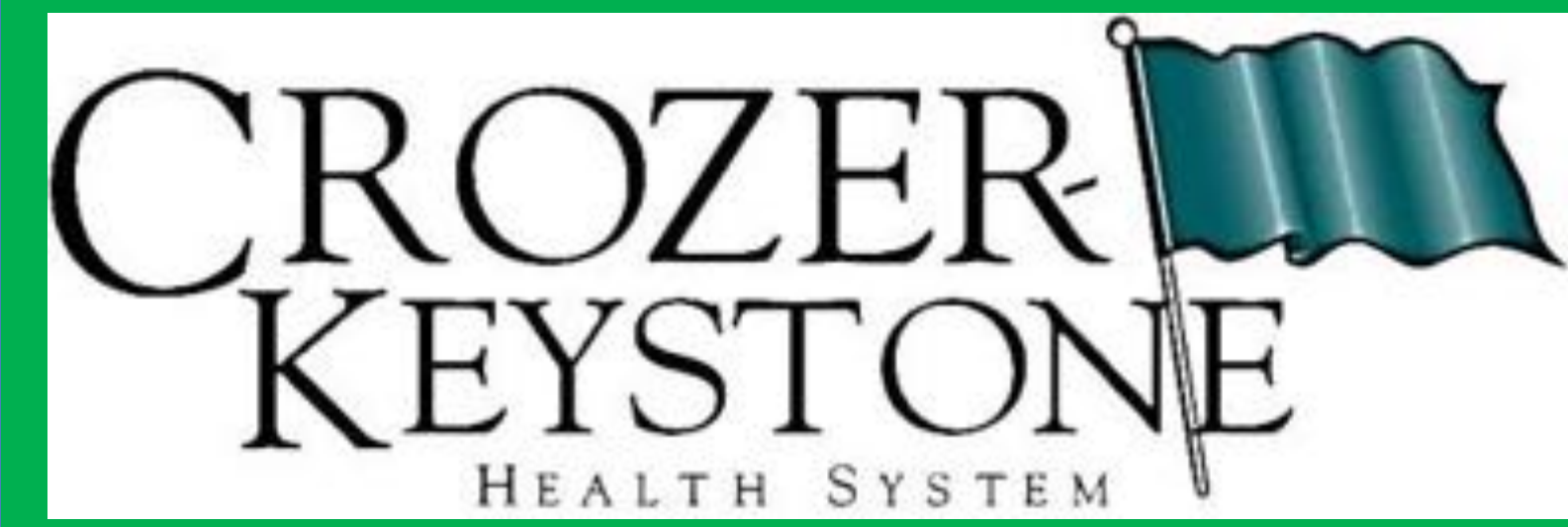


A Novel Treatment of Freiberg's Infraction Utilizing a Viable Osteochondral Allograft with Calcaneal Autograft: A Case Report

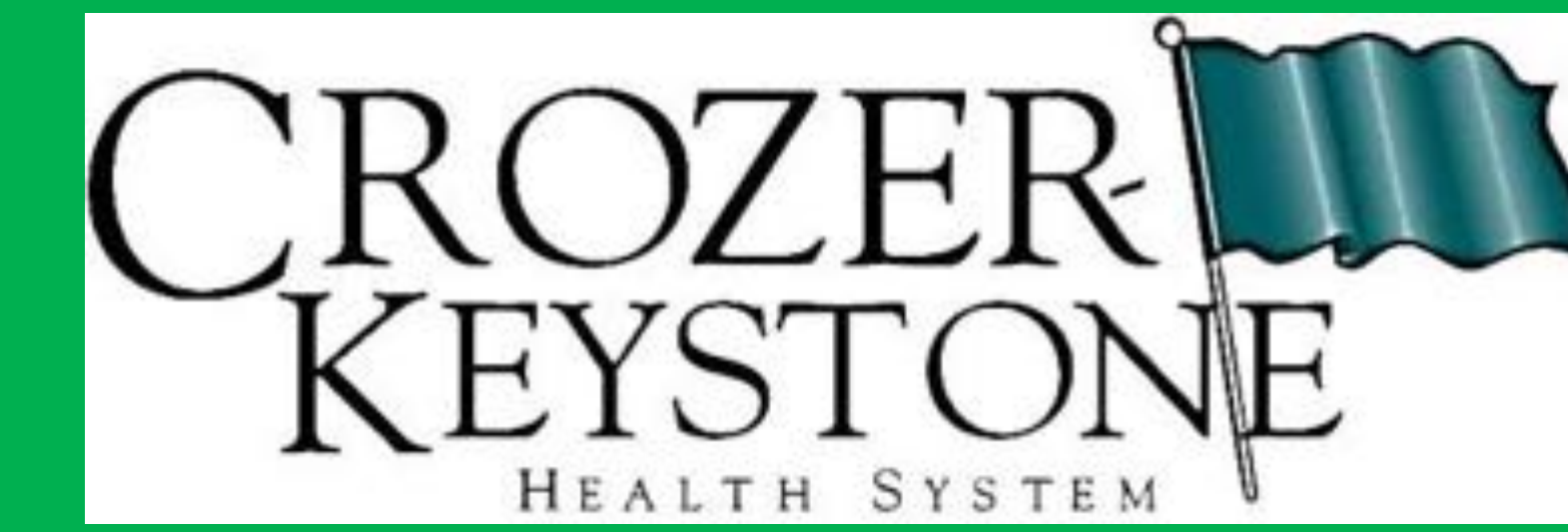


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INTRODUCTION

- ❖ Freiberg's infraction, osteochondrosis of the second metatarsal head, can be frustrating for the podiatric surgeon to cure.
- ❖ It is prevalent in young women in the third decade of life and the etiology is often unclear.
- ❖ If left untreated, there can be pain, edema, and crepitus along the joint as the subchondral cartilage degenerates.
- ❖ This case report presents a novel treatment option for a painful Freiberg's infraction of the second metatarsal head.

METHODS

In this study, a viable osteochondral allograft was utilized, which has been previously reported for its use in repairs of the knee and ankle. This allograft is composed of viable chondrocytes, chondrogenic growth factors, and extracellular matrix proteins. To our knowledge, there are no cases reported utilizing this allograft and calcaneal autograft, for the treatment of Freiberg's infraction.



Pre – Op Films



Metatarsal Flattening with Defect



Graft Placement



Graft Secured



Clinical Pre - Op



Clinical Post – Op

PROCEDURE

- We present a 24-year-old female with osteochondrosis of the second right metatarsal.
- The patient denied any acute trauma to that area but did admit to dancing competitively for 15 years.
- A 4 centimeter incision was made down to the second metatarsal-phalangeal joint.
- Severe cystic changes were noted including flattening of the second metatarsal head with large defects in the subchondral cartilage.
- First, all osteophytes were removed and then the second metatarsal head was re-shaped carefully utilizing a rongeur.
- Next, autogenous cancellous calcaneal graft was obtained from the ipsilateral extremity.
- The second metatarsal head was then subchondrally drilled to promote fibrocartilaginous growth, and then the medial defect was filled with the calcaneal graft.
- The osteochondral graft was then placed over the metatarsal head and secured with fibrin glue and 3-0 monocryl to the surrounding soft tissues.

CONCLUSION

Complete range of motion of the joint was immediately restored and found to be without crepitus. The patient transitioned into normal shoe gear after 6 weeks and has now resumed normal activities. She has been completely pain-free for over a year. Radiographs demonstrate a reshaped metatarsal head and a normal joint space.

This case report reveals our novel treatment of Freiberg's infraction of the second metatarsal. This graft was an excellent surgical option for the patient to restore pain-free range of motion and ambulation.

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