

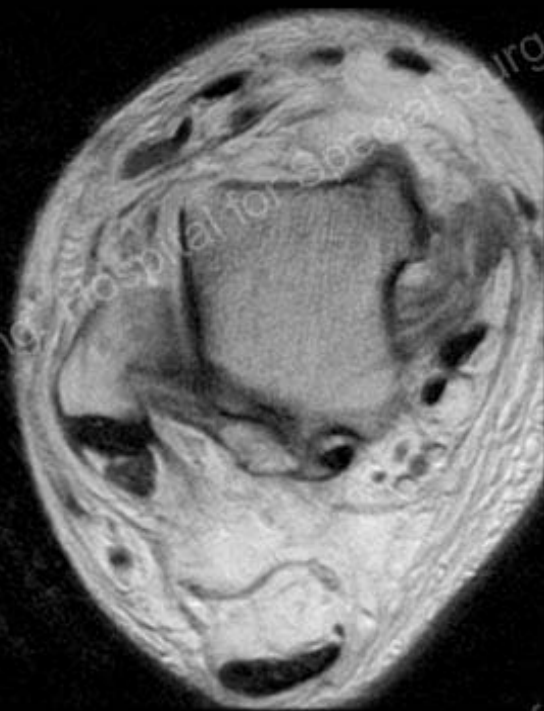
A,B- PD axial images at the distal tibia

C,D - PD and IR axial images 5cm proximal to A and B

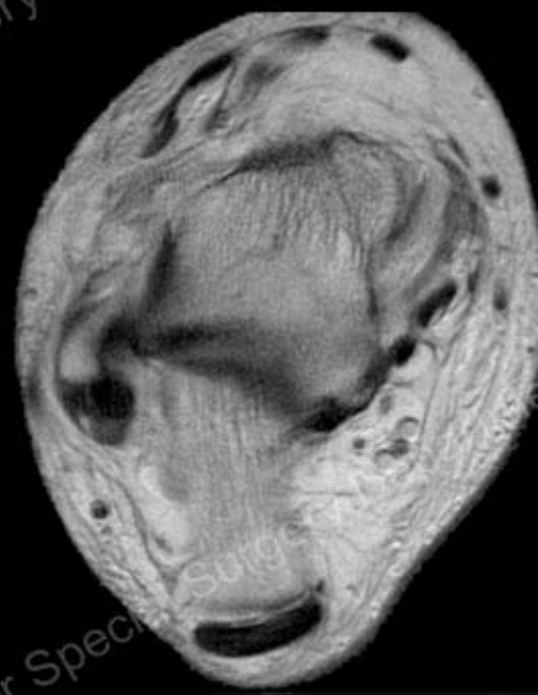
History: 45 year old man with recent trauma to the ankle.



Coronal PD



Axial PD at the talus



Axial PD at the talus

Findings

Images at the level of the distal tibia demonstrate disruption of the anterior tibiofibular ligament and partial disruption of the transverse tibiofibular ligament. Slightly proximal, images demonstrate a disruption of the interosseous ligament yielding edema into the adjacent myofascial planes. The coronal PD image and axial images at the level of the talus demonstrate marked hyperintensity of the deltoid ligament and then disruption, particularly involving the deep components.

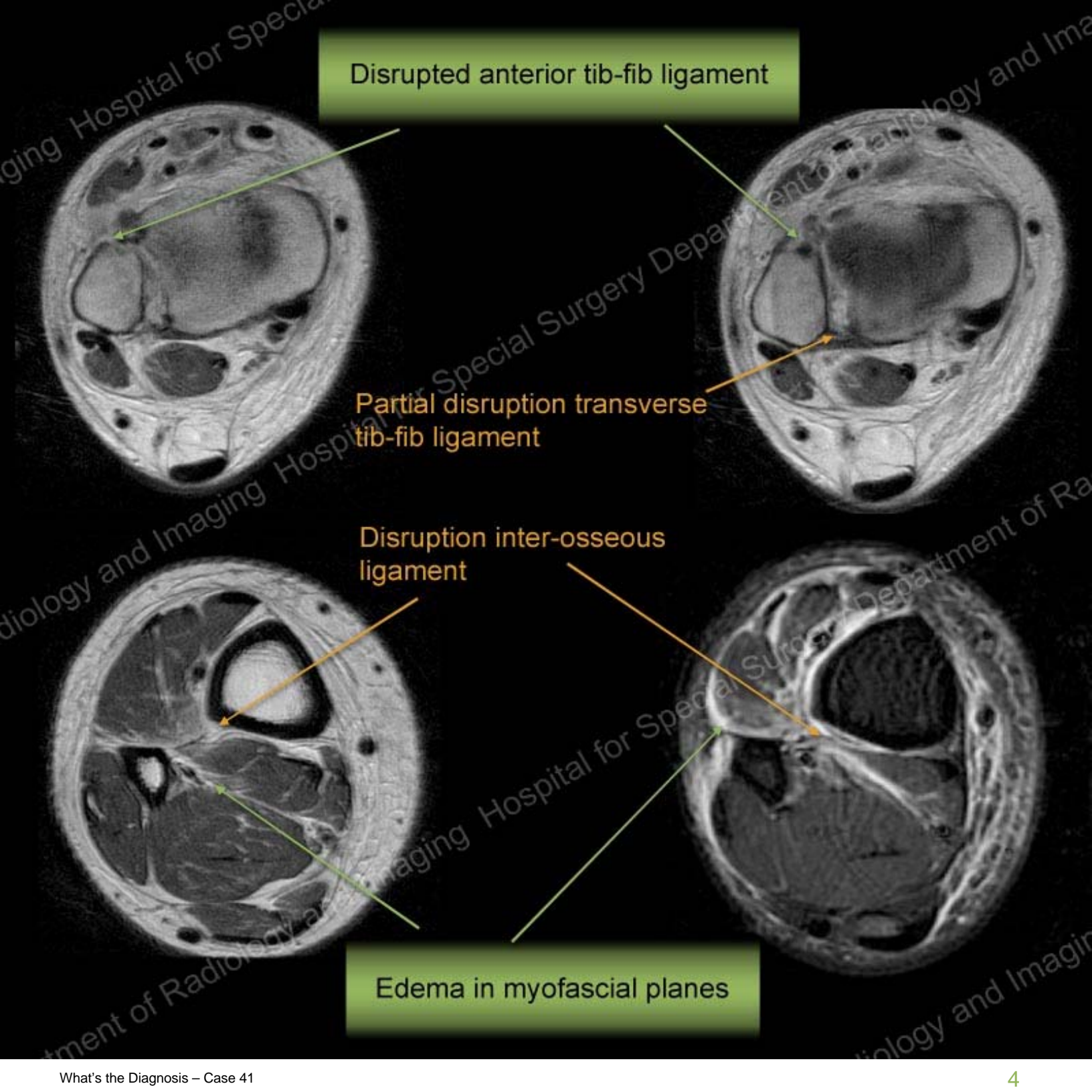


Disrupted anterior tib-fib ligament

Partial disruption transverse tib-fib ligament

Disruption inter-osseous ligament

Edema in myofascial planes

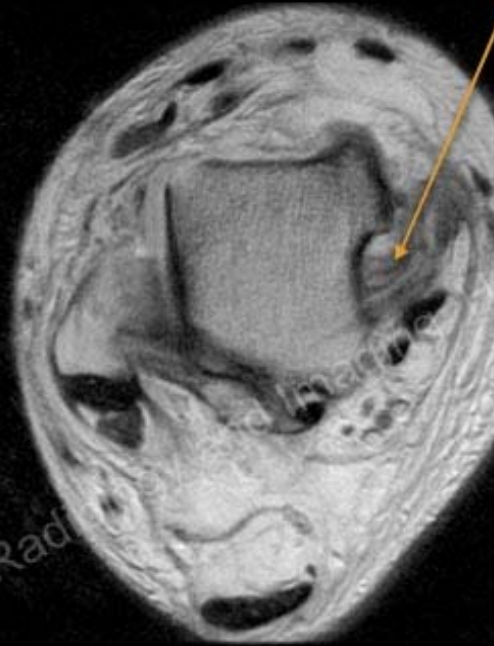


Disruption deep fibers of deltoid ligament

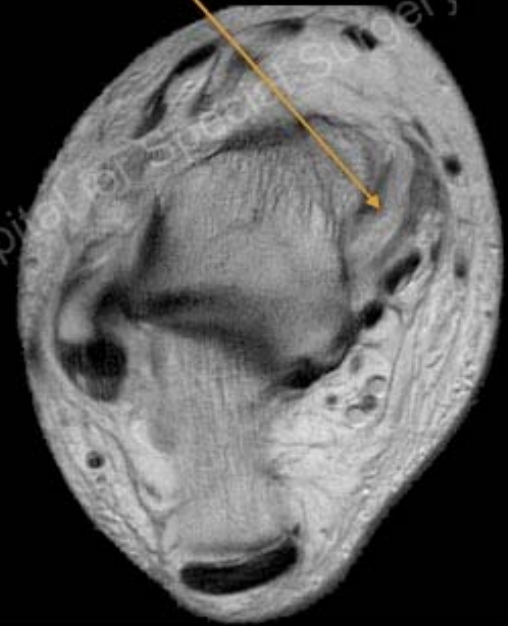
Hyperintensity and disruption deep fibers deltoid ligament



Coronal PD



Axial PD at the talus



Axial PD at the talus

Additional Notes

Patient with additional pain to palpation at the proximal fibula





Proximal fibula or
Maisonneuve fracture



Widening of the medial
clear space of the ankle
mortise

Diagnosis

Ankle syndesmotic and deltoid ligament tears with Maissonneuve fracture.



Discussion

Maissonneuve fracture is a proximal fibular fracture typically seen in the setting of an external rotation injury yielding a disruption of the syndesmotic complex, propagating into the interosseous ligament, and then extending into the fracture of the proximal fibula. Often seen in association with a medial malleolar fracture or disruption of the deltoid ligament rendering an unstable ankle. The deltoid ligament disruption can be identified directly on the MRI or by the widening of the medial clear space beyond 4-5mm. As the ankle has been rendered unstable, fixation is then required.



Treatment with syndesmosotic fixation



Resources

Ankle syndesmotic injury. Zalavras C, Thordarson D. J Am Acad Orthop Surg. 2007 Jun;15(6):330-9.

http://www.wheelessonline.com/ortho/maisonneuve_fracture

