

Unexpected Injury During Jumping Exercise: Isolated Subtalar Dislocation in A National Athlete

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Objectives: The purpose of this case presentation is to report the results of physical therapy and conservative treatment of a rare clinical entity, isolated subtalar dislocation that occurred during triple jumping during which maximum compression forces act on the foot.

Methods: A 20 years old national triple jumping athlete fell during daily sports exercises which consist of jumping to the medial and lateral side trying to catch a sports ball bouncing from the wall while his right foot was inverted and in plantar flexion. The patient was admitted to our emergency service. The physical examination revealed that the hindfoot was displaced medially. The neurological examination was intact and there was no sign of dermal injury. After the radiological examination the diagnosis was isolated subtalar dislocation. The dislocation was reduced with longitudinal traction with the knee was in flexion. The MR imaging did not reveal any chondral damage. The choice of treatment was conservative. After 4 days as the edema subsided, a short leg cast was applied for four weeks. Then, the cast was removed and active range of motion exercises were initiated. The first 25 days consisted of exercises with rubber band, bottle rolling under the foot. The second phase included walking in the pool and the patient was asked to start weight bearing partially. The patient went on with proprioception and strengthening exercises. Later, kinesiological taping was also added to the therapy. He changed his jumping foot and started his routine training program with the team after 170 days. He participated in his first official competition 16 months after the injury. At the 28. month, he broke the national record in the National Interuniversities Athletics Games. 2 months later, he got the third place in the World Athletics Championship.

Results: The follow up period was 4 years. AOFAS score was 76 at second month and 83 at the fourth. At the first and at the fourth year, AOFAS score was 100. No dermal lesions or joint stiffness or signs of arthritis was observed. Avascular necrosis of talus or complex regional pain syndrome was not encountered.

Conclusion: Early return to sports activities is of tantamount importance as early reduction. Reduction can be carried out in an open or closed manner. For prevention of joint stiffness, immobilization period has to be short and active ROM exercises has to be initiated with partial weight bearing as soon as the joint stability and strength is adequate.

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