

17-year-old male presenting with left lower extremity pain after motor vehicle accident

Kyanna Alleyne, M3
Racquel Helsing, MD

AP Ankle Radiograph



Oblique Ankle Radiograph



Lateral Ankle Radiograph





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Talar Fracture with Dislocation of the Posterior Subtalar Joint

AP Ankle Radiograph



Jagged radiolucency through the talar body with extension into the lateral process

Cortical disruption of the lateral process

Oblique Ankle Radiograph



Jagged radiolucency through the talar body with extension into the lateral process

Cortical disruption of the lateral process

Lateral Ankle Radiograph

Displaced fracture of the talus extending through the lateral process



Anterior dislocation of the posterior subtalar joint.

Talus Fracture

Mechanism of injury: Most talar fractures occur in the setting of high energy trauma, such as a motor vehicle accident or a fall from a significant height. The ankle is often in extreme plantar or dorsiflexion at the time of injury.

Clinical Presentation: Patients present with ankle/lower extremity pain and an inability to bear weight following trauma. Soft tissue swelling often with obscuration of joint landmarks. When there is displacement, skin changes may be visualized. Extremely limited range of motion on physical exam.

Treatment: Majority of talar fractures require surgical intervention. Nondisplaced impaction or avulsion fractures may be treated nonoperatively.

Complications: Talar body fractures often result in disruption in osseous vascular supply (posterior tibial, anterior tibial, perforating peroneal arteries), increasing the risk for avascular necrosis. Incidence of AVN is reported in up to 25% of talar body fractures. Osteoarthritis is a common, long term complication.

Imaging Findings

Radiographs

- Standard 3-view ankle series should be obtained when there is a concern for talus fracture (AP, lateral and mortise/oblique)
- Radiolucency and cortical disruption; commonly missed when nondisplaced.

CT

- Provides additional detail about the fracture, especially if there is displacement
- Surgical planning

MRI

- Reserved for patients with persistent pain when above imaging does not reveal a fracture or when concomitant ligamentous injury is suspected.

References

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