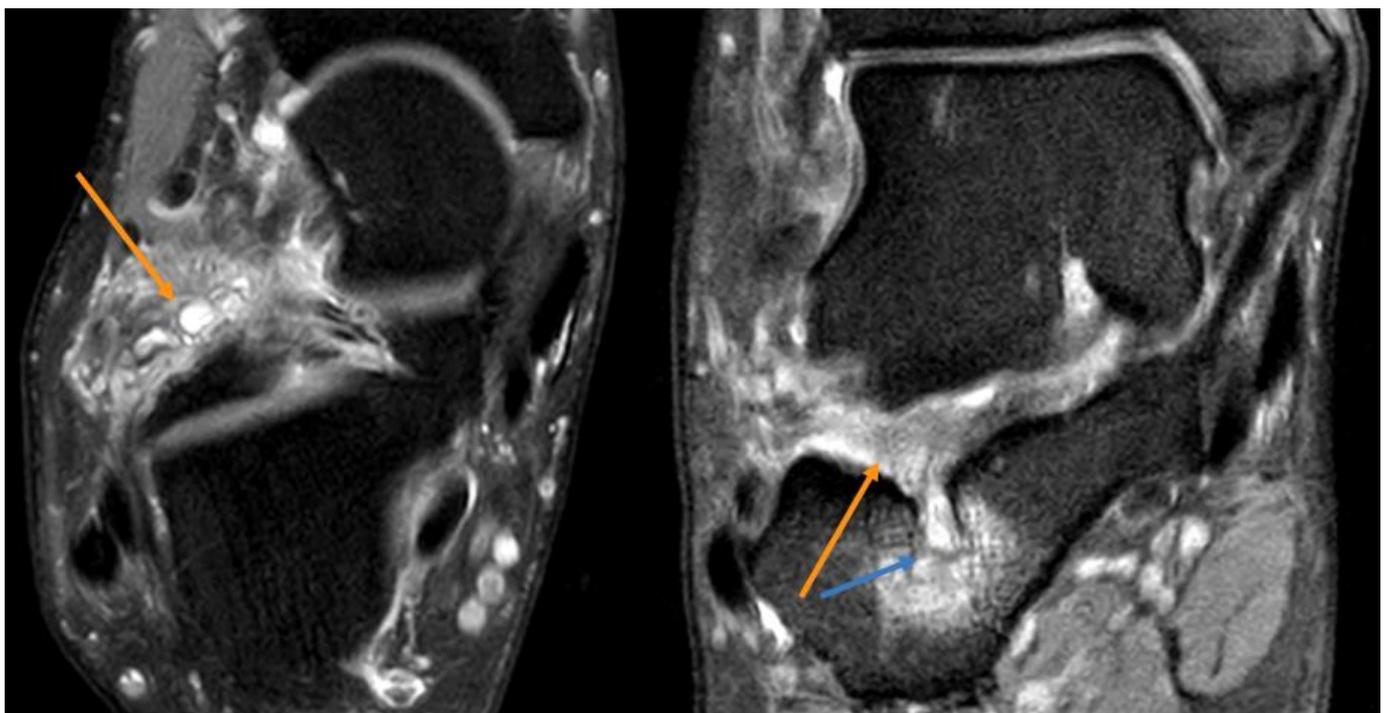
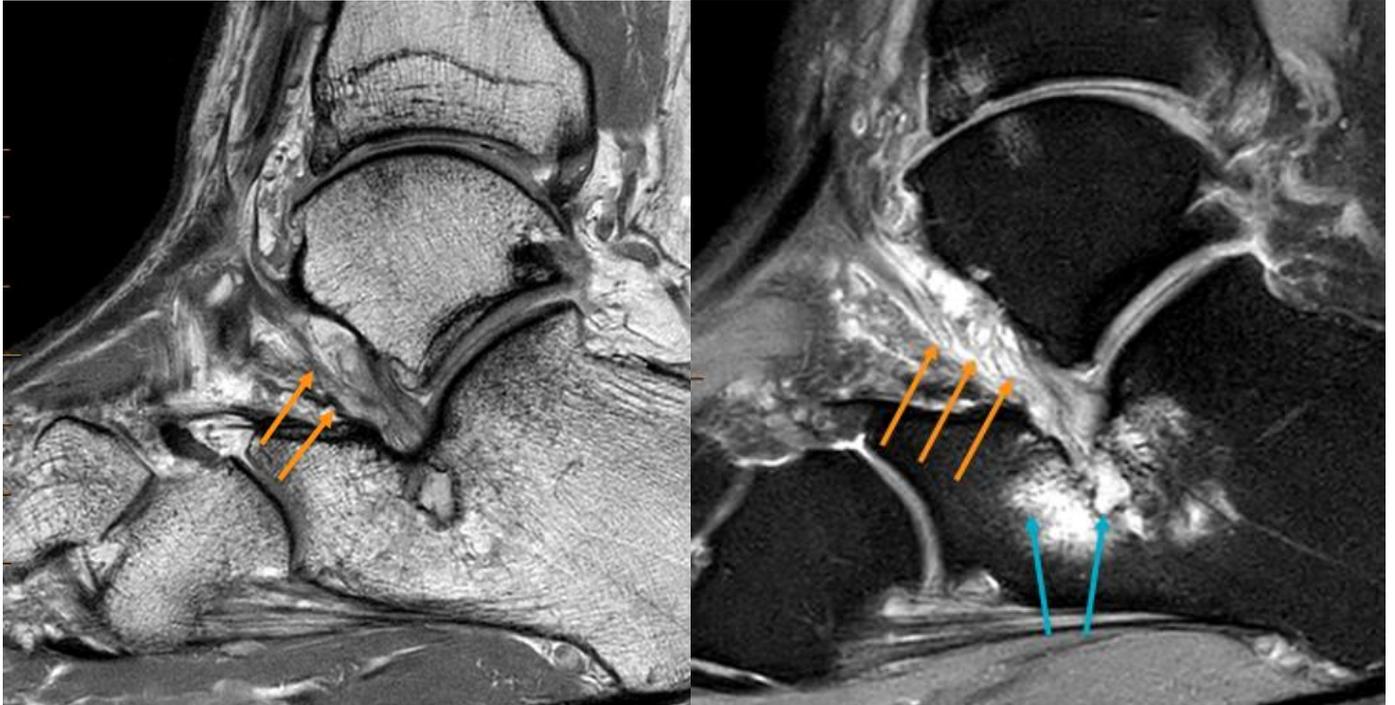


40 year old male presents with six months of right anterolateral ankle pain and instability

MRI Right Ankle (Standard protocol PD and PD fat-sat sequences):

- Features of **sinus tarsi syndrome** including ill-definition, tearing, delamination / mucinous degeneration of cervical ligament and inferior extensor retinaculum with generalised scarring and ganglion cyst formation (ORANGE ARROWS)
- Synovial herniation into the calcaneum at the angle of Gissane (BLUE ARROWS) and marked marrow oedema
- Subtalar joint synovitis and mild chondropathy; features of anterior impingement



Discussion

- **Tarsal Sinus** = Cone-shaped space between talar neck and calcaneus
- **Sinus Tarsi Syndrome** = Chronic lateral hindfoot pain due to abnormal tissue/lesion occupying space
- Often secondary to trauma/repeated trauma (inversion injury lateral ankle/subtalar joint, rupture cervical ligament, interosseous ligament and inferior extensor retinaculum)
- Associated with lateral collateral ligamentous complex injury
- Other causes: Tarsal coalition, ganglion, synovitis, mass
- Often presents 3rd-4th decades with lateral hindfoot pain, focal tenderness, instability
- Treatment options include: conservative; corticosteroid injection; subtalar arthroscopy / debridement

MR Imaging

- Trauma
 - Normal fat signal in tarsal sinus replaced by fluid or fibrous tissue
 - Discontinuity / laxity cervical ligament
 - Poorly defined ligaments due to adjacent scarring
 - Heterotopic ossification
 - Adjacent bone marrow oedema
- Ganglion
 - Discreet fluid collection
- Features of arthritis
 - Effusion, synovitis, erosions
- Tarsal coalitions

Differential Diagnoses

- Peroneal tendinopathy/tears
- Cuboid subluxation
- Talar neck stress fracture
- Subtalar joint effusion
- Bifurcate ligament tear



Further Reading:

- Lektrakul N, Chung CB, Lai Ym et-al. Tarsal sinus: arthrographic, MR imaging, MR arthrographic, and pathologic findings in cadavers and retrospective study data in patients with sinus tarsi syndrome. *Radiology*. 2001;219 (3): 802-10.
- Choudhary S et al. Review of common and unusual causes of lateral ankle pain. *Skeletal Radiol*. 2011; 40(11):1399-413.
- Lee KB, Bai LB, Park JG et-al. Efficacy of MRI versus arthroscopy for evaluation of sinus tarsi syndrome. *Foot Ankle Int*. 2008; 29 (11): 1111-6. Stat Dx online