CASE REPORT

Isolated dislocation of the proximal tibiofibular joint in a long jumper

A J Laing, B Lenehan, A Ali, C V R Prasad

Br J Sports Med 2003;**37**:366–367

Acute traumatic proximal tibiofibular joint dislocation is an exceedingly rare injury. This is a case report in a rare horizontal type joint variant, following a long jump injury. The diagnostic approach when this injury is suspected is described.

CASE REPORT

A 16 year old youth presented with right lateral knee pain following a long jump injury. Physical examination revealed an accentuation of the bony prominence of the fibular head which was tender to palpate. Knee movements were normal.

Plain radiographs showed no fracture. Comparison anteroposterior and true lateral views suggested some lateral and anterior translation of the right fibular head (fig 1). A computed tomography (CT) scan was performed, and axial images clearly identified an anterolateral proximal tibiofibular joint dislocation (fig 2).

Under sedation the fibular head was reduced with an audible snap. The patient was allowed to mobilise with a support bandage which was maintained for six weeks. Sporting activities were restricted for a further six weeks. At six months follow up, the patient was asymptomatic and had returned to competitive athletics.

DISCUSSION

The proximal tibiofibular joint is a plane synovial articulation, and isolated dislocation of this synovial joint is an exceedingly rare injury.^{1,2} The postulated mechanism requires the knee to be initially flexed in order to relax the fibular collateral ligament. This is then followed by a rotatory motion, which

Figure 1 Comparison views of both proximal tibiofibular joints illustrating lateral displacement of the right fibular head.

Figure 2 An axial computed tomography image clearly showing anterolateral dislocation of the right proximal tibiofibular joint and the horizontal joint configuration. The arrow indicates the original site of the fibular head.

disrupts the ligamentous restraints and the congruity of the articulation. Dislocation in most cases reported in the literature is typically anterolateral in direction. Ogden³ identified two variants of the proximal tibiofibular joint, horizontal (coronal plane) and oblique configurations. The horizontal proximal tibiofibular joint lies in the coronal plane and, with a larger articular surface and greater mobility, is more flexible and theoretically more resistant to rotational forces tending to cause fibular dislocation.

The subtle nature of the salient findings makes the diagnosis of proximal tibiofibular joint dislocation very difficult. Plain radiographs generally are unhelpful unless contralateral comparison views are obtained. Axial CT of the proximal tibiofibular joint, however, enables confirmation of a dislocation and identification of its direction and the joint configuration.⁴

Closed reduction under adequate muscle relaxation is usually successful. In this case, in the presence of a stable reduction and normal pain-free knee and ankle movements, the patient was allowed to mobilise freely with a support bandage. If the dislocation cannot be reduced by closed means, then open reduction is recommended. This may be combined with capsular and ligamentous repair or a joint stabilisation

Take home message

Isolated traumatic dislocation of the proximal tibiofibular joint is an exceedingly rare injury. A high level of clinical suspicion combined with appropriate plain radiograph and CT views aid early diagnosis and treatment. Immediate mobilisation can be started if the reduction is stable and knee movements are pain-free.

procedure, although these additional procedures are generally reserved for recurrent dislocations.

This case report is unique in that it describes the rare dislocation of a "horizontal type" proximal tibiofibular joint following a long jump injury. Long jumpers theoretically may be more prone to this injury because of the forced knee hyperflexion generated on ground impact. Clinical suspicion can be confirmed by comparison radiographs and axial CT imaging.

Authors' affiliations

A J Laing, B Lenehan, A Ali, C V R Prasad, Merlin Park Regional Hospital, Galway, Ireland

Correspondence to: Dr Laing, Department of Academic Surgery, Cork University Hospital, Wilton, Cork, Ireland; alanjlaing@hotmail.com

Accepted 25 September 2002

REFERENCES

- 1 **Nelaton A.** *Elements de pathologie chirurgicale*. 2nd ed. Paris: Librairie Germer Bailliere, 1874;**3**:282.
- 2 **Love JN.** Isolated anterolateral proximal fibular head dislocation. *Ann Emerg Med* 1992;**21**:757-9.
- 3 **Ogden JA.** Subluxation and dislocation of the proximal tibiofibular joint. *J Bone Joint Surg [Am]* 1974;**56**:145-54.
- 4 **Keogh P, Masterson E, Murphy B, et al.** The role of radiography and computed tomography in the diagnosis of acute dislocation of the proximal tibiofibular joint. *Br J Radiol* 1993;**66**:108-11.

Have your say

eLetters

If you wish to comment on any article published in the *British Journal of Sports Medicine* you can send an eLetter using the eLetters link at the beginning of each article. Your response will be posted on *British Journal of Sports Medicine* online within a few days of receipt (subject to editorial screening).

www.bjsportmed.com