Rare case of pure medial subtalar dislocation: Conservative treatment and 32 months follow-up

Sir,

Pure acute medial subtalar dislocation without any fractures is very rare and hardly reported in the literature. Such injuries are more likely to be open and associated with fractures of the surrounding foot bones. We report a very rare case of a closed subtalar dislocation without any related fractures treated with conservative treatment; a closed reduction with a cast immobilization. The result was satisfactory with a good functional recovery. We discuss in details the mechanism of such an injury and highlight the importance of prompt closed reduction and early mobilization to ensure a satisfactory long term outcome.

A 23-year-old man presented to the Emergency Department after sustaining a motorbike accident, exhibiting a severe pain and deformity in his left ankle. The clinical examination revealed an ankle fixed in plantar flexion with a bony prominence appreciable laterally [Figure 1a]. The dorsalis pedis and the posterior tibialis pulses were palpable. The radiological examination plainly showed a medial dislocation of both the talonavicular and talocalcaneal joints without associated fractures [Figure 1b]. Closed reduction under a general anesthesia was performed by manual foot traction, with application of firm digital pressure over the head of the talus as the ankle was plantar flexed and then dorsiflexed. The reduction was completed with an audible clunk, and the ankle was immobilized in a short leg cast. Post-reduction films showed good realignment and a computed tomography (CT) scan did not reveal any further occult injuries [Figure 2]. The patient was mobilized with crutches on the third day, with no weight-bearing. Passive ankle motion was permitted after cast removal.

At 4 weeks the patient initiated partial weight-bearing with crutches and full weight-bearing was allowed at 2 months. At 32-months follow-up, the patient was autonomous and active, joint motion and full weight-bearing were painless without instability at the left ankle on joint stress tests.

Subtalar dislocation can be defined as simultaneous dislocation of both the talonavicular and the talocalcaneal joints without a major fracture of the talus. The acute subtalar dislocation represents...
<1-2% of all large joint dislocations and approximately 15% of all talar injuries.\(^5\) The incidence of injury has been estimated to be 3-10 times more likely to occur in men than women.\(^6\) Medial subtalar dislocation occurs more frequently than the lateral form because the lateral talocalcaneal and calcaneofibular ligaments are weaker than deltoid and medial talocalcaneal ligaments. As much as 80% of subtalar dislocations display restriction in motion after healing, and 50-80% have radiographic evidence of post-traumatic subtalar arthritis.\(^6\) Subsequently those cases successfully treated with closed reduction are placed in a non weight-bearing below knee cast for a maximum of 4 weeks,\(^7\) followed by progressive mobilization and rehabilitation. The results of the conservative treatment are reported to be good to excellent. However, complications have been reported, including reduced range of motion, stiffness of the joint, residual instability, osteonecrosis of the talus and early osteoarthritis.\(^7\) Post-reduction CT scan is recommended to identify occult fractures.

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