

## Surgical Workshop

### Medial subtalar dislocation: Approach to prompt care

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#### Abstract

A 27- year old female patient suffered from a closed medial subtalar dislocation treated by conservative means. This relatively rare injury is reported to outline the problems encountered in diagnosis and management of such troublesome pattern of dislocation in developing countries.

Keywords:, Dislocation, peritalar, subtalar, developing countries

#### Introduction

Subtalar dislocations or more correctly peritalar dislocations are uncommon<sup>1</sup>. However literature is replete with information regarding the incidence, mechanism, type of lesion, management, and outcome of these complex injuries<sup>2-4</sup>. We have successfully treated by closed methods in two steps in the emergency room, then in operating theatre a closed medial subtalar dislocation in a woman. We present this case to highlight the importance of a correct diagnosis and a prompt reduction with appropriate while treating such lesions, as relatively junior practitioners take major key in the emergency room in our environment.

#### Case Report

27-year-old woman sustained a severe inversion injury to her right foot while walking. She was brought to the emergency room soon after the injury. She presented with pain, swelling of and internal rotation of the foot in relation to the knee joint. The talus was prominent dorsolaterally. Globally the clinical appearance was that of a clubfoot deformity. This injury was closed and no neurovascular complications were noticed. Plain radiographs revealed medial subtalar dislocation without a fracture (Figure 1a,1b). Prompt reduction was performed under analgesia in the emergency department (ED) by junior practitioners. Post reduction radiographs were done, which showed a persistent subtle talocalcaneal dislocation (Figure2a, 2b). The patient was then transferred to the operating room for

reduction under general anesthesia. The technique of reduction was that described by Kinik<sup>5</sup>. Radiographs after this second attempt revealed anatomical reduction as evidenced by the Figures 3a and 3b. A four week leg cast above knee cast immobilisation was carried out.

#### Discussion

Medial subtalar dislocations occur much more frequently than the lateral ones and can be treated by closed reduction in most cases.<sup>6,7</sup> Because of the threat of soft tissue damage due to pressure of the talar head, immediate reduction should be performed generally in the ED. We are not very fortunate to have experienced doctors in the ED which are commonly taken care of by the recently graduated doctor still trying his hands on most aspects of patient care for the first time. The first care hand care given to the patients is likely to be faulty and delayed due to limitation in the technique of early accurate diagnosis.<sup>8</sup> On presentation the deformity was obvious in our patient, the subtle dislocation after the first attempt at reduction gave rise to the problem of diagnosis. The radiographic findings when the patient was first seen could have been visible after the first episode of reduction. The emergency clinician needs to have a high index of suspicion for these injuries, and aggressively look for them when faced with a patient who sustained a severe inversion or eversion injury to the foot. The caveat is that most EDs in underdeveloped countries lack imaging facilities

in the assessment of musculoskeletal trauma. Radiographs are performed in the department of medical imaging. This results in delay in management. In our institution, portable machines and image intensifier are not available in the ED and the operating theatre and radiographs have to be done in the Radiology Department and so intra-operative assessment of treatment was not possible. Repeated manipulations may result in additional trauma and potential vascular insult and so should be discouraged in preference to prompt and gentle reduction under general anesthesia as already described by Kinik.<sup>4</sup> If these manoeuvres are undertaken correctly, multiple manipulations

could be avoided and surgical procedure in obtaining reduction for a closed injury is infrequently called for. Planning surgical treatment is most often hazardous in developing countries as there is usually limitation in the allocation of theatre space and rare still, a full composition of all appropriate surgical instruments.

### Conclusion

Early suspicion, attention to detail and gentle handling with the appropriate instruments is most important in the outcome



**Fig 1a**



**1b**



**Fig2**



**Fig 3a**



**3b**

**Fig 1:** Initial radiograph showing the medial peritalar dislocation

**a-**AP view: the foot is displaced medially **b-**Lateral: talus is displaced from the talonavicular and talocalcaneal joints of the talocalcaneal joint on both AP (**a**) and lateral (**b**) views.

**Fig 2:** X-rays after the first attempt at reduction revealing the subtle dislocation Medial subtalar dislocation

**Fig 3:** Radiograph after the second attempt with anatomical reduction of both joints in AP (**a**) and lateral (**b**) views.

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