Anterior Impingement

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Aims

- Causes of Anterior Ankle Pain
- Ankle Impingement

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Anterior Ankle Pain

- Medial –
  - Tibialis Posterior Tendinopathy
  - FHL Tendinopathy
  - Talar/Tibia/Navicular Stress Fracture
  - Medial Malleolar Stress Fracture
  - Tarsal Tunnel Syndrome

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Anterior Ankle Pain

- Lateral –
  - Peroneal tendinopathy / Subluxations
  - Sinus Tarsi
  - Stress Fractures Fibula / Talus

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Anterior Ankle Pain

- Anterior –
  - Anterior Impingement
  - Tibialis Anterior Tendinopathy
  - Inferior Tibiofibular / Syndesmotic Injuries

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Anterior Ankle Pain

- Other Conditions –
  - Inflammatory Arthritis
  - Referred Pain
  - Complex Regional Pain

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Ankle Impingement

- Relatively Common Condition
- Initially described by Wolin in 1950 as a “meniscoid lesion”
- Characterised by Anterior Ankle Pain, ? Secondary to bony and soft tissue spurs in the anterior of the ankle
- Classically in those athletes who repeatedly dorsiflex and plantarflex their ankle
- Linked to recurrent ankle sprains

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Ankle Impingement

- Soft Tissue or Bony

- Can be Antero-Lateral, Anterior or Antero-Medial

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Antero - Lateral Impingement

- Antero-Lateral Recess – bounded by tibia, fibula, capsule and anterior tibiofibular, anterior talofibular and calcaneofibular ligaments

- ? Secondary to relatively minor trauma involving plantar flexion and supination

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Antero - Lateral Impingement

- These repeated injuries result in tearing the capsular tissues without significant instability
- Repeated microtrauma and soft tissue haemorrhage lead to scarring, hypertrophy, proliferative fibrosis, and soft tissue impingement

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Antero - Lateral Impingement

- Symptoms tend to be localised anterolateral pain
- Worse on supination and pronation
- Clinically localised pain, worse on single leg squatting, and on DF and eversion are the strongest indicators (Lui 1997)
- Often a diagnosis of exclusion
- The above signs in the absence of instability and peroneal subluxation very suggestive

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Anterior Impingement

- Characterised by anterior tibiotalar spurs
- Spurs are in typical positions on the tibia and talus, within the joint capsule
- Repeated DF / PF leads to cartilage damage, degeneration and spur formation
- Repeated dorsiflexion and plantarflexion

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Anterior Impingement

- Clinically patients often have pain and a subjective ?block on Dorsiflexion
- Note a significant number of patients with spurs are asymptomatic – thought that the associated synovial thickening and scarring are important (Tol 2001)

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Antero - Medial Impingement

- Relatively Uncommon
- ?pronation mechanism, but seems to often occur in those who have had repeated supination / inversion injuries

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Antero - Medial Impingement

- Can be soft tissue or related to spurs
- Often linked to other pathologies in the ankle (Mosier La-Claire 2000)

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Assessment of Ankle Impingement

- History
- Examination
- Imaging

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History

- Age
  - Often Mid 20s
- Sports
  - Footballers
  - Ballet Dancers
  - Runners – Sprinters
- Anterior pain worse on activity - ?lunging, descending, kicking, running
- PMH – recurrent sprains

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Examination

- Well-localised
- Exclude other potential pathologies
- No evidence of Instability

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Investigations

- Xrays
  - AP, LATERAL, OBLIQUE (esp for anteromedial spurs)
  - (Tol 2004)
- MRI
  - To help exclude other pathologies
- Diagnostic / Therapeutic Injections

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Treatment

- Non-Operative
  - Heel lift
  - Rest
  - Activity Modification to limit DorsiFlexion
  - NSAIDs
  - Physiotherapy – stretching, taping

  - Injections

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Treatment

- Operative
  - Arthroscopy –
    - Diagnostic and Therapeutic
    - Excellent results
    - 90% return to sport maintained several years
    - Relatively simple procedure

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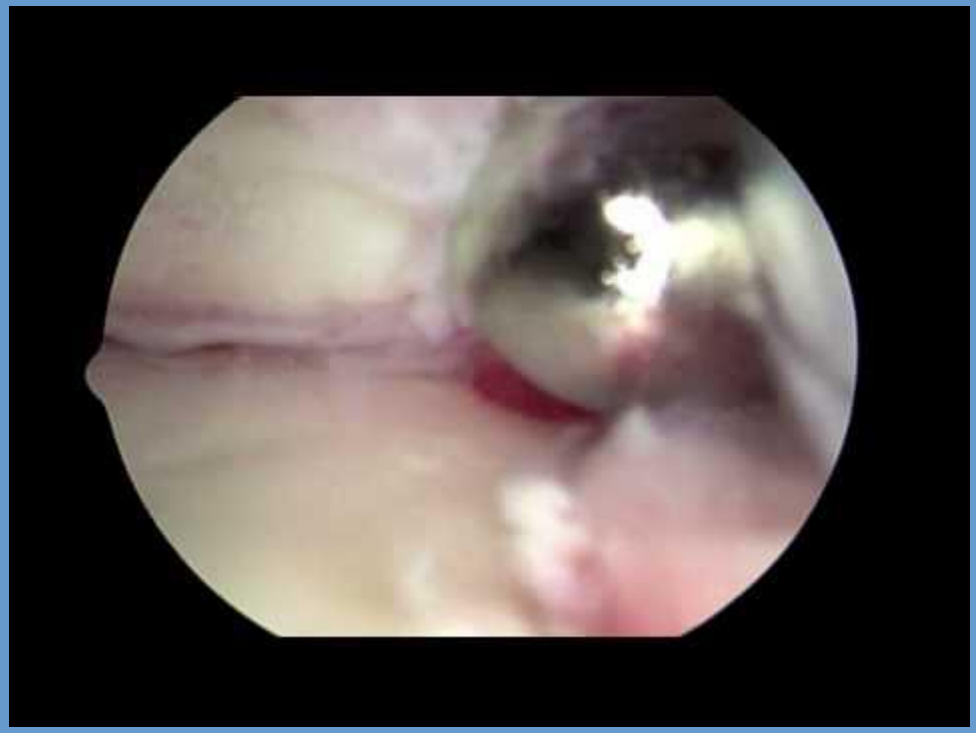
Treatment

- Operative
  - VIDEO



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Treatment

- Operative
  - Arthroscopy –
  - Failures –
    - Failure to adequately decompress
    - Failure to clear the medial gutter
    - Continuing pain from existing OA

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THANK YOU