Kush H. Patel DPM	kushpateldpm@gmail.com	I/We have nothing to disclose	
Chandler J. Ligas DPM FACFAS	chandler.ligas19@gmail.com	I/We have nothing to disclose	

Title

Partial Calcanectomy: Analysis of the Outcomes

Submit Date

10/14/2024

Correspondent

Last Name:Grambart

Full Name:Sean T. Grambart DPM FAFAS

Email:sean.grambart@dmu.edu

Practice/Company/Residency Program:Des Moines University

Authors

Author 1:Chengyu Xie MD MS-4

Author 2:Jacqueline E, Williams BA MS-4

Author 3:Mia Saunders MS BA MS-4

Author 4:Alexandrea R. Bennett PharmD MS-4

Author 5:John Bennett DPM FAFAS

Author 6:Sean T. Grambart DPM FAFAS

Author 7:

Author 8:

Purpose

The purpose of this investigation was to perform a systematic review on PC and specific risk factors and how they affect primary healing, soft tissue complications, conversion to BKA or total calcanectomy, mortality, and post-op ambulatory status.

Methodology

The authors’ conducted electronic database searches within the Des Moines University library system, utilizing resources such as WorldCat, Gale Academic OneFile, the Public Health Database, ERIC, and the Cochrane Library. The search spanned articles published in English to December 31, 2023. We retrieved outcomes(n=124) from searches using the keywords "Partial Calcanectomy" and "Subtotal Calcanectomy".

Procedures

Results

Our results among the 463 patients included in the final 27 studies, 474 partial calcanectomy procedures were performed are shown in Figures 1-8 for Gender, Age, Peripheral Vascular Disease, Osteomyelitis, Antibiotics, Nicotine, and Renal Failure.

Discussions

Female patients are less likely to have a PC appeared to have a better chance to primarily heal and better ambulatory status, but also have a less complications. The age group of 50’s-60’s has a decreased likelihood of primary healing and return to or improve their ambulatory. The use of systemic antibiotics has reduced likelihood of the adverse events and a better chance to at least return to their ambulatory. Pre-operative MRI leads to improvement of ambulatory status post-op.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Diabetic Foot

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Chengyu Xie MD MS-4	chengyu.xie@dmu.edu	I/We have nothing to disclose	
Jacqueline E, Williams BA MS-4	jacqueline.williams@dmu.edu	I/We have nothing to disclose	
Mia Saunders MS BA MS-4	Mia.P.Saunders@dmu.edu	I/We have nothing to disclose	
Alexandrea R. Bennett PharmD MS-4	Alexandrea.R.Bennett@dmu.edu	I/We have nothing to disclose	
John Bennett DPM FAFAS	john.bennett@dmu.edu	I/We have nothing to disclose	
Sean T. Grambart DPM FAFAS	sean.grambart@dmu.edu	Consultant/Advisor/Speaker (List all affiliations)	Depuy
		Hold more than a 2% financial interest (including stocks) in any organizations(s)	BESPA Global
		Intellectual Property rights owned	Orthosolutions
		Member of a medical publication or editorial governing board	FASTRC
		Grant/Research funding	The Podiatry Foundation

Title

The Multiple Roles of 5-LO in Tissue Regeneration: Insights from Animal Models Utilizing Pharmacological and Genetic Approaches

Submit Date

10/14/2024

Correspondent

Last Name: John

Full Name: Nidhin

Practice/Company/Residency Program:

Email: nidhin.john01@utrgv.edu

Univeristy of Texas Rio Grande Valley School of Podiatric Medicine

Authors

Author 1: Claudia C Biguetti, DDS, PhD

Author 2: Roel Navrro, MS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This systematic scoping review explores the role of 5-lipoxygenase (5LO) and its products in tissue healing within animal models, aiming to highlight potential therapeutic benefits and challenges.

Methodology

A systematic search using a specific was conducted from 1994 to 2024 using MEDLINE. The PICO framework focused on rodents as the population, tissue injury as the intervention, no treatment vs. modulation of the 5LO pathway/products as the comparison, and tissue healing as the outcome. Articles that solely focused on in vitro studies were excluded.

Procedures

Results

The search yielded 22 relevant articles. After removing duplicates and applying exclusion criteria, 20 studies were scoped. Methods to block the 5LO pathway included genetic approaches in three studies, pharmacological in sixteen, and a combination of both in one. Five studies demonstrated beneficial effects on bone repair, including in diabetes; three on skeletal muscle; and one on skin wound healing in diabetes. However, four studies reported detrimental effects of 5LO inhibition on burn wound recovery, cardiac repair post-myocardial infarction, and liver regeneration.

Discussions

Our results underscor e the crucial role of 5-LO in tissue repair, with a direct impact and potential benefit in diabetic wound healing. The inhibition of 5-LO offers promising avenues for tissue-specific therapies but requires careful modulation to avoid adverse outcomes.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level I

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Claudia C Biguetti, DDS, PhD	claudia.biguetti@utrgv.edu	I/We have nothing to disclose	
Roel Navrro, MS	roel.navarro99@gmail.com	I/We have nothing to disclose	

Title

Impact of First Metatarsal Shortening: Implications and Insights

Submit Date

10/14/2024

Correspondent

Last Name:Armout

Full Name:Nabih, Armout, DPM

Practice/Company/Residency Program:

Email:nabiharmout1@gmail.com

Cooperman Barnabas Medical Center

Authors

Author 1:Nabih, Armout, DPM

Author 2:Amanda, L, Gallagher, DPM

Author 3:Maryellen, Brucato, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This meta-analysis investigates the impact of first metatarsal shortening on the incidence of postoperative transfer metatarsalgia following hallux valgus surgery.

Methodology

The analysis included 15 studies with 1,550 patients, focusing on the relationship between metatarsal shortening and metatarsalgia, with subgroup analyses based on surgical techniques, patient demographics, and foot morphology.

Procedures

Results

The results show a correlation between the degree of shortening and metatarsalgia risk. Shortening less than 3 mm resulted in a low incidence (6.1%) of metatarsalgia, while shortening between 3-4 mm increased the incidence to 15%. When shortening exceeded 4 mm, the incidence of transfer metatarsalgia rose to 27%. Subgroup analysis revealed that Chevron osteotomies, associated with minimal shortening, had the lowest incidence of metatarsalgia (6.5%). In contrast, Wilson osteotomies, which typically result in greater shortening, had the highest incidence (30%).

Discussions

Patient factors play a significant role. Older patients (greater than 60 years) had a higher risk of complications across all degrees of shortening, while individuals with a longer second metatarsal were susceptible to metatarsalgia when the first metatarsal was shortened greater than 3 mm. The findings suggest that limiting shortening to less than 3 mm can significantly reduce the risk of transfer metatarsalgia. Chevron osteotomies, which minimize shortening, should be preferred, especially for high-risk populations. These results underscore the importance of careful surgical planning and selection of techniques that preserve metatarsal length to optimize patient outcomes and minimize complications.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Forefoot Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Nabih, Armout, DPM	nabiharmout1@gmail.com	I/We have nothing to disclose	
Amanda, L, Gallagher, DPM	agallagher0306@gmail.com	I/We have nothing to disclose	
Maryellen, Brucato, DPM	marebeary1@gmail.com	Consultant/Advisor/Speaker (List all affiliations)	Organogenesis
		Hold more than a 2% financial interest (including stocks) in any organizations(s)	BoardsBlast LLC
		Intellectual Property rights owned	BoardsBlast LLC
		Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	Podiatry Board Seat, NJ Doctor Patient Alliance

TitleTopical and Oral Probiotics as an Adjunctive Therapy for Diabetic Foot Ulcers: A Systematic Review with Meta-Analysis

Submit Date10/14/2024

CorrespondentLast Name: Webb
Full Name: Brady, M, Webb, DPMEmail: bradymwebb71@yahoo.com
Practice/Company/Residency Program: Rochester General Hospital

AuthorsAuthor 1: Mary, E, Matchak, DPMAuthor 2: Brady, M, Webb, DPM
Author 3: Danielle, L, Callard, BSAuthor 4: Paul, J, Merkel, DPM
Author 5: Author 6:
Author 7: Author 8:

PurposeThis study aims to assess the efficacy of topical and oral probiotics in improving wound healing in diabetic patients, offering a complementary approach to conventional wound care.

MethodologyA systematic review was conducted following PRISMA guidelines, including studies from PubMed, Google Scholar, and Cochrane Library up to September 2024. Studies evaluating probiotics' effect on diabetic foot ulcers were included. Systematic reviews, animal, and cadaveric studies were excluded. Percent reduction of ulcer surface area per day (PRUSA/day) was calculated and analyzed using one-tailed weighted ANOVA and Tukey's Post-Hoc Test.

Procedures

ResultsOf 6123 articles, four studies (105 ulcers) were included: three randomized control trials and one case report. Topical probiotics were studied in three trials, and oral probiotics in one. The PRUSA/day was 1.21% for topical probiotics (n=42), 0.97% for oral probiotics (n=30), and 0.83% for controls (n=42). ANOVA was statistically significant (P=0.04), with Tukey's test showing topical probiotics had a mildly significant effect over controls.

DiscussionsDiabetic patients have disrupted skin flora, which probiotics can help restore. This study showed that topical probiotics had a stronger effect on healing than oral probiotics, demonstrating promise as an adjunctive treatment for diabetic ulcers. These findings support further large-scale trials to explore the use of probiotics as adjunct therapy for diabetic foot ulcers.

FormatSystematic Review

Case Rpt Followup

Student Club

ClassificationWound Care/Infectious Diseases

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Mary, E, Matchak, DPM	Elise.Matchak@rochesterregional.org	I/We have nothing to disclose	
Brady, M, Webb, DPM	bradymwebb71@yahoo.com	I/We have nothing to disclose	
Danielle, L, Callard, BS	dcallard8617@gmail.com	I/We have nothing to disclose	
Paul, J, Merkel, DPM	Paul.Merkel@rochesterregional.org	I/We have nothing to disclose	

Title

The Use of Custom 3D Implants for The Correction of Complex Foot and Ankle Deformities

Submit Date

10/15/2024

Correspondent

Last Name: Dourra

Full Name: Ali, Dourra DPM

Practice/Company/Residency Program:

Email: ali.dourra@corewellhealth.org

Corewell Health Hospital Wayne

Authors

Author 1: Ali, Dourra, DPM

Author 2: Lawrence, Fallat, DPM, FACFAS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The management of large osseous defects, deformities, and non-unions in the foot and ankle remains clinically challenging. This study evaluates the effectiveness of custom 3D-printed implants in addressing these complex pathologies.

Methodology

This retrospective study analyzed 25 patients treated with custom 3D-printed implants for foot and ankle pathologies, including large bone defects, post-traumatic arthritis and Charcot neuroarthropathy. Outcome measures included radiographic fusion, need for additional surgery, complication rates and functional outcome scores (AOFAS, ADL, FAAM.)

Procedures

Results

Implants with anatomically congruent geometries provided superior biomechanical stability and functional outcomes compared to more complex, irregular shapes with multiple components. Implants designed to target a single axis of motion demonstrated improved load distribution and joint stability, while those spanning multiple joints with differing axis experienced increased mechanical stress and reduced efficacy. Neuropathic patients had poorer outcomes, with peri-implant bone resorption leading to mechanical instability, implant migration and hardware failure.

Discussions

Custom 3D-printed implants provide a promising solution for managing complex osseous defects, allowing for precise anatomical reconstruction. However, careful patient selection and appropriate implant design are essential to ensuring long-term implant stability and success.

Format

Systematic Review

Case Rpt Followup

12

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Ali, Dourra, DPM	ali.dourra@corewellhealth.org	I/We have nothing to disclose	
Lawrence, Fallat, DPM, FACFAS	lawrence.fallat@corewellhealth.org	I/We have nothing to disclose	

Title

Sever’s Apophysitis: A Systematic Review and Meta-Analysis of Treatment Approaches Comparing Biomechanical and Patient-Reported Outcomes

Submit Date

10/14/2024

Correspondent

Last Name: Webb

Full Name: Brady, M, Webb, DPM

Email: bradymwebb71@yahoo.com

Practice/Company/Residency Program: Rochester General Hospital

Authors

Author 1: Richard, An, DPM

Author 2: Brady, M, Webb, DPM

Author 3: Frederic, Z, Oddone, DPM

Author 4: Paul, J, Merkel, DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To evaluate the efficacy of various interventions for managing heel pain in children and adolescents with Sever’s disease, comparing multiple treatment modalities.

Methodology

A systematic review followed PRISMA guidelines, including studies from PubMed, Google Scholar, Ovid, and Cochrane Library through September 2024. Studies with patient-reported outcomes for Sever’s apophysitis were included. Changes in Visual Analog Scale (VAS) scores were analyzed using a one-tailed ANOVA and Tukey’s Post-Hoc Test.

Procedures

Results

Of 10,487 articles, five studies (330 feet) were included, assessing custom orthotics, heel cups/lifts, and taping/bracing versus controls. The average treatment time was 11.6 weeks. The average VAS score decrease was -4.7. ANOVA and Tukey’s test found no statistically significant difference among groups. Biomechanical outcomes from studies included: heel pad thickness, peak plantar pressure and 6 item foot posture index.

Discussions

While no statistical difference was observed between treatments, individual studies reported notable pain reduction (e.g., a 96.3% VAS reduction in one study). The improvements likely reflect the condition’s self-limiting nature. All treatments improved patient outcomes, though none were statistically superior. Further research is needed to identify the most effective treatment for Sever’s apophysitis.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Orthotics/Prosthetics/Pedorthics

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Richard, An, DPM	richard.an.dpm@gmail.com	I/We have nothing to disclose	
Brady, M, Webb, DPM	bradymwebb71@yahoo.com	I/We have nothing to disclose	
Frederic, Z, Oddone, DPM	zoddone@gmail.com	I/We have nothing to disclose	
Paul, J, Merkel, DPM	paul.merkel@rochesterregional.org	I/We have nothing to disclose	

Title

Outcomes of 3D-Printed Total Talus Replacements for Avascular Necrosis: A Systematic Review

Submit Date

10/14/2024

Correspondent

Last Name: Webb

Full Name: Brady, M, Webb, DPM

Email: bradymwebb71@yahoo.com

Practice/Company/Residency Program: Rochester General Hospital

Authors

Author 1: Tyler, A, Grimes, DPM

Author 2: Brady, M, Webb, DPM

Author 3: Tayler, A, Thomas, DPM

Author 4: Paul, A, Stasko, DPM, AACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To evaluate short- and intermediate-term outcomes of total talus replacements (TTR) performed for avascular necrosis (AVN) without tibiototalcaneal arthrodesis (TTC) or total ankle replacement (TAR).

Methodology

A systematic review was performed following PRISMA guidelines, including studies from Pubmed, Google Scholar, Cochran library, and Ovid databases up to September 2024. Articles evaluating 3D-printed implants for TTR in AVN patients were included, excluding studies with TTC, TAR, or less than one-year follow-up. AOFAS and VAS scores were analyzed, and odds ratios were used to assess complication timing.

Procedures

Results

Out of 9940 articles, nine studies were included (47 feet). All studies had level 4 evidence, consisting of case series (n=5) and case reports (n=4). The average postoperative AOFAS score was 85.8 (n=17), and the average reduction in VAS scores was 3.5 (n=34). Four patients required revision surgeries. Odds ratios indicated an increased likelihood of revision each year, but this was not statistically significant.

Discussions

Statistically significant improvements in AOFAS and VAS scores were observed, with a low complication rate. Future studies should compare 3D-printed talus implants to cadaveric and allograft options. 3D-printed TTRs offer improved pain and function for patients with end-stage AVN.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Tyler, A, Grimes, DPM	tylergrimes29@gmail.com	I/We have nothing to disclose	
Brady, M, Webb, DPM	bradymwebb71@yahoo.com	I/We have nothing to disclose	
Tayler, A, Thomas, DPM	tayler.thomas@rochesterregional.org	I/We have nothing to disclose	
Paul, A, Stasko, DPM, AACFAS	paul.a.stasko@gmail.com	I/We have nothing to disclose	

Title

Evaluating the Impact of Multidisciplinary Approach in Lower Limb Diabetic Re-Amputation on Underserved Communities

Submit Date

10/14/2024

Correspondent

Last Name: Nguyen

Full Name: Julian

Practice/Company/Residency Program:

Email: juliandpm1@gmail.com

Crozer Health

Authors

Author 1: Julian Nguyen, DPM

Author 2: Elaine Chu, DPM

Author 3: Rhonda S. Cornell, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This poster examines a multidisciplinary approach to limb salvage and the rates of lower limb re-amputation in an underserved community.

Methodology

This is a retrospective study that provide an overview of various types of amputation precedes a detailed analysis of the risk factors and rates of re-amputation. Our study, conducted at Crozer-Chester Medical Center and Taylor hospital in Delaware County, Pennsylvania, examined diabetic patients over a three-year period.

Procedures

Results

Results demonstrated that socioeconomic status (SES), the laterality of the initial amputation, and the number and severity of the patient’s comorbidities negatively affected surgical outcomes (p<0.01)

Discussions

These findings underscore the need for targeted interventions to improve outcomes in underserved populations. Further research is warranted to explore effective strategies for limb salvage and to address the disparities in surgical outcomes for patients in underserved communities.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Diabetic Foot

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Julian Nguyen, DPM	juliandpm1@gmail.com	I/We have nothing to disclose	
Elaine Chu, DPM	immaechu@gmail.com	I/We have nothing to disclose	
Rhonda S. Cornell, DPM	rcornell34@gmail.com	I/We have nothing to disclose	

TitleCannabinoids, the new alternative to NSAIDs in post-operative pain relief - a systematic review

Submit Date10/14/2024

CorrespondentLast Name: MagnoFull Name: Joshua C Magno, DPMEmail: joshua.magno@emory.eduPractice/Company/Residency Program: Emory University School of Medicine

AuthorsAuthor 1: Kiara E Francis, DPMAuthor 2: Angela S Moon, DPMAuthor 3: Kush H Patel, DPMAuthor 4: Shivani J Patel, DPMAuthor 5: Ahmad K Odeh, DPMAuthor 6: Author 7: Author 8:

PurposeCannabis is the most commonly used illicit substance worldwide; however, it has begun to be legalized for its therapeutic properties. Animal studies have shown novel therapeutic benefits of medical cannabis with respect to analgesia and bone healing. The purpose of this study is to summarize the available evidence on the analgesic and bone-protective properties of cannabinoids in podiatric surgery.

MethodologyA systematic review of the literature through PubMed from 2019 through 2024 was conducted to identify articles. A standard methodology for performing a systematic review using PRISMA guidelines was used. Animal studies were excluded.

Procedures

Results15 articles were initially found, and 6 were included in this study. All studies were at least clinical level of evidence 4.

DiscussionsBased on this review, there is limited yet promising evidence on the therapeutic efficacy of cannabinoids. Qualitative data supports its analgesic effects. However, there needs to be more data on its bone-protective properties. Overall, basic science research and animal studies show promising therapeutic benefits with cannabinoids. However, more robust clinical research and continued legalization are necessary before cannabinoids could be considered a possible alternative in post-operative pain management.

FormatSystematic Review

Case Rpt Followup

Student Club

ClassificationTrauma

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kiara E Francis, DPM	kiara.francis@emory.edu	I/We have nothing to disclose	
Angela S Moon, DPM	angela.moon@emory.edu	I/We have nothing to disclose	
Kush H Patel, DPM	kushpatel@emory.edu	I/We have nothing to disclose	
Shivani J Patel, DPM	shivani.jagdish.patel@emory.edu	I/We have nothing to disclose	
Ahmad K Odeh, DPM	ahmad.khaled.odeh@emory.edu	I/We have nothing to disclose	

Title

Reporting of Social Demographics in Diabetic Foot Ulcer Randomized Controlled Trials: A Systematic Review

Submit Date

10/14/2024

Correspondent

Last Name: Casciato

Full Name: Dominick, J, Casciato DPM

Practice/Company/Residency Program: Orlando VA Medical Center

Email: dominickcasciatodpm@gmail.com

Authors

Author 1: Nigel Morris DPM

Author 2: Kevin Ruiz MS-4

Author 3: Joshua Calhoun DPM

Author 4: Dominick J Casciato DPM

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this study is to systematically assess the reporting of race, ethnicity, and other social determinants of health in randomized controlled trials (RCTs) evaluating treatments for diabetic foot ulcers (DFUs), promoting more equitable and representative evidence-based care.

Methodology

A systematic review following PRISMA guidelines was conducted, searching PubMed for RCTs on DFU therapies from 2014-2024. Studies were screened for demographics such as age, sex, race, ethnicity, and other social determinants of health. Counts and frequencies were reported; bias was assessed using the Cochrane risk-of-bias tool.

Procedures

Results

Across 61 manuscripts, 100% reported age, 98% reported sex, and 66% included BMI. Race and ethnicity were mentioned in 48% and 28% of manuscripts, respectively. Insurance coverage and socioeconomic class were noted in only 2% of studies, with no income data reported. Further analyses were performed for age (10%), sex (13%), BMI (12%), race (8%), and ethnicity (7%) across the manuscripts. Among all studies, the greatest proportion of low level of bias was reported in attrition (93%), while performance blinding maintained the greatest proportion of high bias (56%).

Discussions

Reporting of race, ethnicity, and social determinants of health in DFU treatment RCTs is limited. Future studies should prioritize including these factors to ensure more equitable and representative research for diverse patient populations.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level I

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Nigel Morris DPM	nigelmorris11@gmail.com	I/We have nothing to disclose	
Kevin Ruiz MS-4	kruizaos@gmail.com	I/We have nothing to disclose	
Joshua Calhoun DPM	um4life2015@gmail.com	I/We have nothing to disclose	
Dominick J Casciato DPM	dominickcasciatodpm@gmail.com	I/We have nothing to disclose	

Title

RICE vs MEAT: An Analysis of Postoperative Therapy Techniques in Podiatric Patients

Submit Date

10/14/2024

Correspondent

Last Name:Tabler

Full Name: Briana, M, Tabler, DPM

Practice/Company/Residency Program:

Email: brianatabler1@gmail.com

Crozer-Chester Medical Center

Authors

Author 1: Briana Tabler, DPM

Author 2: Anushka Ramnani, DPM

Author 3: Rhonda Cornell, DPM, FACFAS

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this article is to introduce, to the field of podiatry, a new and possibly more effective therapy (known as MEAT) to be used in post-operative patients.

Methodology

To assess the effectiveness in post-operative podiatric patients, these different therapeutic modalities were evaluated utilizing relevant clinically-based research articles on search engines such as PubMed and Google Scholar. Each method was analyzed in its respective setting.

Procedures

Results

MEAT proposes that timely movement of the affected area has a key role in the reduction of pain and expedites the return to, or improvement of, a patient's baseline functional status.

Discussions

MEAT focuses on mobilizing the affected region to facilitate the movement of lymphatic fluid throughout the body. By combining early mobility with a multi-modal pain relieving approach, MEAT accelerates the healing process. As a new option for postoperative therapeutic modalities, this article is anticipated to be the first introduction of MEAT to podiatric literature.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Physical Therapy/Rehabilitation

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Briana Tabler, DPM	brianatabler1@gmail.com	I/We have nothing to disclose	
Anushka Ramnani, DPM	ramnani4@gmail.com	I/We have nothing to disclose	
Rhonda Cornell, DPM, FACFAS	rcornell34@gmail.com	I/We have nothing to disclose	

Title

Current Considerations and Trends of Acute Deltoid Ligament Repair in Ankle Fractures Among Prominent Foot and Ankle Surgeons

Submit Date

10/14/2024

Correspondent

Last Name: Gambhir

Full Name: Nikita

Practice/Company/Residency Program:

Email: gambhir@uthscsa.edu

University of Texas Health Science Center

Authors

Author 1: Nikita, Gambhir, DPM

Author 2: Jacob, Riddle, DPM

Author 3: Ogelsby, Barrett, DPM

Author 4: Ian,Barron, FAFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

To investigate the current trends and perspectives among prominent foot and ankle surgeons regarding the management of deltoid ligament injuries in the context of high-impact fractures.

Methodology

Contact information for 80 prominent foot and ankle surgeons was curated to ensure diverse expertise in rearfoot and ankle surgery. A 15-question survey was emailed to participants. The primary endpoint was to assess trends in expert opinions on repairing syndesmotic ankle fractures with or without primary deltoid ligament repair. The secondary endpoint evaluated surgeon preferences, decision-making criteria, and complications encountered.

Procedures

Results

Out of 80 surveys, 34 (43%) were completed. Among respondents, 19 (55.9%) had over 20 years of experience, 6 (18%) had 10-20 years, and 9 (26%) had less than 10 years. Of those surveyed, 29 (85%) reported using primary deltoid ligament repair for ankle fractures with syndesmotic disruption, and 27 (79%) believed ORIF is necessary for all fractures involving both syndesmosis and deltoid ligament rupture. Newer experts favored adjunctive deltoid repair with syndesmotic ORIF.

Discussions

Survey results indicates a strong consensus among respondents on the importance of primary deltoid ligament repair in managing syndesmotic ankle fractures

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level V

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Nikita, Gambhir, DPM	gambhir@uthscsa.edu	I/We have nothing to disclose	
Jacob, Riddle, DPM	riddlej@uthscsa.edu	I/We have nothing to disclose	
Ogelsby, Barrett, DPM	barretto@uthscsa.edu	I/We have nothing to disclose	
Ian,Barron, FAFAS	barroni@uthscsa.edu	I/We have nothing to disclose	

Title

Micro-fragmented Adipose Tissue Injection Therapy for Treatment of Ankle Osteoarthritis: A Systematic Review & Meta-Analysis

Submit Date

10/14/2024

Correspondent

Last Name: Kvach

Full Name: Diana, Kvach, BS

Practice/Company/Residency Program:

Email: diana.kvach@samuelmerritt.edu

Samuel Merritt University College of Podiatric Medicine

Authors

Author 1: Diana Kvach, BS

Author 2: Dorsa Javaheri, BS

Author 3: Melissa Jaballas, BS

Author 4: Alize Koolen, BS

Author 5: Christina Pratt, DPM, FACFAS

Author 6:

Author 7:

Author 8:

Purpose

This systematic review aims to evaluate the efficacy of micro-fragmented adipose tissue (MFAT) injection in reducing pain for patients with ankle osteoarthritis (OA). The review seeks to engage the podiatric community and expand research on this treatment, which has been extensively studied for knee OA but is under-explored for the ankle.

Methodology

Studies published up to 2024 were screened from Cochrane, PubMed, and Google Scholar. The Risk of Bias in Non-randomized Studies of Interventions tool was used to assess bias. Data analysis was conducted in R Studio using a random effects model to find standardized mean differences (SMD) and I² statistics were applied for heterogeneity.

Procedures

Results

Three studies were included, with 63 patients in total aged 18-80. Inclusion criteria comprised studies that utilized Visual Analog Scale (VAS) scores to assess outcomes and Kellgren-Lawrence grade I-IV ankle OA. Bias ranged from moderate to serious. VAS scores were assessed pre-intervention and at 6, 12, and 24 months post-intervention. All studies reported significant pain reduction at 6 months (SMD, 3.30; 95% CI [2.94, 3.67]), 12 months (SMD, 3.43; 95% CI [2.86, 3.99]), and 24 months (SMD, 3.79; 95% CI [3.42, 4.16]).

Discussions

MFAT therapy effectively reduces pain in ankle OA patients for up to two years. Future research should focus on randomized controlled trials to provide higher-quality evidence on this treatment.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Physical Therapy/Rehabilitation

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Diana Kvach, BS	diana.kvach@samuelmerritt.edu	I/We have nothing to disclose	
Dorsa Javaheri, BS	dorsa.javaheri@samuelmerritt.edu	I/We have nothing to disclose	
Melissa Jaballas, BS	melissa.jaballas@samuelmerritt.edu	I/We have nothing to disclose	
Alize Koolen, BS	alize.koolen@samuelmerritt.edu	I/We have nothing to disclose	
Christina Pratt, DPM, FACFAS	cpratt@samuelmerritt.edu	I/We have nothing to disclose	

Title

An Update on Allergic Reactions to Titanium Implants and Systematic Review or Titanium Allergic Reactions: A Systematic Review of Titanium Implants and How to Be Prepared Preoperatively

Submit Date

10/15/2024

Correspondent

Last Name: Razzante

Full Name: Mark Razzante, DPM

Practice/Company/Residency Program:

Email: mrazzante@samuelmerritt.edu

Samuel Merritt Univeristy College of Podiatric Medicine

Authors

Author 1: Steffi Casimir, B.S., M.S.

Author 2: Jasmine Atri, B.S.

Author 3: Susanna Oppong, B.S.

Author 4: Amber Del Rosario, B.S.

Author 5: Pratyush Mahapatra, B.S.

Author 6: Mark Razzante, DPM

Author 7:

Author 8:

Purpose

This study investigates titanium (Ti) hypersensitivity in surgical implants, which can cause complications like implant failure and inflammation. The goal is to evaluate diagnostic methods, particularly skin patch testing versus the Memory Lymphocyte Immunostimulation Assay (MELISA), to improve outcomes for patients with metal sensitivities.

Methodology

A literature search using databases such as Google Scholar and PubMed identified 18 peer-reviewed studies from 2006 to 2024, focusing on titanium implant reactions. Inclusion criteria involved studies with clinical or experimental data on Ti hypersensitivity, excluding non-metallic implant failures and unrelated hypersensitivity reactions.

Procedures

Results

Titanium hypersensitivity, though rare, can result in chronic inflammation and implant failure in foot and ankle surgeries. Patch testing often fails to detect deep tissue reactions, while MELISA testing shows greater accuracy. Alternative materials, such as ceramic or niobium, may be better for patients with metal allergies.

Discussions

MELISA testing is a more reliable tool for diagnosing metal hypersensitivity than patch testing. Surgeons should consider preoperative MELISA testing and alternative implants to reduce hypersensitivity risks, improving patient outcomes. Preoperative MELISA testing should be standard for titanium implant patients to minimize allergic reactions.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level I

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Steffi Casimir, B.S., M.S.	stefficasimirpod@gmail.com	I/We have nothing to disclose	
Jasmine Atri, B.S.	jasmine.atri@samuelmerritt.edu	I/We have nothing to disclose	
Susanna Oppong, B.S.	susanna.oppoing@samuelmerritt.edu	I/We have nothing to disclose	
Amber Del Rosario, B.S.	amber.delrosario@samuelmerritt.edu	I/We have nothing to disclose	
Pratyush Mahapatra, B.S.	pratyush.mahapatra@my.rfums.org	I/We have nothing to disclose	
Mark Razzante, DPM	mrazzante@samuelmerritt.edu	I/We have nothing to disclose	

TitleRe-operation Rates for Lateral Column Lengthening: A Systematic Review

Submit Date10/15/2024

Correspondent

Last Name:GrambartFull Name:SeanEmail:sean.grambart@dmu.eduPractice/Company/Residency Program:Des Moines Univeristy

Authors

Author 1:Sean T. Grambart DPM FACFASAuthor 2:Callie M. Jacobson BSAuthor 3:Stephanie L. Schuster BSAuthor 4:Chloe I. Van Vliet BAAuthor 5:Author 6:Author 7:Author 8:

PurposeThe purpose of this study is to examine the re-operation rates of nonunion and hardware removal of an Evan’s Osteotomy.

MethodologyThe authors’ conducted electronic database searches within the Des Moines University library system, utilizing PubMed. All articles involved a comprehensive evaluation conducted by the coauthors, each ensuring concurrence regarding the extraction, inclusion or exclusion, and data entry. 2,350 articles were evaluated. With elimination of duplicate articles and after removing articles due to exclusion criteria, we were left with 141 articles. 16 articles met are criteria.

Procedures

ResultsOverall nonunion rate of 7.7% for Evans osteotomy. The additional of a medializing calcaneal osteotomy increased the nonunion rate to 8.0%. Titanium wedge has the lowest nonunion rate of 3.1% compared to allograft, autograft, and wedge plates. Hardware removal rate was 26.0%

DiscussionsThe nonunion rate did not show any statistical significance between the lateral column lengthening group only compared to the lateral column lengthening group combined with the medializing calcaneal osteotomy, The titanium wedge did have a lower nonunion rate. The authors speculate that this is due to the use of compression hardware that can be used with titanium instead of traditional graft materials in which compression can lead to graft resorption.

FormatSystematic Review

Case Rpt Followup

Student Club

ClassificationRearfoot and Ankle Reconstruction

Level of EvidenceLevel IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
		Grant/Research funding	The Podiatry Foundation
		Hold more than a 2% financial interest (including stocks) in any organizations(s)	BESPA Global
		Intellectual Property rights owned	Orthosolutions
		Member of a medical publication or editorial governing board	FASTRC
Sean T. Grambart DPM FACFAS	salam.r.abbad@dmu.edu	Consultant/Advisor/Speaker (List all affiliations)	Depuy
Callie M. Jacobson BS	callie.m.jacobson@dmu.edu	I/We have nothing to disclose	
Stephanie L. Schuster BS	Stephanie.L.Schuster@dmu.edu	I/We have nothing to disclose	
Chloe I. Van Vliet BA	Chloe.I.VanVliet@dmu.edu	I/We have nothing to disclose	

Title

The Efficacy of Extracorporeal Shockwave Therapy Compared with Alternative Clinical Treatment Options for Plantar Fasciitis: A Systematic Review and Meta-Analysis of Randomized Controlled Trials and Retrospective Comparative Study

Submit Date

10/15/2024

Correspondent

Last Name:Reardon

Full Name: Brennan, K, Reardon, DPM, AACFAS

Practice/Company/Residency Program:

Email: brennan.reardon@gmail.com

Student Transatlantic Education in Podiatric Surgery

Authors

Author 1: Brennan, K, Reardon, DPM, AACFAS

Author 2: Gabriella, A, Ley, DPM, AACFAS

Author 3: Jenny, Ying, Yuan, MSII

Author 4: Rainiel, Reyes, MSIII

Author 5: Faris Hussain, MSIII

Author 6:

Author 7:

Author 8:

Purpose

Our purpose was to determine if extracorporeal shockwave therapy is still a viable treatment option with the introduction of alternative clinical treatment options with equal or greater efficacy.

Methodology

We systematically searched PubMed, MDP, JFASI, and NIH, focusing on studies published after 2022 that compared ESWT with widely used PF treatments. We reviewed four studies involving 209 participants, assessing High-Intensity Laser Therapy (HILT), corticosteroid injections combined with therapeutic ultrasound (CSI + TUS), and platelet-rich plasma (PRP) injections. The visual analog scale (VAS) was used to measure pain reduction.

Procedures

Results

The mean VAS pain difference for ESWT was 3.63, while HILT, CSI + TUS, and PRP showed 3.24, 2.08, and 5.71, respectively. PRP demonstrated the greatest pain improvement. While ESWT is a viable treatment option to these alternatives, with comparable improvements in PF pain and reduction in PF thickness, it requires multiple sessions for lasting effects, unlike the fewer required for CSI + TUS and PRP.

Discussions

Despite the need for multiple sessions, ESWT is virtually painless and may be more accessible in clinics, making it a preferred option for patients and physicians alike. Further research is needed to explore ESWT's long-term physiological benefits in treating PF.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Physical Therapy/Rehabilitation

Level of Evidence

Level IV

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Brennan, K, Reardon, DPM, AACFAS	brennan.reardon@gmail.com	I/We have nothing to disclose	
Gabriella, A, Ley, DPM, AACFAS	gabby.ley94@gmail.com	I/We have nothing to disclose	
Jenny, Ying, Yuan, MSII	jeyuanw@gmail.com	I/We have nothing to disclose	
Rainiel, Reyes, MSIII	rainiel.reyes@my.rfums.org	I/We have nothing to disclose	
Faris Hussain, MSIII	faris.hussain@my.rfums.org	I/We have nothing to disclose	

Title

Impact of Adjunctive Procedures on Outcomes in Chopart’s/TMA: A Comprehensive Meta-Analysis

Submit Date

10/15/2024

Correspondent

Last Name:Eljahmi

Full Name:Tarek A. Eljahmi, DPM

Practice/Company/Residency Program:

Email:teljahmi@saintjosephs.org

Saint Joseph's Medical Center

Authors

Author 1:Tarek A. Eljahmi, DPM

Author 2:Huma S. Haq, DPM

Author 3:Sanghyuk Kim ,DPM, AACFAS

Author 4:James De Meo, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The goal of our study is to quantify the healing rates of forefoot amputations when performed with and without various adjunctive procedures aimed at mitigating equinovarus deformity.

Methodology

Analysis of different studies of forefoot amputations were performed at various times from 2009 and 2021. A comprehensive search was performed with the following terms using PubMed and Google Scholar databases, including "transmetatarsal", "amputation", "forefoot amputation", "Chopart's amputation". Inclusion criteria consisted of non-traumatic amputations, and exclusion criteria consisted of non-RCT, RCT, retrospective or cohort studies comparing forefoot amputation healing rate with adjunctive procedures.

Procedures

Results

Forefoot amputations alone had a 94% ulceration rate, forefoot amputations performed with tendon transfer had a 13% reulceration rate. Amputations with tendon lengthening experienced a 5% re-ulceration rate. Amputations with hindfoot fusions experienced 16% reulceration rates. forefoot amputations with multiple adjunct procedures performed in a group of 9 patients experienced no reulceration.

Discussions

Based on the analysis, forefoot amputations with hindfoot fusion or Achilles tendon lengthenings had the lowest reulceration rates. It is important to include adjunctive procedures to prevent further deformities following forefoot amputations.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Diabetic Foot

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Tarek A. Eljahmi, DPM	teljahmi@saintjosephs.org	I/We have nothing to disclose	
Huma S. Haq, DPM	huma.s.haq@gmail.com	I/We have nothing to disclose	
Sanghyuk Kim ,DPM, AACFAS	skim02@saintjosephs.org	I/We have nothing to disclose	
James De Meo, DPM, FACFAS	jdemeo@saintjosephs.org	I/We have nothing to disclose	

Title

Do We Need Another Frame? A Scoping Review on External Frame Reuse

Submit Date

10/15/2024

Correspondent

Last Name: Hughes

Full Name: James M Hughes BS

Practice/Company/Residency Program:

Email: james.hughes02@utrgv.edu

University of Texas Rio Grande Valley School of Podiatric Medicine

Authors

Author 1: James M. Hughes BS

Author 2: Nicholas B. Obias BS

Author 3: Dustin B. Prins DPM, MBA, FACFAS

Author 4: Amanda L. Killeen DPM, FACPM, CWSP, FFPM RCPS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This study aims to assess the safety of reprocessed external fixator components to lower the cost burden of surgeries using external fixation.

Methodology

Investigators searched PubMed, Cochrane, Web of Science, and Google Scholar for candidate articles for “External Fixator Frame” and “Reuse.” Parameters were set for articles included in the study and documented using a PRISMA flow chart.

Procedures

Results

Systematic searching yielded nineteen results with two articles matching the criteria. A total of forty-six (46) Delta, seventeen (17) Hexapod, and eight (8) Illizarov Frames were reprocessed. External fixation-indicated pathologies were Non-Union, Deformity, Complex/Open Tibia & Fibula Fracture, and Distal Radial Fracture. Total shared pathologies between analyzed papers were thirty-one (31) pilon fractures and twenty-four (24) tibial plateau fractures. No significant difference in adverse outcomes was found between reprocessed and single-use external fixators.

Discussions

This review found that Reprocessed External Fixators were not inferior to Single-Use External Fixators regarding adverse outcomes. Outcomes measured were infection and mechanical failure. Limitations were nondifferentiation between specific pathologies and frame types. Reprocessing frames is a viable means of reducing healthcare costs; up to 60% of material cost may be saved depending on the frame. This line of inquiry would benefit from further investigation on specific pathologies, and long-term outcomes.

Format

Systematic Review

Case Rpt Followup

Student Club

Trauma

Classification

Level II

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
James M. Hughes BS	james.hughes02@utrgv.edu	I/We have nothing to disclose	
Nicholas B. Obias BS	nicholas.obias01@utrgv.edu	I/We have nothing to disclose	
Dustin B. Prins DPM, MBA, FACFAS	dustin.prins@utrgv.edu	I/We have nothing to disclose	
Amanda L. Killeen DPM, FACPM, CWSP, FFPM RCPS	amanda.killeen@utrgv.edu	Serve in an official capacity (elected or appointed) for any other medical or podiatric organization(s)	American College of Podiatric Medicine

Title

Probative Value in Peripheral Angiogram for Planning Lower Extremity Flaps

Submit Date

10/15/2024

Correspondent

Last Name:Giagnacova

Full Name:Albert

Email:Albertdpm@gmail.com

Practice/Company/Residency Program:Company

Authors

Author 1:Albert Giagnacova DPM, AACFAS

Author 2:Lev Blekher DPM,

Author 3:Samuel Belsky DPM

Author 4:Adam Bieker DPM

Author 5:Wilven Smoody DPM

Author 6:Pejmahn EFtekharzadeh, DO

Author 7:

Author 8:

Purpose

Flaps are essential part of reconstructive limb savage ladder, we favored using peripheral angiogram, both as insurance as proper vascular supply or transpositional and rotation flaps, stenosis and obstruction interventional were addressed. Alternatives of MRI-angiograms and CT with runoff were less specific and only diagnostic is scope of value.

Methodology

Peripheral angiogram flap was done at least 5 days before flap execution. Angiograms traditional concepts were dispelled, until angiogram were reviewed. 13 patient had followup angiograms. Are study is nonrandomized all flaps received an peripheral angiogram, this is limitation in our study. Microvascular disease are poorly understood within our research group.

Procedures

Results

3/38 flaps failed for noncomplaint, early weightbearing, poor HGa 1c, non compliances issues such as not taking ASA or other thinner were noted.

Discussions

Janhofer, also Park published a similar article but from an endovascular perspective, not from orthoplastics approach, our research had a further followup and special attention to the management of flap whereas was more interventional in approach. Literature reviews bears out that peripheral angiogram is clinically superior to CT and MRI, and should be standard of care for both perspective surgeons and interventionist. There as been little consensus within the orthoplastics community are should be definitive workup for these patients.

Format

Systematic Review

Case Rpt Followup

166

Student Club

Classification

Wound Care/Infectious Diseases

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Albert Giagnacova DPM, AACFAS	Albertdpm@gmail.com	I/We have nothing to disclose	
Lev Blekher DPM,	lev_blekher@hotmail.com	I/We have nothing to disclose	
Samuel Belsky DPM	lbhpodiatry@gmail.com	I/We have nothing to disclose	
Adam Bieker DPM	lbhpodiatry@gmail.com	I/We have nothing to disclose	
Wilven Smoody DPM	lbhpodiatry@gmail.com	I/We have nothing to disclose	
Pejmahn EFtekharzadeh, DO	peftekharzadeh@phsi.us	I/We have nothing to disclose	

Title

Racial Disparities in Amputation and Limb Salvage of Lower Extremity Revascularization in Peripheral Arterial Disease: A Systematic Review and Meta-Analysis

Submit Date

10/15/2024

Correspondent

Last Name: Mackey

Full Name: Olivia, T, Mackey, MS

Practice/Company/Residency Program:

Email: olivia.mackey01@utrgv.edu

University of Texas Rio Grande Valley School of Podiatric Medicine

Authors

Author 1: Olivia T. Mackey, MS

Author 2: Amanda L. Killeen, DPM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

Racial disparities in healthcare outcomes pose significant challenges in managing peripheral arterial disease (PAD), particularly regarding amputation and limb salvage rates between Black and White patients following lower extremity revascularization.

Methodology

A systematic review was conducted using PubMed and EBSCO databases, following PRISMA guidelines. Studies from 2014 to 2024 addressing racial disparities in PAD outcomes post-revascularization were included. Exclusions comprised studies prior to 2014, lacking racial data, and non-human studies, case reports, and abstracts.

Procedures

Results

Of 3,986 articles, three studies with 310,397 patients were included. One study reported an amputation rate of 1.9 and a limb salvage rate of 0.53 among 7,108 patients. Another found an amputation rate of 1.04 and a limb salvage rate of 0.59 in 240,139 patients. The third study showed an amputation rate of 2.5 and a limb salvage rate of 0.40 for 63,150 patients. These findings indicate significantly higher amputation rates and lower limb salvage rates for Black patients.

Discussions

These results emphasize the need for targeted interventions to tackle disparities in PAD treatment and improve outcomes for all patients, fostering health equity and enhancing quality of life.

Format

Systematic Review

Case Rpt Followup

0

Student Club

Classification

Epidemiology/Population Study

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Olivia T. Mackey, MS	olivia.mackey01@utrgv.edu	I/We have nothing to disclose	
Amanda L. Killeen, DPM	amanda.killeen@utrgv.edu	I/We have nothing to disclose	

Title

Surgical Planning for Complex Podiatric Deformity with 3D Biomodel Printing: A Systematic Review and Meta Analysis

Submit Date

10/15/2024

Correspondent

Last Name: Dobronevsky

Full Name: Lina Dobronevsky DPM, PGY3

Email: dobronevsky@gmail.com

Practice/Company/Residency Program: Northwell LIJ Forest Hills

Authors

Author 1: Lina Dobronevsky

Author 2: Robert J Stabile, DPM, FACFAS

Author 3: Kaitlin Kingston, DPM, PGY3

Author 4: Raffin Chowdhury, DPM, PGY3,

Author 5: Caitlyn Minihane, DPM

Author 6:

Author 7:

Author 8:

Purpose

Variability exists for surgical intervention of rigid lower extremity deformities. Planning for this includes many individual factors. We aim to establish value of preoperative 3D printing in comparison to conventional preoperative planning.

Methodology

Utilizing PRISMA guidelines, a systematic review of literature published to PubMed was conducted through 2016. Including criteria of 3D model printing in correction for complex deformities/injuries. Measures for outcome included operative duration, fluoroscopy time, post-op complications and patient satisfaction.

Procedures

Results

Nine studies were initially identified however; five met our criteria for outcome measures. Five studies were either prospective or retrospective with two comparison groups: 3D printing pre-operatively and conventional planning. Meta-analysis of the studies showed operation duration was appreciably decreased in the 3D groups. We found mean difference of 13.28 minutes. Only two studies exhibited postoperative complications - one showed no difference, second was decreased. Fluoroscopy mean difference was 6.15 minutes. Meta-analysis of patient satisfaction via AOFAS score yielded statistically significant differences with increased scores in three reviewed studies.

Discussions

This systematic review provides promising evidence in improved patient outcomes using 3D biomodels. Access to 3D printing has shown improvement in surgical outcomes for a wide range of deformities and proven a valuable enhancement to resident education.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Lina Dobronevsky	dobronevsky@gmail.com	I/We have nothing to disclose	
Robert J Stabile, DPM, FACFAS	rstable@numc.edu	I/We have nothing to disclose	
Kaitlin Kingston, DPM, PGY3	kkingst3@kent.edu	I/We have nothing to disclose	
Raffin Chowdhury, DPM, PGY3,	raffin25@gmail.com	I/We have nothing to disclose	
Caitlyn Minihane, DPM	cminihane12@gmail.com	I/We have nothing to disclose	

Title

Open vs Minimally Invasive Approaches to Ankle Arthrodesis - A Systematic Literature Review

Submit Date

10/15/2024

Correspondent

Last Name: Hossain

Full Name: Muhannah

Practice/Company/Residency Program:

Email: muhannah.hossain@temple.edu

Temple University School of Podiatric Medicine

Authors

Author 1: Muhannah Hossain, BS

Author 2: Lucas Moran, BS

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This research addresses the question: Is MIS superior to open arthrodesis in terms of clinical outcomes, recovery, and complication rates?

Methodology

A literature search was conducted of the Advocate Christ Midwest Library as well as the Pubmed database. This yielded a total of 129 articles which were reviewed and sorted based on their titles and abstracts. 12 final studies were included that met the inclusion/exclusion criteria.

Procedures

Results

All selected studies were reviewed and mean fusion rates, time to fusion, and complication rates were selected as outcome measures to compare MIS vs. open approaches for ankle arthrodesis. Based on paired t-tests of the means, it was found that the MIS approach has a higher fusion rate, faster time to fusion, and lower complication rate.

Discussions

Arthroscopic approaches to ankle arthrodesis should be given much more consideration due the noted benefits compared to open approaches. However, surgeon preference/comfort and patient compatibility is still the greatest predictor of outcome.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Muhannah Hossain, BS	muhannah.hossain@temple.edu	I/We have nothing to disclose	
Lucas Moran, BS	lucas.moran@temple.edu	I/We have nothing to disclose	

Title

Effect of tibial transverse transport corticotomy on chronic lower extremity ulcers by ulcer grading

Submit Date

10/02/2024

Correspondent

Last Name: Guo

Full Name: Anna Guo, DPM MS

Practice/Company/Residency Program:

Email: aguo@challiance.org

Cambridge Health Alliance

Authors

Author 1: Anna Guo, DPM, MS

Author 2: Shuran Zhang, DPM

Author 3: Dylan Hemsted, DPM

Author 4: Michael H. Theodoulou, DPM, FACFAS

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The tibial cortex transverse transport corticotomy (TTT) is an emerging limb salvage technique for refractory neuroischemic lower extremity wounds, although its effectiveness relative to wound severity remains uncertain.

Methodology

A systematic review was conducted to evaluate the effects of the TTT on chronic lower extremity wound healing, following PRISMA guidelines. Studies with patients ≥18 years and ≥ Wagner 2 or UT 2B lower extremity ulcers who underwent TTT were included.

Procedures

Results

Of 64 total screened articles, 7 studies met inclusion criteria with 1,446 TTT procedures; four prospective observational (level 1 evidence) and three retrospective (level 2 evidence). Two studies compared healing rates by ulcers graded Wagner 3 and Wagner 4. The weighted mean difference in healing time was 12.78 days longer for Wagner 4 (n=31) versus Wagner 3 (n=58) ulcers (95% CI 6.89, 18.67; p<0.0001). Pooled healing time (five studies, n=1,072) was 32.53 days (95% CI 21.44, 43.63; p<0.0001). Overall healing rate was 94.77% (seven studies, n=1446; 95% CI 93.48, 95.81).

Discussions

The TTT shows potential beyond limb salvage for management of neuroischemic lower extremity ulcers. Few studies have evaluated TTT by wound severity, but the overwhelming positive healing rates published so far provide support for this regenerative procedure with recalcitrant ulcers regardless of severity.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Diabetic Foot

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Anna Guo, DPM, MS	aguo@challiance.org	I/We have nothing to disclose	
Shuran Zhang, DPM	shzhang@challiance.org	I/We have nothing to disclose	
Dylan Hemsted, DPM	dhemsted@challiance.org	I/We have nothing to disclose	
Michael H. Theodoulou, DPM, FACFAS	mtheodoulou@challiance.org	I/We have nothing to disclose	

Title

The Effectiveness of 3-D Talus Modeling Varies Among Patient Populations Depending on Factors Such as Age, Sex, and Comorbidities: A Systematic Review.

Submit Date

09/30/2024

Correspondent

Last Name: Camellia

Full Name: Russell

Practice/Company/Residency Program:

Email: camellia.russell@temple.edu

Temple University College of Podiatric Medicine

Authors

Author 1: Thomas Birdwell DPM FACFAS

Author 2: Camellia Russell

Author 3: Mark Russell BSN RN

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

This research assesses whether 3-D talus modeling enhances surgical outcomes for total ankle replacement differently based on patient factors like age, sex, and comorbidities.

Methodology

An extensive systematic approach was used to locate available studies. Searches will be conducted in the following electronic databases: JFAS, JAPMA, PubMed, Embase, Cochrane Library, and Scopus.

Procedures

Results

Our systematic review indicated that 3-D modeling of the talus is affected by a patient factor that can influence its effectiveness— age, comorbidities, and sex. Age-related comorbidities such as vascular disease, or more commonly, alcohol abuse, are notable challenges for older patients combing through a model. In addition, dramatic anatomical differences between males and females have taken sharp focus on the geometrical shape of the talus, which calls for new 3-D models to be used.

Discussions

Concerning patient-hosted 3-D models, factors affect the success of 3-D talus modeling, such as age, comorbidities, and sex. Therefore, addressing the customization of 3-D models here is fundamental in improving their efficiency and clinical relevance in surgical planning and outcomes.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level I

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Thomas Birdwell DPM FACFAS	thomas.birdwell@temple.edu	I/We have nothing to disclose	
Camellia Russell	camellia.russell@temple.edu	I/We have nothing to disclose	
Mark Russell BSN RN	mark.russell@unlv.edu	I/We have nothing to disclose	

Title

The Use of 8% Capsaicin in Painful Neuropathy Secondary to HIV and Diabetes

Submit Date

10/01/2024

Correspondent

Last Name: Santiago

Full Name: Savannah, M, Santiago DPM

Practice/Company/Residency Program:

Email: savannahsantiagodpm@gmail.com

Ascension St. Vincent Indianapolis

Authors

Author 1: Savannah M Santiago, DPM

Author 2: Jonathan Labovitz, DPM, FAFAS, CHCQM

Author 3:

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The study conducts a systematic review and meta-analysis to evaluate the efficacy of 8% capsaicin for treating pain in patients with diabetic peripheral neuropathy (DPN) and HIV-associated peripheral neuropathy (HIV-PN). It also examines the effectiveness of different patch application durations of 30, 60, and 90 minutes across the two subgroups.

Methodology

A literature search was performed using PubMed, Embase, and Google Scholar, focusing on Level 1 studies published in English over the last 10 years with full-text access. Inclusion criteria required studies with a relevant number needed to treat and patient populations treated for HIV-PN, DPN, or both, using the 8% capsaicin patch. Exclusion criteria included those focusing solely on the 8% capsaicin patch without treating DPN or HIV-PN. Seven articles were selected, encompassing a total patient population of 3,161, with 2,337 in the treatment group. Statistical analyses included ANOVA, improved ratio, percentage improvement, averaged ratio, and Chi-squared tests, with bias analysis using the RoBANS 2.0 system.

Procedures

Results

The treatment group experienced an average pain improvement of 40.7% (p = 0.016). No significant differences were found between patch durations (p = 0.953) or between the HIV-PN and DPN groups (p = 0.268).

Discussions

The systematic review highlights 8% capsaicin's potential as a non-addictive pain management option and demonstrates significant pain reduction for DPN and HIV-PN without a significant impact from patch duration.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Neurological/Peripheral Nerve Disorders

Level of Evidence

Level II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Savannah M Santiago, DPM	savannahsantiagodpm@gmail.com	I/We have nothing to disclose	
Jonathan Labovitz, DPM, FAFAS, CHCQM	jlabovitz@westernu.edu	I/We have nothing to disclose	

TitlePost-traumatic arthritis following medial tarsometatarsal injuries: A systematic review and meta-analysis

Submit Date10/02/2024

CorrespondentLast Name: Tonsuthanluck
Full Name: Sora , MD. Email: drsora.ton@gmail.com
Practice/Company/Residency Program: Rajavithi Hospital

AuthorsAuthor 1: Sora Tonsuthanluck, MD. Author 2: Jari Dahmen, MD.
Author 3: Sebastian F. Baumbach Author 4: Henry Ricardo Handoyo
Author 5: Piyawat Kantagowit Author 6: Chayanin Angthong
Author 7: Author 8:

PurposeThis study was to examine incidence and factors of PTA, severe PTA and worsening outcomes following medial TMT injuries by systematic review and meta-analysis method.

MethodologyThe systematic review were performed according to PRISMA guidelines. The search terms as “tarsometatarsal”, “post-traumatic”, “arthritis” were used for searching in PubMed and Google Scholar. 14 Eligible studies were selected. The meta-analysis results were extracted and reported by the Forest plots model.

Procedures

Results687 patients were included. The incidences of PTA following medial TMT injuries was 33% and severe PTA among PTA occurrence was 20%. The occurrence rate of PTA varies from 7-96.83%. Following outcomes were the factors affecting PTA. 1) Ligamentous injury versus combined ligamentous-osseous injury was -0.10. 2) Anatomical reduction after the treatment following medial TMT injuries was -1.85 compared to non-anatomical reduction after the injury. 3) The percentage of Myerson classification ≥ C was identified as a source of prevalence of PTA, with a coefficient of 0.0242 in the meta-regression method.

DiscussionsPosttraumatic arthritis of medial TMT injuries occurred one-third of cases after injury. More severity of injury (Myerson classification type C and non-anatomical reduction were the significant factors which affected PTA and severe PTA formations.

FormatSystematic Review

Case Rpt Followup

Student Club

ClassificationTrauma

Level of EvidenceLevel II

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Sora Tonsuthanluck, MD.	drsora.ton@gmail.com	I/We have nothing to disclose	
Jari Dahmen, MD.	j.dahmen@amsterdamumc.nl	I/We have nothing to disclose	
Sebastian F. Baumbach	sebastian.baumbach@med.uni-muenchen.de	I/We have nothing to disclose	
Henry Ricardo Handoyo	henryricardohandoyo@gmail.com	I/We have nothing to disclose	
Piyawat Kantagowit	kantpiya@windowslive.com	I/We have nothing to disclose	
Chayanin Angthong	chayanin.an@kmitl.ac.th	I/We have nothing to disclose	

TitleA Systematic Review of Posterior Pilon Fractures

Submit Date10/02/2024

Correspondent

Last Name:BoeselFull Name:Joseph M. Boesel, BAEmail:joseph.boesel@rockets.utoledo.eduPractice/Company/Residency Program:The University of Toledo College of Medicine and Life Sciences

Authors

Author 1:Joseph M. Boesel, BAAuthor 2:Dominique G. DiGiacomo, BSAuthor 3:Brett A. Hoffmann, BSAuthor 4:Jiayong Liu, MDAuthor 5:Author 6:Author 7:Author 8:

PurposeThis study aims to clarify the definition, mechanism, classification, and surgical approach for the posterior pilon fracture (PPF) to help physicians achieve better outcomes.

MethodologyKeywords such as “posterior pilon,” “surgical approach,” “fracture,” etc., were used to find relevant literature on PubMed, MEDLINE, Embase, and Google Scholar. Retrospective and prospective cohort studies discussing PPFs were included. Non-English, anatomical or biochemical studies, and studies not discussing PPFs were excluded. General demographics, complications, and the American Orthopaedic Foot and Ankle Society (AOFAS) functional outcome scores were collected.

Procedures

ResultsA total of 18 publications (959 patients) were selected for data collection. PPFs are defined as distal tibia fractures involving impaction of the articular surface and proximal displacement of talus and posterior malleolus fragments. PPFs are caused by high-energy rotational and axial load. Five studies contained classification systems for ankle fractures that included the PPF. The posterolateral (PL) approach was the most common (34.9%), followed by the modified posteromedial (PM) (20.7%), PM (7.9%), and combined PM and PL (6.9%). Combined AOFAS score was 84.8.

DiscussionsPPFs are breaks that occur in the posterior half of the articular surface of the distal tibia, typically affecting the weight-bearing area. Five classification systems define the PPF based on X-rays, CT scans, or through morphological analysis. The PL approach was the most common, with malreduction being the major complication.

FormatSystematic Review

Case Rpt Followup

Student Club

ClassificationTrauma

Level of EvidenceLevel III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Joseph M. Boesel, BA	joseph.boesel@rockets.utoledo.edu	I/We have nothing to disclose	
Dominique G. DiGiacomo, BS	Dominique.Digiacomo@rockets.utoledo.edu	I/We have nothing to disclose	
Brett A. Hoffmann, BS	Brett.Hoffman@rockets.utoledo.edu	I/We have nothing to disclose	
Jiayong Liu, MD	Jiayong.Liu@utoledo.edu	I/We have nothing to disclose	

TitleSurgical Excision of Symptomatic Nonunions of Fifth Metatarsal Base Fractures: A Systematic Review of Outcomes and Complications

Submit Date10/08/2024

CorrespondentLast Name: HillFull Name: ZackEmail: zph1582@gmail.comPractice/Company/Residency Program: Student Transatlantic Education in Podiatric Medicine

AuthorsAuthor 1: Zachary Hill, DPM, AACFASAuthor 2: Fely Jhae D. Ebanculla, MS-IIAuthor 3: Patcharathorn Pookun, MS-IIAuthor 4: Ceclina Cao, MS-IIIAuthor 5: Author 6: Author 7: Author 8:

PurposeThe purpose is to synthesize available data on surgical excision of proximal fifth metatarsal non-union fragments as a definitive treatment, addressing outcomes and complications.

MethodologyA systematic review of PubMed, Embase, Cochrane Library, and Google Scholar was performed to identify studies reporting on the excision of non-union fragments at the proximal fifth metatarsal. Inclusion criteria required studies to present functional outcomes and complications following excision in Zones 1 and 2. Of 156 studies reviewed, 4 met the criteria, encompassing 18 patient cases.

Procedures

ResultsAll 18 patients underwent excision of the proximal fragment, with various techniques used to preserve peroneal tendon function. Twelve patients were high-level athletes, and all returned to sport without pain or functional limitations. One study reported a significant improvement in AOFAS forefoot scores (from 58.6 to 95; p=0.024) and VAS scores (from 8.0 to 1.6; p=0.023). At an average follow-up of 18.3 months, 100% of patients were pain-free, and no complications were reported.

DiscussionsExcision of symptomatic non-unions of the fifth metatarsal base appears to be a safe and effective treatment option, allowing for complete pain relief and return to activity in high-level athletes. Further research is needed to validate long-term outcomes and optimal surgical techniques.

FormatSystematic Review

Case Rpt Followup12

Student Club

ClassificationForefoot Reconstruction

Level of EvidenceLevel III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Zachary Hill, DPM, AACFAS	zph1582@gmail.com	I/We have nothing to disclose	
Fely Jhae D. Ebanculla, MS-II	felyjhae.ebancul@samuelmerritt.edu	I/We have nothing to disclose	
Patcharathorn Pookun, MS-II	pat.pookun@samuelmerritt.edu	I/We have nothing to disclose	
Ceclina Cao, MS-III	Ceclina.cao@my.rfums.org	I/We have nothing to disclose	

Title

Gutter Impingement Following Total Ankle Arthroplasty: A Systematic Review of Management and Surgical Approaches

Submit Date

10/12/2024

Correspondent

Last Name:Badillo

Full Name:Karissa, J, Badillo DPM

Email:karissabadillo@gmail.com

Practice/Company/Residency Program:UPMC Pittsburgh

Authors

Author 1:Karissa Badillo, DPM

Author 2:Julia Tolin, DPM

Author 3:Jeffrey Manway, DPM

Author 4:

Author 5:

Author 6:

Author 7:

Author 8:

Purpose

The purpose of this systematic review was to evaluate the reported surgical approaches and subsequent outcomes in patients with gutter impingement following total ankle arthroplasty.

Methodology

A systematic review of studies published in PubMed/Medline, Cochrane, and Scopus databases was conducted to identify articles that evaluated studies that surgically treated gutter impingement following total ankle arthroplasty. The search terms included were “Total ankle arthroplasty impingement” OR “Total ankle replacement impingement” OR “Total Ankle Arthroplasty gutter impingement”.

Procedures

Results

In our systematic review of gutter impingement following total ankle replacement, we analyzed data from 8 studies, including a total of 1,456 patients. Gutter impingement was observed in a total of 130 ankles ;therefore, the overall incidence of gutter impingement was noted to be 8.93%.

Discussions

In summary, while all approaches show improvements in AOFAS scores, the limited data and high heterogeneity prevent us from definitively concluding which approach is superior. Future studies with larger sample sizes and standardized outcome measures are necessary to guide clinical decision-making and optimize patient outcomes in the management of gutter impingement following TAA.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Rearfoot and Ankle Reconstruction

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Karissa Badillo, DPM	badillokj2@upmc.edu	I/We have nothing to disclose	
Julia Tolin, DPM	tolinj@upmc.edu	I/We have nothing to disclose	
Jeffrey Manway, DPM	Manwayjm@upmc.edu	I/We have nothing to disclose	

Title

The Impact of Optimal Surgical Timing and It’s Clinical Outcomes in Ankle Fractures: A Systematic Review

Submit Date

10/15/2024

Correspondent

Last Name: Francis

Full Name: Kiara

Practice/Company/Residency Program:

Email: kfran30@emory.edu

Emory University School of Medicine Podiatry Residency

Authors

Author 1: Kiara E. Francis, DPM

Author 2: Joshua J. Mann, DPM, FACFAS

Author 3: Angela S. Moon, DPM

Author 4: Joshua C. Magno, DPM

Author 5: Kush H. Patel, DPM

Author 6: Shivani J. Patel, DPM

Author 7: Sean C. Busby, DPM

Author 8: Steven M. Hogan, DPM

Purpose

The purpose of this study is to explore the optimal time for surgical intervention in ankle fractures and to further evaluate the effects of early versus late intervention on patient outcomes.

Methodology

A systematic review of closed bi-malleolar and tri-malleolar ankle fractures treated with ORIF were included and retrospectively analyzed for timing of operation and complications postoperatively. Wound complication data was reviewed for 995 patients while AOFAS and VAS scores were available for 101 patients. Time to surgery was determined to be statistically significant using p values.

Procedures

Results

Current literature is inconclusive on the most appropriate timing for ankle fracture repair. Wound complications were much greater in the delayed (12.23%) versus the early treatment group (2.98%). The AOFAS and VAS scores were reviewed for patients with and without complications, with the complication group scoring 11.5 points lower in AOFAS and 0.5 points lower in the VAS score.

Discussions

The compiled data shows early intervention in treating ankle fractures is preferred to minimize the risk of complications. However, several factors including swelling, comorbidities, and polytrauma may limit safe early intervention. Overall, proper alignment of the ankle fracture can be achieved regardless of time to surgery. Further research is necessary to determine the most appropriate time for surgical intervention.

Format

Systematic Review

Case Rpt Followup

Student Club

Classification

Trauma

Level of Evidence

Level III

Authors/Financial Disclosures

Full Name:	Email:	Disclosure(s) selected:	Disclosed Organisation(s):
Kiara E. Francis, DPM	kfran30@emory.edu	I/We have nothing to disclose	
Joshua J. Mann, DPM, FACFAS	joshua.mann@emory.edu	I/We have nothing to disclose	
Angela S. Moon, DPM	angela.moon@emory.edu	I/We have nothing to disclose	
Joshua C. Magno, DPM	joshua.magno@emory.edu	I/We have nothing to disclose	
Kush H. Patel, DPM	kushpatel@emory.edu	I/We have nothing to disclose	
Shivani J. Patel, DPM	shivani.jagdish.patel@emory.edu	I/We have nothing to disclose	
Sean C. Busby, DPM	sean.busby2@emory.edu	I/We have nothing to disclose	
Steven M. Hogan, DPM	steven.hogan@emory.edu	I/We have nothing to disclose	

