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Isolated Irreducible Lateral Subtalar Dislocation: A Case Report

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Abstract: *Isolated subtalar dislocation is a rare dislocation. Subtalar dislocation is the simultaneous dislocation of talocalcaneal and talonavicular joint. Osteochondral fracture and failed closed reduction is common. Late complications are osteonecrosis of talus and secondary osteoarthritis. A 45 year old patient with isolated irreducible lateral dislocation is presented here. The result was graded as good at one year follow up.*
Keyword: *Lateral Subtalar dislocation.*

I. Introduction

Isolatedsubtalar dislocations without associated bony injuries are uncommon with few large scale studies to draw conclusions from. The mechanism of dislocation is well outlined while the modes of injury is highly variable. An attempt at closed reduction is successful in about 65% of cases. However repeated attempt at closed reduction is liable to result in further bony and soft tissue injuries with long term deleterious effects.

II. Case Report

A 45 year old male patient presented to Orthopaedic casualty, RIMS Imphal with history of injury over the right ankle following a fall from a height. On examination, a grotesque deformity of the foot was found .Fore foot was shifted laterally and head of talus was palpable medially. No neurovascular deficit was detected . X-ray was taken and diagnosed as lateral subtalar dislocation (Fig 1-A). There were no other associated injuries except superficial abrasion over lateral aspect of foot.

Close reduction was attempted under GA, but failed to achieve reduction. Open reduction was done. Tibialisposterior tendons was found to be the obstructing structure. The subtalar joint was transfixed with two K wires and limb maintained in a below knee POP slab. Post operative X-ray (Fig 1-B) and CT scan (Fig 2) of the affected joint showed an anatomically congruent reduction. CT scan did not show any other fracture or osteochondral fracture. Routine antibiotic and supportive care were given. Peri-operative period was uneventful and wound healed without any problem. K-wires were removed after three weeks and a walking cast was applied and partial weight bearing was allowed. Follow up at one year, there is no sign of subtalar arthritis or osteonecrsis of talus clinically and radiologically. The result is graded as good using the AOFAS score[1].

III. Discussion

Isolated subtalar dislocations without associated bony injuries are uncommon. Subtalar dislocation is the simultaneous dislocation of talocalcaneal and talonavicular joint. It can be medial, lateral or posterior depending on the direction in which the distal part of the foot is displaced in relation to the head of the talus. Most of the articles are report of a few cases[2,3,4,5,6,7]. The largest case series in the literature is a retrospective case study of 79 patients collected from various centres[2]. Other large series are of Perugia etal[8] and Merchan etal[9]. The mechanism of dislocation is well outlined while the mode of injury is highly variable. Diagnosis is often straightforward in a case of frank open dislocation while it may often be overlooked in closed cases. An attempt at closed reduction is successful in about 65% of cases[2]. However repeated attempt with closed reduction is liable to result in further cartilage and soft tissue injuries with long term deleterious effects. Detailed radiological study helps in planning of reduction and prediction of outcome. Reduction even under vision are always a challenge with certain anatomical structures interfering with the process.[3] A careful approach with clear anatomical understanding is of immense help in such situation. . The nature of injury itself often impairs wound healing and thereby the overall outcome. The common complications are talar osteonecrosis and secondary osteoarthritis [7]. Though certain intrinsic factors exist, such complication may also be significantly reduced by early intervention and due surgical care. With a good radiological image, a proper anatomical orientation and careful soft tissue handling, early attempt at open reduction with supervised post operative care results in an excellent structural and functional outcome.

IV. Figures

Fig 1-A

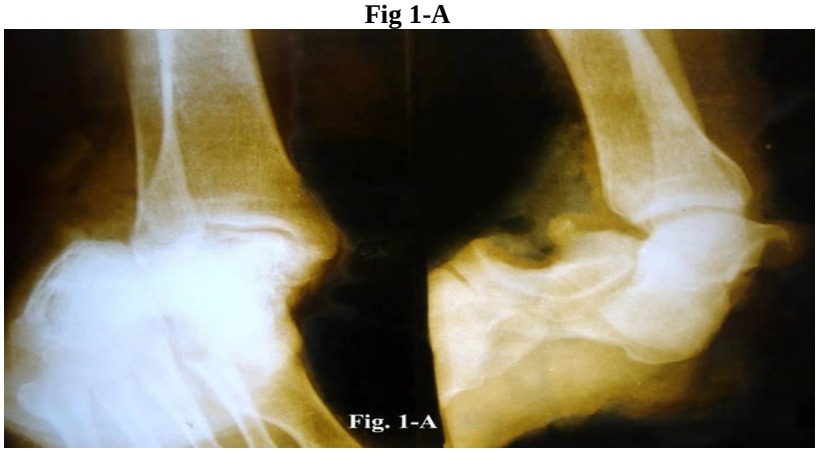


Fig 1-B

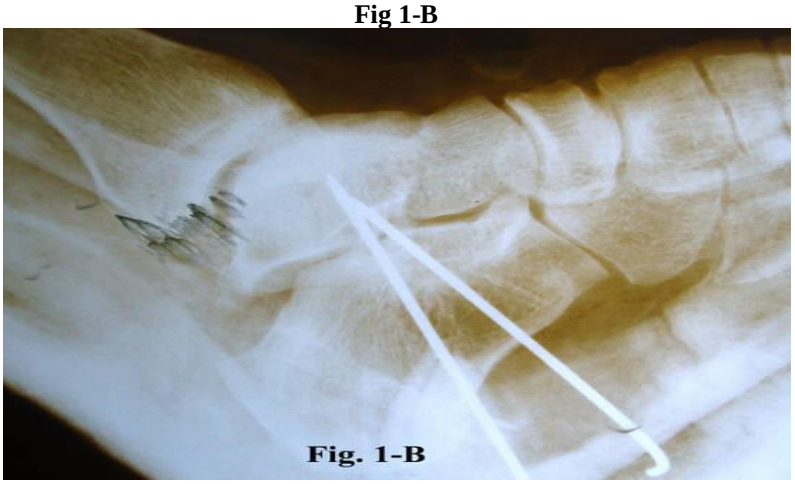
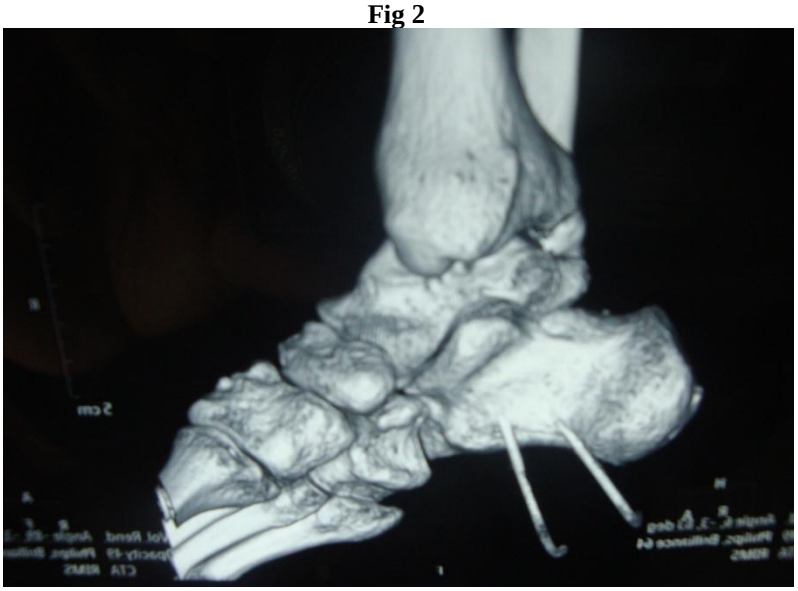


Fig 2



V. Conclusion

Subtalar dislocations though uncommon, has a high chance of redislocation after attempted reduction by closed method. Repeated attempt closed reduction is liable to result in further bony and soft tissue injury with long term deleterious effects. Fixation with K wire and maintained with below knee POP slab offers a good functional out come in experienced hands.

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