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## A case report of lateral subtalar dislocation

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### Abstract

**Introduction:** Subtalar or peritalar dislocation is defined as simultaneous dislocation of talocalcaneal and talonavicular joint. Most injuries are caused by moderate to high energy trauma including motor vehicle accidents and falls from height. This case is operated for lateral subtalar dislocation treated with open reduction.

**Case:** A 35 year old male patient came to Emergency Department of C U Shah Medical College And Hospital, Surendranagar with complaints of pain and tenderness over left ankle after history of road traffic accident between patient and bike. On clinical examination, it revealed tenderness and eversion deformity of the foot. Dorsalis pedis and Posterior Tibial pulses were intact. Sensation in the foot was preserved.

**Conclusion:** Subtalar dislocations are rare but serious injuries of the talus this injury is usually due to high energy trauma. Early diagnosis and urgent reduction are the prerequisites for a satisfactory functional outcome. The prognosis is generally good, although long-term monitoring is required to combat the appearance of subtalar arthrosis.

**Keywords:** Subtalar dislocation, talocalcaneal joint, talonavicular joint, arthrosis

### Introduction

Subtalar or peritalar dislocation is defined as simultaneous dislocation of talocalcaneal and talonavicular joint. Most injuries are caused by moderate to high energy trauma including motor vehicle accidents and falls from height. Subtalar dislocations without associated fracture are rare because of the inherent instability of these types of injuries. Subtalar dislocation occurs most commonly in the medial direction followed by lateral, posterior and anterior directions.

**Case:** A 35-year-old male patient came to Emergency Department of C U Shah Medical College And Hospital, Surendranagar with complaints of pain and tenderness over left ankle after history of road traffic accident between patient and bike. On clinical examination, it revealed tenderness and eversion deformity of the foot. Dorsalis pedis and Posterior Tibial pulses were intact. Sensation in the foot was preserved.



**Fig 1 and 2:** Demonstrating swelling over left ankle

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Plain radiographic evaluation showed lateral subtalar dislocation.



**Fig 3:** Demonstrating lateral subtalar dislocation

CT scan demonstrated the lateral subtalar dislocation without talus fracture.



**Fig 4 and 5:** Demonstrating the lateral subtalar dislocation without talus fracture on CT reconstructed images

Closed reduction was attempted. But no successful results were obtained. Hence, the patient was scheduled for Open Reduction.

**Operative Procedure**

Patient was given short general anesthesia and was placed in supine position on operating table. A 6 cm long dorsomedial incision was placed along the axis of first metatarsal at its base to first cuneiform reaching the tubercle of the navicular. The talonavicular joint, navicular-medial cuneiform joint and the first metatarsocuneiform joint were exposed and the tendon of tibialis posterior was retracted. Open reduction was attempted and achieved. Thorough wash was given with normal saline. Skin was closed in successive layers and below knee cast given for 1 month.



**Fig 6:** Demonstrating the dorsomedial approach taken for open reduction



**Fig 7:** Demonstrating post operative radiograph after successful open reduction

**Result:** At 6 months follow up, patient achieved full range of motions with AOFAS SCORE 90.



**Fig 8:** Demonstrating post operative follow up at 6 months

**Discussion**

Subtalar joint dislocation is defined as a simultaneous dislocation of both talocalcaneal and talonavicular joints, but tibiotalar and calcaneocuboid joints remain undisturbed. It is also commonly accompanied by fractures of the malleoli, talus or fifth metatarsal. Different force directions applied to the foot may lead to different types of dislocation. Medial dislocation is more common than lateral dislocation. Lateral subtalar joint dislocation is a rare and severe injury. This injury may be caused as a result of sustained longitudinal

compression and plantar flexion of the mobile lateral column of the foot following sudden eversion injury causing the lateral subtalar dislocation. Our patient underwent open reduction to stabilize the lateral column and talonavicular articulations, which resulted in a stable and plantigrade foot without radiographic evidence of talar avascular necrosis at latest follow-up.

### **Conclusion**

Subtalar dislocations are rare but serious injuries of the talus this injury is usually due to high energy trauma. Early diagnosis and urgent reduction are the prerequisites for a satisfactory functional outcome. The prognosis is generally good, although long-term monitoring is required to combat the appearance of subtalar arthrosis.

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