

## Pure Internal Subtalar Dislocation: About A Case

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### Abstract

### Case Report

Subtalar dislocations are uncommon limb lesion representing 1% of all dislocations that occurs in polytraumatism context. We here report the case of a young patient presenting with sports-related internal astragalo-scapho-calcaneal dislocation. The patient underwent orthopedic treatment with good clinical and radiological outcome.

**Key words:** Internal subtalar dislocation, pure, sport accident.

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## INTRODUCTION

The posterior astragalinal dislocation is a traumatology [1], in the calcaneus and the navicular are 1-of-1-of-the-dislocations observing in traumatology [1]. In the mortise of the ankle. The diagnosis is clinically confirmed by x-rays of the foot and ankle. Sometimes, the use of CT is necessary to search for associated osteocartilaginous lesions. The reduction must be performed urgently under anesthesia. If orthopedic reduction proves impossible, surgical treatment can achieve an anatomical reduction by removing obstacles and performing osteosynthesis of intra-articular fractures associated. The prognosis of this lesion is better.

## PATIENT AND OBSERVATION

We report the observation of a young patient, aged 24, with no notable pathological antecedents. He suffered a trauma to his right ankle following a sports

accident (during a football match) with a jump in inversion and equinism of the right foot. The clinical study had objectified a pain with functional impotence of the limb, a deformation of the mid-tarsal region: the heel is moved internally with respect to the leg, the foot being in inversion, shortening of the medial edge of the foot and a cutaneous tension, with edema of the ankle. There was no cutaneous pain or vasculoneurotic lesion (Figure 1). Standard radiographs were used to diagnose a pure medial talar dislocation (Figure 2). The reduction was performed in the next hour under general anesthesia by the pulling maneuver, the ankle being stable to the test and a control X-ray showed a good joint congruence (Figure 3). Then, the ankle was immobilized in a plastered boot for 6 weeks without support followed by functional rehabilitation. The functional result was excellent with a decline of 9 months and sports recovery was allowed at 3 months.



Fig-1: Clinical image of dislocation before reduction



**Fig-2: Radiological aspect of the internal subtalar dislocation in faces and profile incidence**



**Fig-3: Control radio after reduction showing good joint congruence**



**Fig-4: Clinical appearance after reduction**

## DISCUSSION

In 1803, Hey [2] published the first observations on dislocations under Australian and revealed them to the medical public. In 1811, Dufaurest and Judey [3, 4] reported the existence of the dislocation in Australia, but the first definition proposed for this type of dislocation was Broca [5] in 1853 which specified that it was a dislocation in which the talus maintains its relationship with the bones of the leg, while the calcaneus and the navicular move below.

**A purely anatomical classification has been described by Malgaine [6] and is subdivided into four varieties**

- The internal astragalian dislocation (50 to 90%)
- The external astragalian dislocation which is less frequent,
- The anterior and posterior Astragalian dislocations that remains exceptional.

Concerning the medial subtalar dislocation, its mechanism is a forced inversion with a blocked foot on the ground resulting in a ligament rupture in a precise chronological order: it is firstly the dorsal talo-navicular

ligament which is injured, then the two bundles of the ligament. Interosseous or hedge ligament and finally the peronéo-calcaneal ligament [7].

The clinical deformity is obvious and the diagnosis is confirmed on standard X-ray analysis of the foot and ankle, especially the incidence of the face, which shows the talus in place in the tibio-fibular mortise while the foot is, moved internally [7].

Treatment is emergency reduction under general anesthesia. This is done by the maneuver of the pull-boot, the knee being flexed to relax the triceps sural. Irreducibility can be the interpositions of fibular tendons, fibular ligament, and short extensor muscle of the toes or a bone fragment for medial dislocations. The reduction is usually stable and does not justify, for the pure dislocation, no osteosynthesis of principle [8] (boot plastered during 3 to 6 weeks without support). The prognosis of these lesions is relatively good in most authors except in case of cutaneous opening or associated fracture [8-10]. The risk of talar necrosis is estimated at 4% and that of subtalar osteoarthritis at 31% [10].

## CONCLUSION

Pure internal talar dislocation is a rare trauma condition, its diagnosis is easy, the treatment often consists of a reduction by external maneuver under general anesthesia, except in case of irreducibility by ligament incarceration or surgical reduction is required.

These are lesions of good prognosis except in cases associated with cutaneous opening.

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