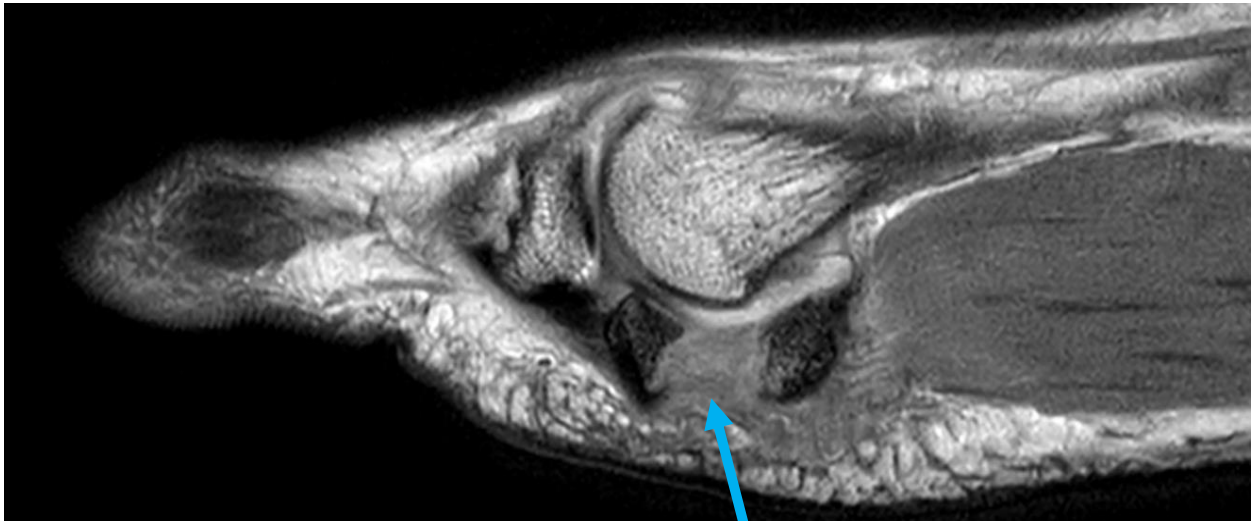


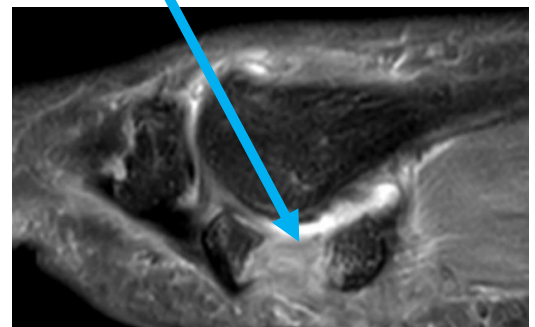
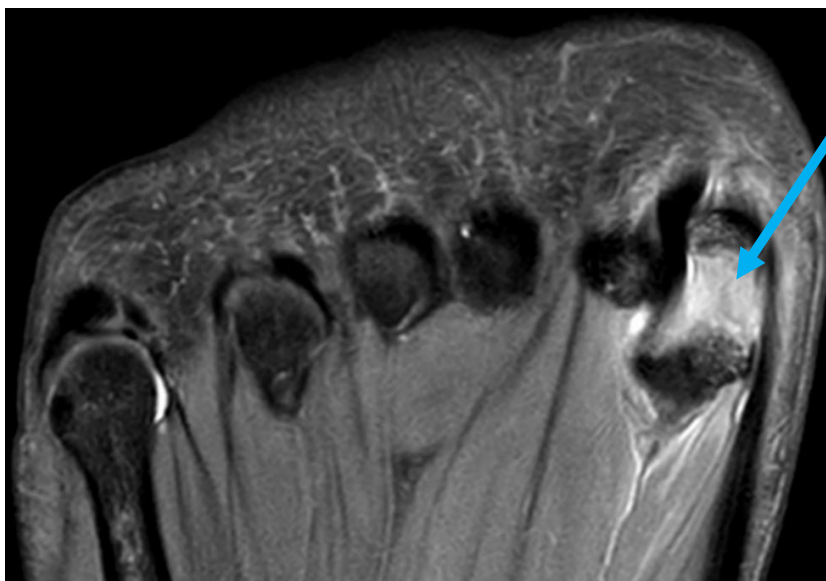
15 M presents post 1st MTPJ forcible hyperextension injury (fall forwards after kicking football). Plantar plate tear?

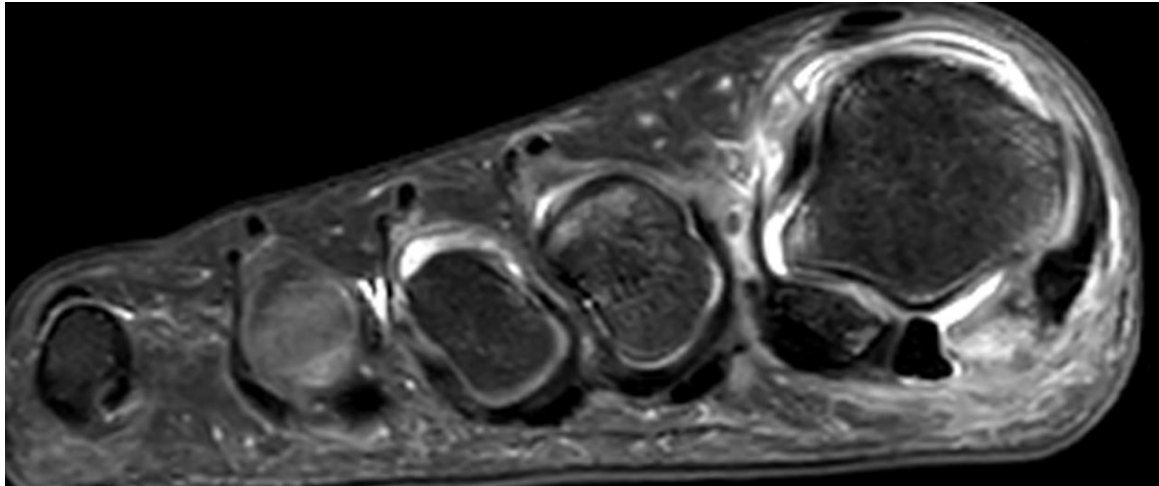
MRI Findings:

- Acute traumatic distracting injury between the two moieties of the bipartite medial sesamoid of the 1st MTP joint demonstrating 8-10mm of separation
- High grade tearing of intersesamoidal ligament and partial thickness tearing of the plantar plate that extends to involve the metatarsal attachment of the medial collateral and medial sesamoid-metatarsal ligaments
- Flexor hallucis longus tendon partially subluxed into the joint between the sesamoid bones
- Delamination, fraying and low grade partial thickness tearing of the distal insertions of adductor hallucis and, to a lesser extent, the distal insertions of both flexor hallucis brevis muscles
- Patchy areas of minor subchondral/subcortical contusion in the 1st metatarsal head

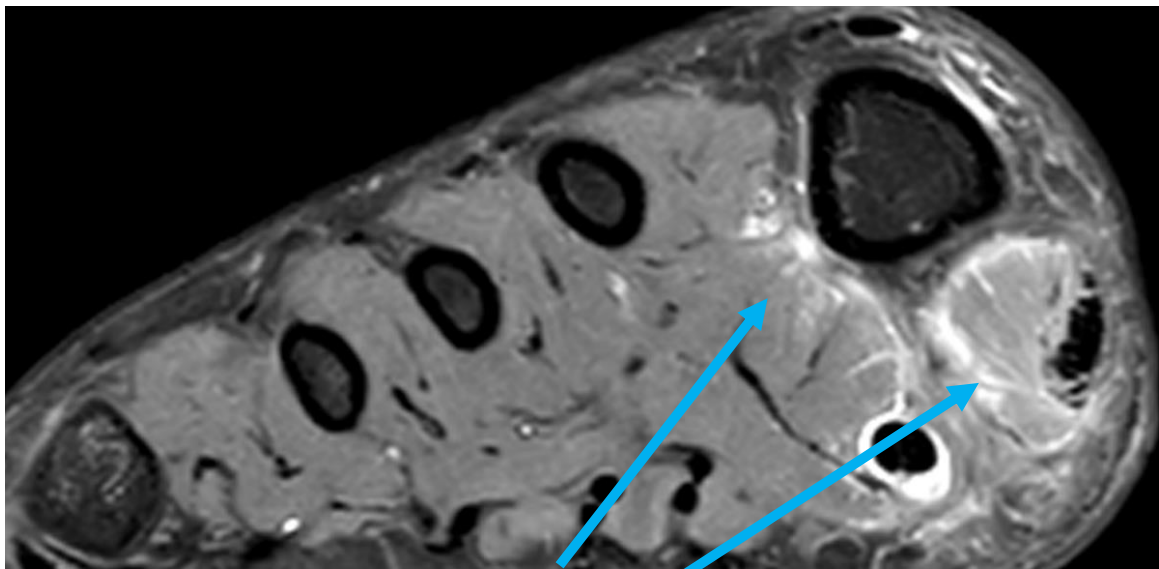


Sag PD & Axial/Sag PD SPAIR: 8-10 mm defect b/w distracted medial sesamoid moieties at the hallux complex





Cor PD SPAIR: Defect b/w distracted medial moeties, oedema, medial ligamentous complex injury and contusions



Cor PD SPAIR: Delamination, fraying adductor hallucis and flexor hallucis brevis muscles

Discussion

- MRI imaging test of choice
 - delineates complex soft tissue anatomy
 - assessment for chondral injury, fracture, contusion, tendon and plantar plate injury
- Important diagnosis due to potential for instability at the 1st MTPJ complex
- Management - *non-surgical* (including immobilisation/walking boot) or *surgical* for high grade injuries and athletes / failed conservative treatment
- Our case – coming to end of 8 week trial of non-operative management, with close clinical monitoring and will be re-assessed shortly

DDx: Turf-toe, acute sesamoid fracture/subluxation, tendon injury, osteonecrosis

Further Reading:

Dedmond B, et al. The hallucal sesamoid complex. *J Am Acad Orthop Surg* 2006; 14:745-53.
 Oloff LM, et al. Sesamoid complex disorders. *Clin Podiatr Med Surg* 1996;13(3):497-513.
 Watson TS, et al. Periarticular injuries to the hallux metatarsophalangeal joint in athletes. *Foot Ankle Clin* 2000;5(3):687-713.
 Awh, MH. Turf Toe MRI Web Clinic 2012:Jan.