Fourth and Fifth Tarsometatarsal Arthritis in the Subtle Cavus Foot

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Disclaimer

• Parisa Morris MD
  • My disclosure is in the Final AOFAS Mobile App.
  • I have no potential conflicts with this presentation.

• Kristen Kuratnick DO
  • My disclosure is in the Final AOFAS Mobile App.
  • I have no potential conflicts with this presentation.

• Arthur Manoli II MD
  • My disclosure is in the Final AOFAS Mobile App.
  • I have a potential conflict with this presentation due to:
    • Patent/Royalties - Arch Rival Orthotic®, DJO Global
    • Fellowship Support – Synthes
Background

- Subtle cavus foot (SCF) deformity is a common foot malalignment
  - Easily diagnosed clinically with + peak-a-boo heel sign
- Lateral foot pain is a common SCF complaint
  - likely due to overload from the varus foot deformity
- Typical Causes:
  - stress fractures of the lesser metatarsals (4/5)
  - painful os peroneum syndrome
  - lateral foot overload

- PURPOSE: To present a description of a common finding of arthritis at the 4th and 5th metatarsal base as a cause of lateral foot pain in patients with SCF
Methods

• Retrospective chart review

• 8 patients with known subtle cavus foot position

• All patients presented with a primary complaint of lateral foot pain

• Radiographs showed evidence of 4\textsuperscript{th} and 5\textsuperscript{th} metatarsal base degenerative changes
Results

• Clinical findings:
  • Palpable osteophyte at 4\textsuperscript{th} TMT joint

• Radiographic findings:
  • Spur at the 4\textsuperscript{th} metatarsal base
  • Joint space narrowing and irregularity at the 4\textsuperscript{th} and 5\textsuperscript{th} TMT joints
  • CT scans showed spurs and periarticular subchondral cysts at the 4\textsuperscript{th} and 5\textsuperscript{th} tarsometatarsal (TMT) joints
4th Metatarsal Base Spur

Clinical Exam
4th Metatarsal Base Spur

Radiographic Exam

Non-symptomatic Left Foot

Symptomatic Right Foot
4th and 5th TMT Joint Space Narrowing and Irregularity

Radiographic Exam
CT Scan – 4th TMT Spur and Periarticular Subchondral Cysts
Treatment

• Nonoperative Treatment
  • Custom cavus foot orthotics
    • 1\textsuperscript{st} MTP recess and low arch
  • Injection of steroid to the 4\textsuperscript{th} and 5\textsuperscript{th} TMT joints

• Operative Treatment
  • 4\textsuperscript{th} and 5\textsuperscript{th} TMT joint debridement and excision of bone spur
  • As these are normally more mobile joints, fusion of these joints should be avoided
Results

• The majority improved with:
  • custom cavus foot orthotics
  • steroid injection to the 4th and 5th TMT joints
• One patient required surgical intervention
  • debridement of the 4th and 5th TMT joints
  • satisfactory result

Conclusion

• Arthritis of the 4th and 5th metatarsal base can be a common cause of lateral sided foot pain in patients with SCF
• The majority of patients improve with conservative management
• Patients that continue to have pain can benefit from operative debridement
References


