Talofibular Impingement Due To Enlarged Lateral Process Of Talus

-Anatomical & Clinical Study-

1Dept. of Orthopaedic Surgery, Kangwon National University Hospital
2Seoul Foot & Ankle Center, Inje University Seoul Paik Hospital
3Dept. of Orthopaedic Surgery, Seoul National University Hospital

Kang Lee1, Je Eun Lee1, Woo-Chun Lee2, Dong Yeon Lee3, Sang Gyo Seo3
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Presenter: Kang Lee, M.D.

My disclosure is in the Final AOFAS program book.
I have no potential conflicts with this presentation.
Introduction

- **Cause of lateral ankle pain**
  - Peroneal tendon problem
  - Ankle instability
  - Sinus tarsi syndrome
  - Fracture
  - Congenital deformity
  - Rarely reported about talus lateral process

- **Talus lateral process**
  - Wedge-shaped prominence of the lateral talar body
  - Playing a part in subtalar motion
  - Functioning as a load-bearing structure
  - Known as lateral process fracture with snowboarding injury
Purpose

- Anatomic investigation of the prevalence of the enlarged lateral process of talus
- Clinical study of talofibular impingement and result of lateral process partial excision.
Material & Method

- Total 69 ankles of 60 subjects (10 cadavers; 50 volunteers)
  - M : F -> 36 : 24
  - Age : 52.7 (range: 20-80)
- Cadavers - 19 ankles
- Patients – 50 ankles
- Uninjured ankle with bilateral ankle CT d/t fracture
- Exclusion Criteria
  - Radiographic sign of arthritis
  - Congenital deformity (e.g., Coalition)
  - Recurrent sprain history
  - Past history of prolonged ankle pain
Material & Method

- CT scan with resolution of “1mm”
- 3D Reconstruction using 3D reconstruction program
Measurements & Result

Measurements – Axial View

| Axial Length | 7.37 ± 1.41mm |
| Axial Length Ratio | 0.24 ± 0.05 |
| Anterior Lateral process angle | 37.53 ± 7.78 degrees |

Measurements – Coronal View

| Coronal Length | 15.84 ± 3.85 mm |
| Coronal Lateral process angle | 25.12 ± 5.20 degrees |
Case

- Ten patients with lateral ankle pain
  - No evidence about chronic ankle instability and peroneal tendon problem
  - Some sign of soft tissue impingement of synovitis underneath ATFL on MRI
  - Enlarged lateral process on CT
  - Successfully managed with cheilectomy
Discussion & Conclusion

- Study about enlarged talar lateral process – very rare
  - Accessory anterolateral facet (Jeffrey E. Martus et al.)
    - Focused on talocalcaneal impingement
  - Difficult to define an enlarged talar lateral process using standard radiographs.
    - Further evaluation (MRI, CT) is mandatory for evaluation of talar lateral process
  - Need to define the natural history of enlarged lateral process
    - Repetitive irritation??
    - Congenital development??

- Partial excision of lateral process
  - No definition of excision range
  - Requirement of ATFL incision and additional ligament repair

- Limitation
  - Limited number of ankles for anatomical study
  - Few cases with actual talofibular impingement
  - Short-term follow-up

- Conclusion
  - Talofibular impingement may be considered as a cause of lateral ankle pain when the pain is unexplained by common pathologies such as, peroneal tendon injuries, lateral ligament injuries, fractures, and subtalar joint problems.
Reference