Fracture of the lateral talus process

A case report

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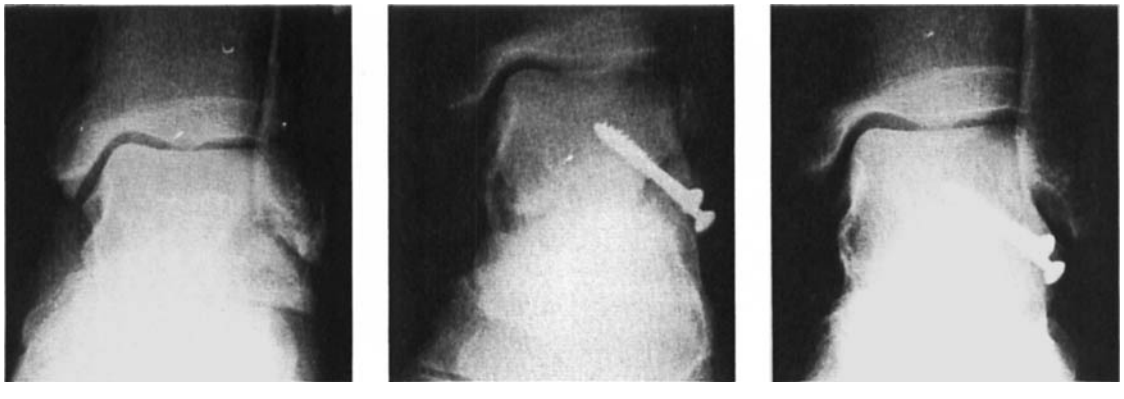
A healthy 40-year-old vascular surgeon (RH, the fourth author) was participating at a conference in Vienna. He sprained his left ankle running up a flight of stairs. After immediate first aid (cold, compression, elevation and anti-inflammatory drugs) he walked with caution for 3 days with supportive bandage and full weight-bearing. On the fourth day the patient was evaluated by the second author. The ankle was bilaterally swollen and stable, but in inversion there was pain anterolaterally. The radiographs were considered as normal—retrospectively the lateral talar avulsion was noticed (Figure). Arthrography demonstrated leakage into the region of the anterior fibulotalar ligament and into the tibialis posterior tendon sheath, but not into the peroneal tendon sheath or subtalar joint. At operation we found stretched fibulotalar and fibulocalcanear ligaments. After partial discision of the anterior fibulotalar ligament a dislocated biarticular fracture of the lateral talar process was found, consisting of 20 × 20 mm of the fibular facet and 10 × 20 mm of the lateral subtalar facet. The fracture was fixed by two lag screws (Figure 1) and the anterior fibulotalar ligament was resutured. The medial side of the ankle was not explored. Postoperatively a part-time dorsal splint was used for 4 weeks with no weight-bearing but with immediate active mobilization. After 4 months the patient started light jogging with full mobility and only mild discomfort. At a follow-up after 2 years the ankle was without symptom even in strenuous exercise and the radiographic outcome was good.

Discussion

Fracture of the lateral process of the talus is rare; less than 60 cases have been reported (Mills and Horne 1987). There are 2 main mechanisms for these fractures: inversion of the ankle in dorsiflexion and high-energy injuries (Heckman and McLean 1985). Fracture fragments are usually small and may be overlapped by the distal fibula or the calcaneus in radiographs; thus, missing the diagnosis is not unusual. One half of the fractures were missed initially in the 2 largest series consisting of 13 patients each (Hawkins 1965, Mukherjee et al. 1974). True mortise view



Preoperatively. Postoperatively. After two years.

Figure 1. The biarticular fracture of the lateral talus process.

radiograph is mandatory and in uncertain cases talar tomography or a CT-scan should be used. Small, non-displaced fractures heal well by closed treatment, but large, displaced fractures should be internally fixed (Heckman and McLean 1985).

We have not seen an avulsion fracture like this before. The clinical signs were misleading because of the effective primary care and anti-inflammatory drugs. The arthrography showed leakage into the tibialis posterior tendon sheath, indicating a lesion of the deltoid ligament. The subtalar joint and the peroneal tendon sheats were not visualized, probably because the examination was made after 4 days, when arthrography is of limited value because of blood clotting (Rijke et al. 1986). The large, biarticular fracture of our patient is atypical. When operating it is important to obtain exact reduction and rigid fixation (Heckman and McLean 1985). With a co-operative patient no postoperative immobilization is needed.

References

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