International Journal of Integrated Medical Research
Volume 9 Issue 04 October-November-December 2022
https://doi.org/10.57181/ijoimr/vol9i04/74
ISSN (Online): 2393-9869, ISSN (Print): 2350-0360

RESEARCH ARTICLE

SUBTALAR DISLOCATION (LATERAL TYPE)

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ABSTRACT

Background: Subtalar dislocation means dislocation of the distal articulations of the talus at the talocalcaneal and talonavicular joints. Closed reduction and immobilization remains the treatment of choice. If closed reduction is failed, open reduction is required. A variety of bone and soft tissue structures may become entrapped, resulting in obstruction of closed reduction.

Methods: We retrospectively studied 6 cases of lateral subtalar dislocation. All patients were males. The average Age was 40 years old. Functional assessment was done with (AOFAS) score.

Results: All patients had underwent open reduction. Fixation with 2 (1.8) K-wires.

The (AOFAS) was improved from 55 to 100 scores.

Conclusion: Urgent closed or open reduction of subtalar dislocation is very important this will improve ankle and foot function

KEYWORDS: Subtalar joint, dislocation open reduction.

INTRODUCTION

Subtalar dislocation is an uncommon injury accounting tor 1-2% of all joint dislocations [1]. It involves the disruption of the talocalcancal and talonavicular joints, while the calcancocuboid joint remains intact [2,3,4,5]. Medial dislocations comprise up to 85% of subtalar dislocations, whereas lateral subtalar dislocations are less frequent occurring in 15% to 20% of dislocations. In medial subtalar dislocation, the head of the talus is found laterally and rest of the foot is dislocated medially. However, in a lateral subtalar dislocation, the talus can remain fixed while the remaining structures of the foot are dislocated laterally along the talus [6]. Many of these injuries are open, particularly when associated with a high-energy trauma [7].

PATIENTS AND METHODS

6 cases of lateral subtalar dislocation were treated with open reduction. Fixation with 2 (1.8) K wires after failure of closed reduction. All cases were managed in Mataria Teaching Hospital during the period from March 2020 till July 2021. All cases were males. The average age was 40 years old two of them were associated with other injuries such as fracture shaft femur and left hip dislocation Huge odema was present at the ankle and dosnm of the foot in all cases Fig. (1). Plain X-ray, CT were done for all patients (Fig. 2,3,4).

FIGURE 1- Huge edema of lateral subtalar dislocation

FIGURE 2- Plain X-ray Lat. view showing lateral subtalar dislocation

FIGURE (3, 4)- CT. sagittal cuts showing lateral subtalar dislocation

SURGICAL TECHNIQUE

Initially, closed reduction was attempted which was unsuccessful. The patient was taken to the operating room for open reduction. The talus was explored through the medial wound, and the tendon of tibialis posterior was found to be interposed between the talus and calcaneum.

The posterior tibial tendon was retracted, and the talus was levered into a more anatomical position with reduction achieved. Adequate reduction was Confirmed using (c-arm), two K wires wire was inserted from the calcaneum into the talus to hold the reduction.

A below knee splint was applied after placing sterile dressing on the operative site. Fig. (5).

FIGURE 5- Post reduction X-ray

RESULTS

The average follow up period was 12 months. All cases were improved. The (AOFAS) was improved from 55 to 100 scores Fig. (6,7).

FIGURE 6- follow up X-ray 1 month postoperatively

FIGURE 7- Follow up X-ray 12 months postoperatively after removal of K wires

DISCUSSION

These injuries most commonly occur in young adult males, although Bibbo et al noted 38% of subtalar dislocations in their case series of 25 patients occurred in patients over 40 years of age [8].

Subtalar dislocation can result from either high-energy or low-energy mechanisms. The distinction is important because outcome has been correlated with the severity of the initial injury. In the case series presented by Bibbo et al, high-energy mechanisms such as motor vehicle trauma and falls from a height accounted for 68% of subtalar dislocations [8]

Regional fractures include talus, ankle, calcaneus, navicular, cuboid, cuneifom, and metatarsal fractures [9]. Osteochondral shearing injuries to the articular surface of the talus, the calcaneus, or the navicular are common. These injuries occur in up to 55% of patients, and are difficult to discover on plain X-ray [3,10,11].

All subtalar dislocations require urgent reduction. In most cases, closed reduction can be accomplished. Sometimes, the injury presents with skin tenting requiring a prompt reduction to reduce the possibility of skin necrosis [12]

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