



Lateral and open medial subtalar dislocation: Report of two uncommon cases

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Subtalar or peritalar dislocation is a rare injury and limited to a small number of reported cases. The proper and early diagnosis and judicious management is paramount to good functional outcome. The documentation of other associated injuries and respective management is also crucial. We present two cases describing each of the two variants i.e. medial and lateral subtalar dislocation. These cases add value to existing literature by strengthening the knowledge about early identification and appropriate management of such uncommon pattern of injuries.

Key words: subtalar joint, dislocation, medial subtalar dislocation, lateral subtalar dislocation, closed reduction.

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Subtalar dislocation, also referred as peritalar dislocation, is an uncommon injury pattern and may or may not involve associated talar fracture. The incidence has been reported to be 0.9% (42 cases in a series of 4215 dislocations) in one series [1]. Another series reported its incidence of 15% of all talar injuries[2]. Initially regarded as a traumatic event in young adults, recent observations reveal sizeable number of patients beyond forty years of age [3]. The injury usually presents with deformed anatomy, and medial dislocation is more common[4]. Lateral dislocation are associated with higher energy injuries and carry a worse prognosis of the two. Motor vehicle accidents, fall from height, and sports injury are common mechanisms of these injuries. Apart from the primary dislocation, the frequent presence of open injuries requires careful soft tissue handling and asepsis in the treatment [5]. Two cases of both types of dislocation including one with small a open wound is presented here with appropriate management and good outcomes.

Case Reports

Case 1

A 26-year-old male patient presented to us with history of road traffic accident two hours prior to presentation, after getting hit by a moving car while cycling, and his right foot got stuck under the bike after falling to the ground. The exact mechanism and position of the foot at the time of impact could not be recalled by the patient and he noticed a deformity and inability to bear weight since the injury. The deformity involved the foot to be appearing lateral. There was mild swelling at presentation and active toe movement along with an intact distal neurovascular status. A small 2cm open wound at lateral aspect of the ankle was present that was apparently uncontaminated (Figure 1). Prompt radiological evaluation was ordered to reveal a medial subtalar dislocation without noticeable fracture (Figure 2). Urgent reduction under anesthesia was planned.

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Figure 1 Clinical picture of case with medial dislocation and small lateral wound.

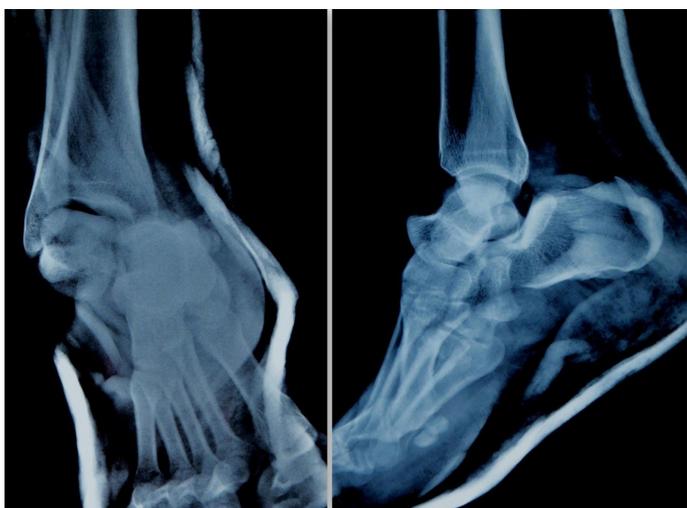


Figure 2 The radiograph of medial subtalar dislocation of right foot in both planes.

The talus appeared to remain at normal location while the structures below it were displaced medially along with talonavicular dislocation. A thorough copious lavage was done through the wound. The reduction was done by traction and initially accentuating the deformity and reducing by digital pressure over the talus and giving lateral force to the foot for a smooth reduction. The reduction was confirmed on image intensifier for restoration of normal foot anatomy in biplanar views before applying a plaster protection splint (Figure 3). The limb was elevated and pain medications were given as active toe movements were encouraged throughout treatment.



Figure 3 Post-reduction radiograph showing good reduction stabilized with plaster slab.

Case 2

A 53-year-old male patient hit and twisted his right foot after fall from a height of six feet into hard ground five hours prior to presentation. The weight of the body was concentrated on ankle and foot region at ground strike. His foot was everted as he fell followed by body weight over the area leading to deformity and pain. There was painful restriction of ankle movement and unable to ambulate. He was taken to a local clinic where a cardboard make-do splint was provided before consultation. There was no open wound or distal neurovascular deficit present. His radiograph showed a lateral subtalar dislocation with a small bony fragment between the navicular and talus in lateral view, suggestive of probable osteochondral fracture of talus (Figure 4). He was posted for urgent reduction under anaesthesia following informed consent. Slight traction and accentuation of deformity by eversion followed by inward foot pressure with counter-pressure at navicular bone resulted in successful reduction.



Figure 4 The radiograph of lateral subtalar dislocation of right foot in both planes, and a small osteochondral fragment from navicular is also noted.



Figure 5 Post-reduction radiograph showing good reduction stabilized with plaster slab.

The reduction was assessed under image intensifier followed by plaster back-slab (Figure 5). The further management and the results were similar to the first case and uncomplicated recovery and follow up period was noted. The patient was lost to follow up after ten months.

Results

The follow up period was uneventful and there were no recurrence noted. The patients gradually started protected weight bearing after rest of four weeks for optimal soft tissue healing and reduction of swelling. Supervised physiotherapy was instrumental in regain of function and ambulation. The follow up of fourteen weeks was unremarkable and patients were pursuing activities of daily living.

Discussion

The characteristic deformities following subtalar dislocation resemble an ‘acquired clubfoot’ and ‘acquired flatfoot’ in cases of medial and lateral dislocation respectively [6]. Other regional or remote injuries including small osteochondral fractures need to be searched and treated accordingly as they involve a large portion of cases[3-5,7]. Skin tenting should be relieved by prompt reduction to avoid complication. Open wounds should be thoroughly lavaged and debrided before closure [8]. Reduction is preferably done with complete muscle relaxation and often accentuation of deformity by either inversion or eversion maneuver for medial and lateral dislocations respectively. This reduction maneuver is well described in the literature and was followed by us to an uneventful outcome [9]. The reduction usually is achieved in closed manner but adjacent tissue and other structures might impede reduction at times and require open reduction. Shortest possible immobilization has been advocated followed by physical therapy to regain subtalar and midtarsal mobility. Conservative management has been an excellent modality with good results in previous studies[4,10]. Both of our cases had a successful result of uneventful closed reduction and satisfactory functional outcome.

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