Fracture of the lateral process of the talus: computed
tomographic scan diagnosis

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Fracture of the lateral process of the talus is rare but can be
mistaken for a simple ankle sprain1. A case with normal
conventional radiographs is presented to draw attention to
this diagnosis in the resistant ankle sprain, and to
highlight some of the problems that may be encountered
with treatment.

Keywords: Talus, stress fracture, computed tomographic
scan

Case report

A 20-year-old professional footballer presented with a
painful ankle on exertion after a twisting injury a few
weeks earlier. Clinical examination revealed only
minor tenderness over the anterolateral part of the
ankle joint. Conventional radiographs, tomograms
and a computed tomographic (CT) scan at this stage
were normal, but a skeletal scintigram showed an
area of increased uptake in the inferolateral talus,
adjacent to the subtalar joint (Figure 1).

In view of persistent symptoms despite conven-
tional treatment, a second CT scan was performed
which showed a fracture of the lateral process of the
talus extending into the subtalar joint (Figure 2).

A period in plaster failed to improve the situation
and an ankle arthroscopy was performed. This
showed no abnormality apart from a small notch in
the articular surface of the inferolateral part of the
talus.

Despite some initial improvement, the patient's
symptoms relapsed while training. Plain radiographs
were again normal, but a further CT scan showed an
unequivocal fracture with surrounding sclerosis
(Figure 3). A diagnosis of non-union was made.

An operative approach through an anterolateral
reversed hockey stick incision was performed. No
abnormality could be found in the articular surface
and drilling across the site of the fracture was
performed.

A relapse of symptoms occurred on the resumption
of training 4 months later and a sclerotic area became
visible on plain radiographs.

A second operative procedure was performed with
exposure of the fracture, which was curetted, and a
cancellous bone graft from the distal tibia was packed
into the defect. The fractured lateral tuberosity was
fixed internally with a Herbert screw. A period of 12
weeks in plaster ensued.

The patient made a steady recovery, and returned
to top level competitive professional football 2 years
after his original injury.

Discussion

Fractures of the lateral process of the talus are rare,
and may be overlooked as symptoms are similar to an
inversion ankle sprain, and may account for up to 1% of
these injuries2. These fractures have been divided
into three types: (1) The simple fracture extending
from the ankle to the subtalar joint; (2) The
comminuted fracture; and (3) The chip fracture into
the subtalar joint, as in the case reported here.

Figure 1. Scintigram showing increased uptake around the lateral talus
Fracture of the talus: J. Noble and S. G. Royle

Union of undisplaced fractures can usually be anticipated with conservative treatment, but non-union can occur, particularly in displaced fractures. Early operative treatment of displaced or comminuted fractures in the form of fixation or excision is recommended. Problems with the subtalar joint in the long term are not infrequent in comminuted or displaced fractures, and subtalar arthrodesis may be required.

The case presented here highlights two of the main problems encountered when treating fractures of the lateral process of the talus.

First, the diagnosis may be difficult to make and the radiographs may be normal. We recommend that both skeletal scintigraphy and CT scanning should be used in the resistant ankle sprain. The presence of normal radiographs creates difficulty assessing the progress of the fracture.

Second, obtaining union can be a problem in these fractures and surgical intervention with bone grafting and internal fixation may be required.

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