

# SUBTALAR DISLOCATION IN AN ELDERLY PATIENT: A CASE REPORT AND LITERATURE REVIEW

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## INTRODUCTION:

Subtalar dislocations are rare injuries that involved simultaneous dislocation of the talocalcaneal and talonavicular joint. They are mostly caused by high energy injuries. Associated fractures may be easily missed.

## CASE REPORT:

A 61 years old man alleged fall from 10 feet height at work. Post trauma he developed pain and swelling over left ankle and was unable to bear weight. Examination revealed a swollen left ankle with limited range of movement. Neurovascular was intact. Plain radiograph showed left subtalar and talonavicular dislocation. Closed manipulative reduction under sedation was unsuccessful. Computed tomography revealed residual subluxation of talonavicular joint with multiple small bony fragments within subtalar joint spaces. Open reduction and fusion of talonavicular joint was achieved by screws. The ankle was immobilized with a below knee cast for 6 weeks.



Figure 1: plain radiograph and computed tomography of left ankle showing subtalar and talonavicular dislocation.



Figure 2: Image intensifier film after open reduction and screw fixation.

## DISCUSSIONS:

Subtalar dislocation is first reported by Judey and Defaurest in 1811. It is a rare ankle injury that only account for approximately 1 % of all dislocations and 15 % of talar injuries (1,2). Medial dislocation is the most common type, followed by lateral, posterior and anterior dislocation (3,4,5).

The surface of talus is covered by articular cartilage and does not have muscular or tendinous attachment (6). High energy trauma such as road traffic accident or fall from height may produce subtalar dislocation. Medial and lateral subtalar dislocations are being described as event of forceful inversion and eversion of the foot while posterior and anterior dislocations are caused by extreme plantar flexion or dorsiflexion of forefoot. (1,2,7,8).

Associated fracture are easily missed on plain radiograph thus most studies suggested that a computed tomography (CT) should be carried out to confirm the diagnosis (9,10,11).

Most cases can be successfully reduced by close reduction. Open reduction and internal fixation (ORIF) were reserved for cases with articular fracture or failed closed reduction with joint

instability. In 2016, Ansari MAQ treated a patient of subtalar dislocation by ORIF with K-wires. He mentioned the risk of K wires loosening over time and suggested that primary arthrodesis may show better functional outcome (12). In our patient, open reduction and screw fixation was performed to achieve stability of the talonavicular joint. Most authors recommended immobilization with below knee cast for 6 weeks post reduction followed by physiotherapy after cast removal to achieve good range of motion (3,5,9,11,13,14).

Uncomplicated subtalar dislocations usually have an excellent prognosis. Post traumatic osteoarthritis has higher prevalence in cases that are associated with fractures (9,10,13). Osteonecrosis might happen in high energy trauma as talus is mostly covered by articular cartilage with limited blood supply (15). Early treatment is important to reduce risk of complications. Our patient was reassessed at 6 weeks post reduction. The cast was removed and allow partial weight bearing with ankle physiotherapy. Further follow up were arranged to review the progress of recovery.

## CONCLUSION:

Subtalar dislocation is a serious injury with very low incidence rate. Computed tomography is helpful in assessing peritalar osseous injury for better management plan. Proper reduction of the articular surfaces together with sufficient immobilization and effective rehabilitation is vital to achieve good outcomes.

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