Medial subtalar dislocation with navicular and posterior talar process fracture: the first report in the literature

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DESCRIPTION

Subtalar dislocations are rare types of injury and account for approximately 1% of all dislocations. There is simultaneous disruption of both the talocalcaneal and talonavicular joints, whereas the tibiotalar and calcaneocuboid joints remain undisturbed. Medial subtalar dislocations are the most common (up to 85%), with lateral types making up the majority of the rest.^{1 2} Total anterior or posterior dislocations are extremely rare. These injuries may be associated with fractures of the bones of the foot and ankle.

Reviewing the literature reveals no previous reports of posterior talar process and navicular fracture, in the presence of a total medial subtalar dislocation (as in this case). Fotiadis *et al*³ have reported on a medial subtalar dislocation with non-displaced fractures of the talar body and navicular (figure 1).

Papers describing total talar dislocation have shown that open reduction is required in most cases.

This should be undertaken urgently as it reduces deformity and subsequent nerve, blood vessel or skin damage. Talectomy may be required as an interval procedure due to the development of avascular necrosis or osteomyelitis (eg, after open total dislocation). Ankle fusion is also described as a second procedure in cases of complicated total talar dislocation with or without accompanying fracture. Xarchas *et al* describe a closed method of reduction under general anaesthetic whereby the knee is flexed and the talus is pushed posteromedially.

In this case, closed reduction under general anaesthetic failed. Open reduction was successful and revealed that the talus had 'button-holed' through the dorsal fascia preventing closed reduction.

Learning point

Subtalar dislocations with concomitant fractures are rare injuries. Therefore, the best and most reliable way of treating this significant trauma remains unknown. However, what is clear is that the subtalar dislocation should be reduced, whether by a closed or open method. The management of the associated fracture(s) will depend on many factors, particularly displacement of the fracture fragments.

Contributors All the authors were involved in the clinical care of the patient. All the authors contributed equally in the concept, research, design, writing, reviewing and editing of the manuscript. All authors approved the final draft of the manuscript.

Competing interests None.

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Figure 1 CT reconstruction demonstrating medial subtalar dislocation (posterior talar process and navicular fractures seen on sectional imaging).

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