

Talar process or tubercle [Shepherd's fracture]



Facts

Consists of medial and lateral tubercles: a groove for FHL

The lateral tubercle serves as the attachment for the PTFL.

Lateral tubercle fractures are common than Medial

The mechanism: Forced plantar flexion with impingement against the tibia

Non-operative Treatment: cast immobilization x 6 weeks

Operative Technique

If symptoms > 4–6 months, surgical excision or fixation of the posterior process fragment is indicated.

Posterolateral incision between FHL and Perone

Fix with a screw if possible

These injuries are often missed or neglected

This can lead to significant disability, because such fractures can involve a substantial portion of the ankle and subtalar articular surface.

Treatment of Cleavage and Compression Fractures

Displaced cleavage and crush fractures of the talar body are optimally treated with anatomic reduction and internal fixation. Because these fractures occur beneath the ankle, a mortise, medial, or lateral malleolar osteotomy is often necessary to gain exposure to the fracture. Once the fracture has been exposed, temporary Kirschner-wire fixation is used before final fracture stabilization with screws.

Fractures of the Talar Body

Talar body fractures occur less frequently than fractures of the talar neck. Because fractures of the talar body involve both the ankle joint and the posterior facet of the subtalar joint, accurate reconstruction of a congruent articular surface is required. Inokuchi suggested that the diagnosis can be accurately predicted on the basis of the location of the inferior fracture line in relation to the lateral process. Fractures in which the inferior fracture line propagates in front of the lateral process are considered talar neck fractures. Fractures in which the inferior fracture line propagates behind the lateral process involve the posterior facet of the subtalar joint and are therefore considered talar body fractures.

Plain radiographs often underestimate the extent of articular injury. Computed tomography is necessary to define the fracture pattern, amount of comminution, and extent of joint involvement.

Sneppen's Classification

Type A, transchondral or osteochondral;

Type B, coronal shear;

Type C, sagittal shear;

Type D, posterior tubercle;

Type E, lateral process;

Type F, crush fractures.

Contemporary management with open reduction and internal fixation of all displaced fractures has led to improved clinical results.



Low reported good or excellent results in 18 of 22 patients who underwent open reduction and internal fixation for displaced talar neck

Benerska: Fracture talar body

AVN 49%

>1/3rd revascularises

1/3rd Collapse

AVN: with comminution of the talar neck ($p < 0.03$) and open fracture ($p < 0.05$).

Post traumatic arthritis: 54%

Patients with comminuted fractures also had worse functional outcome scores

We agree that once fracture union has been achieved, weight bearing as tolerated may be started. In the present study, 37% of the patients with radiographic evidence of osteonecrosis showed a return to normal talar dome density on plain radiographs. No collapse of the talar dome was detected in these patients despite weight bearing as tolerated without bracing.