

CLINICAL HISTORY: 36-year-old male with right ankle pain, status post a motor vehicle accident on 03/04/2015.

COMPARISON: None available at this time.

TECHNIQUE: Multiplanar, multisequence fat and water weighted images of the right ankle were performed. Edema sensitive coronal and sagittal images were performed.

FINDINGS: A 2.5 cm in transverse dimension x 8 mm AP fracture of the posterior malleolus with a visible coronally-oriented fracture plane that is estimated to encompass one-eighth of the sagittal diameter of the tibial plafond and is associated with a tear of the anterior-inferior tibiofibular syndesmotic ligament. This finding is consistent with the date and mechanism of injury with early, subacute scarring of the ligament.

The posterior-inferior tibiofibular, anterior and posterior talofibular, calcaneofibular and deltoid superficial and deep fibers demonstrate no tearing. No tearing of the subtalar ligaments or findings of sinus tarsi syndrome.

An additional interesting finding that may be post-traumatic is a geographic lesion with central fat and serpentine margins within the mid and posterior one-third of the distal tibia most consistent with osteonecrosis without cortical collapse. This infarction measures 2.3 cm AP x 4.2 cm in length and 2.3 cm transverse. No fracture of the lateral malleolus; however, contusion is observed. No hindfoot fracture or OCD lesion of the talar dome. There is a congruent tibiotalar joint with a tibiotalar and posterior subtalar joint effusion. The middle and posterior subtalar joints, transverse tarsal joint, anterosuperior calcaneal process, and bifurcate ligament are intact. Minimal marrow resorption or stress-related edema is noted within the midbody of the calcaneus without a fracture.

Slight watershed zone Achilles tendinosis and minimal mucoid degeneration at the insertion without high-grade tear or impinging Haglund spur.

Normal plantar fascia without thickening, fibromatosis, tearing, peri aponeurotic edema, large calcaneal spur or reactive osteitis at the origin. No denervation atrophy of the abductor digiti minimi.

Normal posterior tibial tendon. No marrow edema or accessory os tibiale externum at the navicular insertion. Normal flexor digitorum longus and flexor hallucis longus tendons without tearing. Tenosynovitis is observed at Henry's knot. The extensor tendons are intact. Intact peroneus longus and peroneus brevis tendons without tearing, tenosynovitis, subluxation, or disruption of the superior peroneal retinaculum.

No impinging tarsal tunnel mass.

IMPRESSION: (MRI of the Right Ankle)

1. **Associated with a posterior malleolar fracture is a large medullary infarction that extends to the subchondral plate of the tibial plafond and a subacute "high ankle sprain". These findings are consistent with the date and mechanism of injury.**
2. **A subacute tear of the anterior-inferior tibiofibular syndesmotic ligament with early scarring is identified. The other ligaments including the talofibular, calcaneofibular, deltoid and subtalar ligaments remain intact.**

3. **The posterior malleolar fracture encompasses an estimated one-eighth of the sagittal diameter of the tibial plafond.**
4. **Joint effusions, but no hindfoot fracture, midfoot fracture or OCD lesion of the talar dome.**
5. **Flexor tenosynovitis, but no tearing of the medial flexor, extensor, or peroneal, Achilles, or plantaris tendons. There is mild watershed zone insertional Achilles tendinosis without a tear or an impinging Haglund spur.**
6. **No evidence of sinus tarsi or tearing of the subtalar ligaments.**
7. **Ill-defined contusions are noted in the lateral malleolus and within the calcaneus without fracture lines or cortical disruption.**