



Irreducible Medial Peritalar Dislocation A Case Report THIYAGESWARAN

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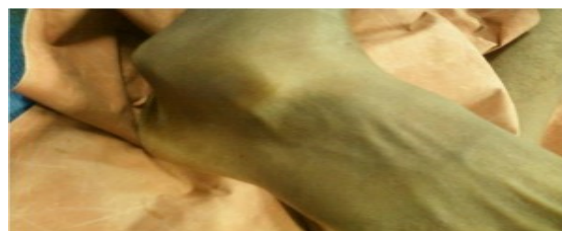
Abstract : Background- Peritalar dislocations are rare injuries involving a simultaneous dislocation of both subtalar and talonavicular joints with no associated dislocation of the calcaneocuboid or tibiotalar joints. We present a rare case report of irreducible closed medial peritalar dislocation. Materials and method- A 29-year-old man was brought to emergency room after an acute inversion injury to his right foot while playing football. Physical examination revealed that the foot was completely displaced medially and the head of the talus was palpable and visible with the overlying skin on the dorsolateral foot. There was no neurovascular insufficiency. Xrays showed a medial peritalar dislocation with complete dislocation at the talonavicular joint and talocalcaneal joint with talonavicular impaction.

After an unsuccessful closed manipulation CT scan was taken, which revealed some small osteochondral fragments from talus which does not require fixation. Hence open reduction through an anterolateral incision was done. We found few loose intraarticular osteochondral fragments blocking congruent reduction with the lateral navicular impacting on the medial talar head. All the fragments were removed and the impaction was released by leverage. Reduction was stabilised with K-wires. Postoperative CT showed no intraarticular fragments with congruent reduction. The foot was immobilized in a non-weightbearing short-leg cast for 6 weeks, thereafter the cast and K-wires were removed, followed by active inversion, eversion, dorsiflexion and plantar flexion exercises with progressive weightbearing was allowed. Result- After 22 months followup, patient had pain free ankle movements with mild pain on forced inversion. There was no limitation of ankle movements, with mild subtalar motion restriction. The AOFAS hind foot score indicated an excellent outcome (score 89). Conclusion - Irreducible closed medial dislocations are very rare. Early open reduction can significantly influence the long term functional outcome of the patient. The case has been reported for its rarity and for its importance in acute management.

Keyword : Peritalar dislocation, talonavicular impaction, buttonholing of talar head

Introduction: Peritalar dislocations are rare injuries estimated to be approximately 1% of all dislocations. Peritalar dislocation involves simultaneous dislocation of both subtalar and talonavicular joints with no associated dislocation of the calcaneocuboid or tibiotalar joints (1,2). We present a rare case report of irreducible closed medial peritalar dislocation.

Case report : A 29-year-old man was brought to emergency room after 6 hours of an acute inversion injury to his right foot while playing football. Physical examination revealed that the foot was completely displaced medially and the head of the talus was palpable and visible with the overlying skin on the dorsolateral foot (fig 1 and 2). There was no neurovascular insufficiency. Xrays taken showed a medial peritalar dislocation with complete dislocation at the talonavicular joint and



talocalcaneal joint with talonavicular impaction (fig 3)



fig.1 preoperative clinical picture



figure 2 preoperative clinical picture
fig.3 preoperative radiographs and CT

We attempted a closed reduction but was unsuccessful. Hence CT scan was taken which revealed some small osteochondral fragments from talus and an open reduction was done through an anterolateral incision. We found Extensor digitorum brevis blocking reduction along with few loose intraarticular fragments (though we were not able to produce intraoperative photographs). All bony fragments were removed and the impaction was released by leverage. Reduction was stabilised with K-wires. Postoperative CT showed no intraarticular fragments with congruent reduction (fig 4). The foot was immobilized in a non-weightbearing short-leg cast for 6 weeks, thereafter the cast and K-wires were removed, followed by active inversion, eversion, dorsiflexion, plantar flexion exercises with progressive weightbearing.



fig.4 post operative radiographs and CT



fig.5 follow up radiograph

Result: After 22 months followup, patient had pain free ankle movements with mild pain on forced inversion. There was no limitation of ankle movements, with mild subtalar motion restriction. The AOFAS hind foot score indicated an excellent outcome (score 89) but there were radiographic features of early AVN in our case at 22 month follow up (fig5).

Discussion: Peritalar/Subtalar dislocations are rare and devastating injuries. The incidence of the peritalar dislocations has been estimated to be approximately 1% of all dislocations. Frequency of the different subtypes of subtalar dislocations has been reported as 80% medial, 17% lateral, 2% posterior, and 1% anterior (1,3). High-energy injuries are more likely to be open, more likely to be lateral, have a higher incidence of associated fracture, and have a worse long-term prognosis. In medial subtalar dislocation, the talar head is prominent on the dorsolateral aspect of foot, the calcaneus with rest of the foot is displaced medially. In lateral dislocations, the calcaneus with rest of foot is lateral to talus. The navicular lies lateral to talar neck (2).

Medial dislocations are more common and easily reducible than the irreducible lateral dislocations. Irreducible medial dislocations are very rare for which open reduction is mandatory. If closed reduction is unsuccessful CT scan provides useful information regarding any osteochondral obstacle to reduction. Forced inversion of the foot results in a medial subtalar dislocation, whereas eversion causes a lateral dislocation. During medial dislocations, the sustentaculum tali serves as the fulcrum around which the foot rotates. With lateral dislocations, the foot rotates around the anterior process of the calcaneus. (2,3)

Currently, the literature suggests a period of non-weight bearing of 4 weeks with no fracture and 6 weeks with an associated fracture. The common obstacles for closed reduction of medial dislocation are button-holing of the talar head through the extensor retinaculum or extensor digitorum muscle, interlocking osteochondral fractures in the talonavicular joint, talonavicular impaction and interposition of extensor digitorum brevis muscle (4,7,8). Though there are multiple osteochondral fragments hindering reduction, the term fracture dislocation is reserved in literature to dislocations which involve larger anatomical fragments of talus which needs fixation. So far in literature reported, there have been very few case reports of the extensor digitorum brevis blocking reduction, as reported in our case. But the limitation of our case report is that we were not able to produce the intraoperative photographs unfortunately.

Conclusion : Peritalar dislocations are rare injuries usually sustained by high-energy trauma and have the potential for serious complications such as avascular necrosis of the talus and subtalar arthrosis. Early open reduction can significantly influence the long term functional outcome of the patient (6). The case has been reported for its rarity and to highlight its importance in acute management.

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