Figure 1 Diagrammatic representation of the procedure (see RE GILBERT, PD GALLACHER, AP ROBERTS).

New intra-operative technique for testing the distal tibiofibular syndesmosis

S RAJAGOPALAN, V UPADHYAY, HP TAYLOR, A SANGAR
Dept of Orthopaedics, Poole Hospital NHS Trust, Poole, UK

CORRESPONDENCE TO

S Rajagopalan, Department of Orthopaedics, Poole Hospital
NHS Trust, Poole, UK
E: velansenthil78@yahoo.com

BACKGROUND

The intra-operative tests commonly in use when assessing for the presence of syndesmotic instability are the hook test and the external rotation stress test which have high inter-observer variance.¹ Candal-Couto *et al.*² showed that the anteroposterior mortise view correlated poorly with observed diastasis when using the hook test. We describe a new technique to test the inferior tibiofibular syndesmosis in ankle fractures.³

TECHNIQUE

The fibular fracture is stabilised using plate and screws. Using the screw hole at an appropriate level, a drill hole is made through the near and far cortex of the fibula using 2.5-mm drill bit. A 3.5-mm tap is introduced to meet and push the near cortex of the tibia. If there is evidence of widening of the tibiofibular clear space on mortise view, the syndesmosis is stabilised by the surgeon's preferred technique. If there is no evidence of syndesmotic instability, the screw hole is filled with a standard 3.5-mm screw.

DISCUSSION

This technique has proved to be useful for the intra-operative assessment of syndesmotic instability. Further studies are required to compare this new technique with those previously described.

References

1. Solomon L, Warwick DJ, Nayagam S. *Apley's System of Orthopaedics and Fractures*. London: Arnold, 2001.
2. Candal-Couto JJ, Burrow D, Bromage S, Briggs PJ. Instability of tibiofibular syndesmosis; have we been pulling in wrong direction? *Injury* 2004; **35**: 814–8.
3. Jenkinson RJ, Sanders DW, Macleod MD, Domonkos A, Lydestadt J. Intraoperative diagnosis of syndesmosis injuries in external rotation ankle fractures. *J Orthop Trauma* 2005; **19**: 604–9.

Figure 1 Ankle X rays with tap *in situ*.

Figure 2 Tap test.

Figure 3 Final fixation.