Delayed ORIF of Missed Low Energy Lisfranc Injuries

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Disclosures

• Dr. Moss & Luu have nothing to disclose
• Dry Harris: Consultant & Speaker for Arthrex, Extremity Medical, & Trimed
• Royalties from Arthrex and LWW (Orthopaedic Emergency and Office Procedures)
• Research Funding from Biomet
• Editorial / Review board for Journal of Bone and Joint Surgery (JBJS), Foot and Ankle International (FAI), and Foot Ankle Specialist (FAS)
• Potential Conflict: I developed & designed the Lisfranc plate for Arthrex
Introduction

- Lisfranc injuries are difficult to treat with suboptimal results and outcomes
- Up to 25% of Lisfranc injuries are missed initially
- Incidence of low-energy Lisfrancs are increasing
- Treatment of sub-acute low-energy Lisfranc injuries are controversial with little to no literature to guide surgical treatment
Methods

- Retrospective Review
- Low Energy / “Sports” Lisfranc Injuries only
  - Not MVA, Industrial Accidents
- Minimum of 6 weeks from injury to treatment
- Treated with ORIF not Primary Fusion
- Looked at Radiographs, Clinical Exam, VAS, SF-12 & FAAM scores
Methods

- 8 patients (7 female and 1 male)
  - 2 worker’s compensation cases
  - Average Age of 40
- Healthy group
  - 1 patient with DM 2 well controlled
- All gave consent for study
- All presented with recurrent pain and difficulty with work and / or sports
Methods

• All were ORIFs: 5 plates, 2 screws, 1 Endobutton

• No primary fusions were performed

• Average days until ORIF of 105.8 (range of 60 to 218)

• Average Follow Up of 1051 days (403 to 2111)
  • 35 months (13 to 70)
Results

- VAS Pain decreased from 8.5 to 2.9 (p < 0.05)
- FAAM of 74.1/63.5 (Sports)
- SF-12 of 45.3 (physical) and 54.9 (mental)
- All had Hardware Removals (except endobutton case), No Hardware Failures
- No further surgeries or fusions needed / wanted
- All returned to work and sports
  - 2 college level athletes
Discussion

• Describes a difficult but increasingly common clinical situation

• Positives: Addresses very specific clinical scenario, single surgeon, uses validated outcome measures

• Negatives: Heterogeneity of surgical treatments (plates, screws, or endobutton), Level IV data, Small numbers
Discussion

- ORIF of missed Lisfranc low energy injuries at mid to early follow-up showed a significant decrease in patient’s pre-op pain level
- All returned to work & pre-injury sports
- SF-12 and FAAM scores would be described as fair to good but not excellent
- No comparables for primary fusion
Further study to find out who would benefit from an ORIF vs. primary fusion for missed Lisfranc injuries

ORIF of these injuries can be done at a delayed fashion with expected decrease in pain but only average to good functional scores
Thank You