

The Use of Two Fibular Intramedullary Nail Systems as Minimally Invasive Approach for Fibula ORIF

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Purpose & Literature Review

weight bearing. co-morbidities, skin envelope quality, or difficulty remaining non fixation of fibular fractures. This is ideal for patients with significant This case series showcases a minimally invasive approach for

factors alone decrease the risk of complications for an at-risk hardware, size of incision, and time of non-weight bearing. These complications. (1) Fibular nails reduce the prominence of hypertension, CHF, and tobacco use leads to increase risk of decreased mobility coupled with co-morbidities such as, diabetes, with standard ORIF of fibular fractures. A patients age and baseline healing complications, infection, and failure of hardware increase As a patient's age increases their chances of non-union, wound

Methodology/Case Presentation

permitted to weight bear at 2-3 weeks or when the incision had disease, hypertension, CAD, and stroke. All patients were co-morbidities. Co-morbities included: diabetes, end stage renal patients had significant medical histories while one patient had no healed. for the fixation of 9 fibular fractures. Eight of the nine fibular fractures were SER injuries, the other a PAD injury. 8 out of the 9 In the cases presented, 2 different fibular nail systems were used



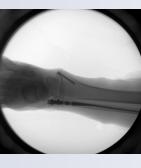
Pre and Post-Op insertion of fibular nail without talon feature, the

Procedures

fixation system had the feature of deploying talons that allowed for orientation and holes proximally for a syndesmotic fixation. One system constructed of distal locking screws which differed in increased stability of the fixation. Two different fibular nail systems were used for fixation. Each

the talons were deployed in one of the systems fractures were then reduced, guide wire inserted, reamed, nail incisions. The incision made to insert the nail distally only needed to had different screw orientations). Prior to placing the locking screws inserted and then locked into place with the locking screws (both be approximately 2.5 cm in length to access the distal fibula. The Each system had similar procedural steps only requiring small





Pre and Post-Op insertion of fibular nail without talon feature





Pre and Post-Op insertion of fibular nail with talon feature

removal of the nail, washout, placement of antibiotic beads, and septic arthritis of that ankle. This patient was taken to the OR for without complication, the patient however, months later developed intraoperatively. One postoperative wound developed which healed occurred in the only case where this was used on young patient. purchase of the syndesmotic screw. The intraoperative fracture operative complications included fracture of the fibula and lack of was treated with 6 weeks of IV antibiotics. This case was converted to a standard plate and screw construct There were 3 complications total, 2 intra operative. Intra-

except for the case that developed septic arthritis. no large difference in patient satisfaction between the two systems used, both achieved stable reduction of the fractures. There was There were no differences in outcomes between the systems

Discussions

population. method is better for long term functional outcome in the geriatric compare conventional plating to fibular nails to determine which studies are promising there is a need for retrospective studies to non-invasive and allows early weight bearing. Although small cohort morbidities fibular nails are an excellent choice for fixation that is for fibular nails. For a patient that is elderly with multiple comay pose further investigation for limitations on patient selection fibular nails. However, the fracture case of a young healthy patient, Overall no significant complications occurred with use of the

Resources

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