



There is something wrong but where? Dislocation or fracture?



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A 23-year-old man was admitted to our emergency department with the complaint of right foot pain and deformity after falling from a 3-m high wall. He could not bear weight on the foot; on physical examination, there was wide swelling with lateral displacement and medial deformity (Fig. 1). There was pain, especially on the medial side of the foot, with ankle movement. Neurovascular examination was normal. Standard antero-posterior and lateral ankle radiographs were obtained (Fig. 2).

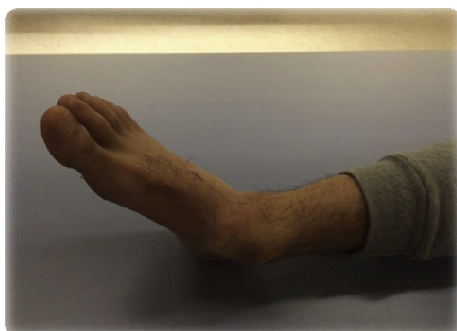


Fig. 1. Medial deformity at foot.

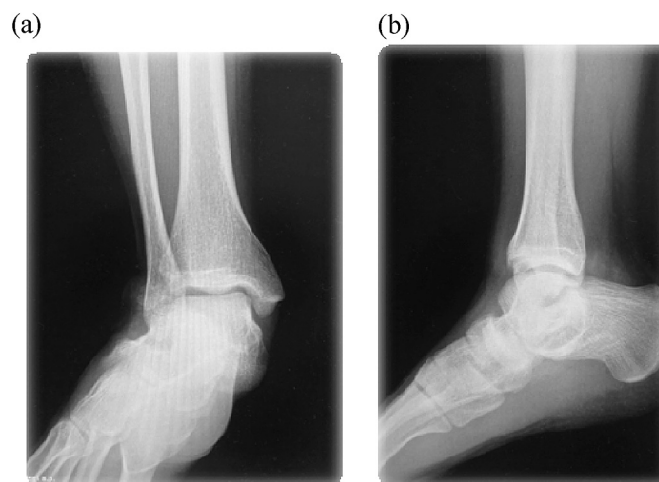


Fig. 2. Antero-posterior (a) and lateral (b) ankle radiographs.

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Diagnosis: Lateral subtalar dislocation (talonavicular dislocation)

A CT scan was acquired and isolated talonavicular dislocation was determined (Fig. 3). The patient was taken to the operating room. Patient was positioned in supine position and sedation was applied. Knee was flexed in order to get rid of the traction force of gastrocnemius muscle. Longitudinal traction was applied while applying lateral pressure on the talus. Talus settled down at talonavicular joint with a “pop” sound. Post reduction radiographs and CT were taken and showed adequate closed reduction (Fig. 4). A short leg posterior splint was applied to follow the disruption of the skin where talus head pressed, and additional interventions like operative fixation were not necessary because talonavicular joint seemed to be stable during stress examinations.

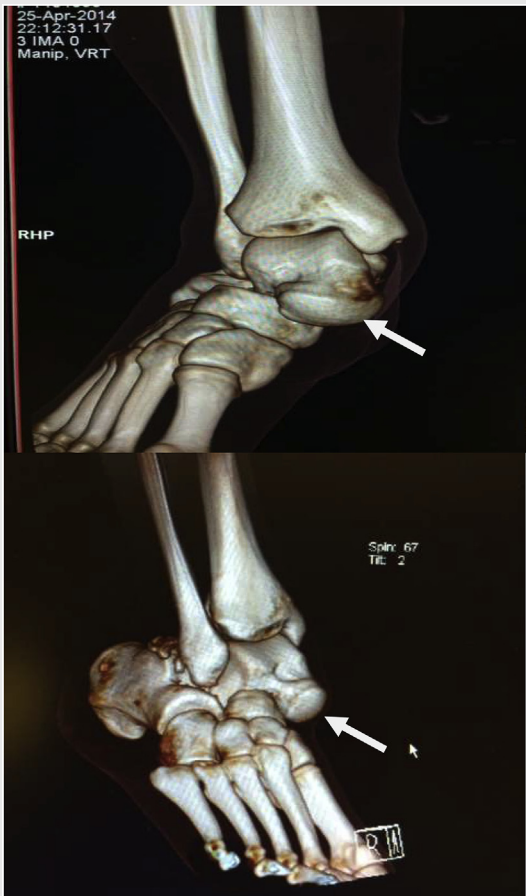


Fig. 3. Pre-reduction CT scans (white arrow: talus head).

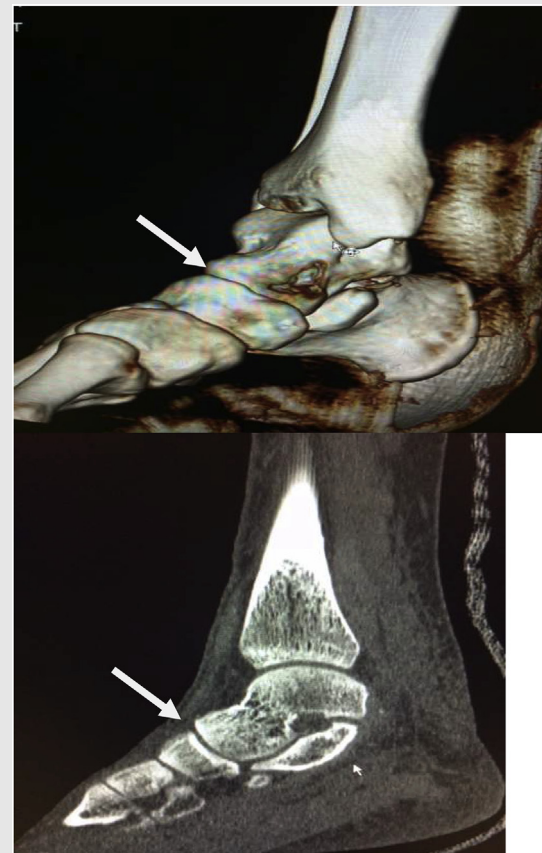


Fig. 4. Post-reduction CT scans (white arrow: reduced talonavicular joint).

Subtalar dislocations occur because of high energy trauma. They are very rare and compromise 1–2% of all luxation (1). The foot is most commonly displaced medially (80%–85%), and lateral dislocation is more rare (15%–20%) (2). It is important to determine the side of dislocation because reduction methods differ, and prognosis of lateral dislocations is worse than medial dislocations (3). AP and lateral ankle X-rays are usually sufficient for diagnosis. Dislocation can be determined at AP graphy, but at lateral graphy overlapping of the bones may hide pathology. Sometimes tomography is needed for diagnosing accompanying injuries.

The most important treatment goal is gentle and quick reduction under sedation or spinal anesthesia. Approximately 60% of subtalar dislocations are closed. Simple dislocations with no associated fracture can be reduced easily. Post reduction assessments of foot with standard plus oblique graphics and CT scans, and physical stress examinations provide useful information about whether the joint is stable or not. Operative interventions may be needed when soft tissue interpositions or bony blocks prevent closed reduction or if talonavicular joint is unstable.

One of most common complication of this injury is limitation of subtalar joint with pain. Wide soft tissue injury and associated fractures lead to much worse results.

This article emphasizes that CT is a useful tool in diagnosing dislocations and treatment type. Quick and proper reduction of talonavicular joint may help to prevent catastrophic clinical results like wound necrosis, persistent pain with joint limitation, or even amputations.