CASE REPORT

Fracture of lateral process of the talus presenting as ankle pain

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The case is presented of a 27 year old woman with lateral ankle pain after an inversion injury sustained while dancing. Although initial radiographs failed to identify the fracture, radiographs of the ankle at six weeks showed an unsuspected fracture of the lateral process of the talus. The fracture was treated with cast immobilisation for six weeks and the patient is currently undergoing aggressive physiotherapy. A literature review revealed that fractures of the lateral process of the talus are frequently overlooked and should be considered in the differential diagnosis of patients with acute and chronic ankle pain as an early diagnosis and treatment prevent long term complications.

Fractures of the lateral process of the talus are frequently overlooked and should be considered in the differential diagnosis of patients with acute and chronic ankle pain.¹ These fractures are frequently associated with snowboarding injuries.² The incidence of this fracture, however, is very low in other accounts of ankle injuries. The mechanism of this injury is a combination of dorsiflexion and inversion of the ankle.

Early diagnosis and treatment is important in preventing long term complications such as subtalar pain and stiffness.³ The author reports a case of this fracture, which presented with a six week history of ankle pain. The fracture was eventually diagnosed and successfully treated with cast immobilisation.

CASE REPORT

A 27 year old woman was referred to the orthopaedic clinic with complaints of pain below the right ankle and the lateral aspect of the subtalar joint of the right foot of six weeks duration. She sustained an inversion injury to her ankle while dancing. There was no history of any swelling around the ankle or subtalar joint. She was seen in the accident and emergency department immediately after the injury. Examination of the ankle during this visit revealed no swelling, the patient however did have localised tenderness over the lateral malleolus. In addition, the terminal range of dorsiflexion of the ankle was painful. Radiographs of the ankle (fig 1), though, failed to reveal any fracture. A diagnosis of calcaneo-fibular ligament strain was made and the patient was

Figure 1 Frontal view of ankle at initial presentation to accident and emergency department.

Figure 2 Frontal view of ankle, which shows lateral process fracture of the talus when patient presented to clinic, six weeks after the injury.

Figure 3 Frontal view of ankle after six weeks in plaster, which shows union of lateral process fracture of the talus in progress.

prescribed a tubigrip. The pain, however, did not decrease in severity over the next six weeks and she was, therefore, referred by her general practitioner to the orthopaedic clinic for a consultation. On examination in the clinic, she had no swelling over her ankle and had no tenderness over her medial or lateral malleolus. She however had some tenderness just beneath her lateral malleolus. Movements of her ankle and subtalar joints were restricted and painful. The radiograph of the ankle (fig 2), taken during this consultation revealed a fracture of the lateral process of the talus with a 3 mm displacement. A non-weight bearing short leg cast was applied for a period of six weeks.

Radiography of the ankle after six weeks (fig 3) revealed fracture union of the lateral process of the talus in progress. The patient was left out of plaster and mobilised partial weight bearing over the next two weeks and progressed onto full weight bearing four weeks after removal of the plaster cast. Although she had no pain in her subtalar or ankle joint, she had some restriction of movement at the subtalar joint and is currently undergoing aggressive physiotherapy.

DISCUSSION

The fact that this fracture was not identified in the first radiograph raises the possibility of a further injury having occurred between the first and second radiographs. The patient

however did not give any history of another injury to her ankle nor a history of worsening of her ankle pain between the first and second consultation. Therefore it is highly probable that the patient did indeed have a fracture of the lateral process of the talus that did not show up in the first radiograph. The second radiograph, which was taken six weeks later, did pick up this fracture probably because of increased bone turn over at the fracture site, which tends to increase the radiolucency at the fracture site. Thorough radiological evaluation that on occasions may include serial radiographs at weekly intervals, lateral tomography, computed tomography, and magnetic resonance imaging,⁴⁻⁶ is often necessary for definite evaluation of the abnormality and to determine the need for operative or non-operative management of fractures of the lateral process of the talus. These fractures can be classified into three subtypes based on the severity of the bony injury. Undisplaced or minimally displaced fractures are treated with cast immobilisation, whereas large displaced fractures usually require open reduction and internal fixation. Comminution or small fragments are best treated by surgical excision, although alteration in the biomechanics of the subtalar joint may occur. A timely diagnosis and early appropriate treatment is essential to achieve the best possible results. Complications such as pain and a decreased range of motion in the subtalar joint can occur in cases in which the diagnosis has been delayed or missed. As displaced or comminuted fractures can cause long term disability, doctors in the accident and emergency department need to be aware of the association of this fracture with lateral ankle pain.

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