Intraoperative localisation of Schottle's point without fluoroscopy during medial patellofemoral ligament reconstruction

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BACKGROUND

Schottle's point is a radiographic landmark depicting the isometric point of femoral insertion during medial patellofemoral ligament (MPFL) reconstruction.¹ This can be identified intraoperatively using fluoroscopy. The femoral tunnel for the MPFL is deemed to have been placed acceptably if it is within 9mm of this point.² We describe a technique to identify this point intraoperatively without the use of fluoroscopy and without radiation exposure to the patient or surgeon.

TECHNIQUE

A 2–3 cm longitudinal incision is made medially, centered over the medial epicondyle (ME). Following superficial and deep dissection, with an artery forceps, feel for the adductor tubercle (AT) and posterior cortex of the femur. Anatomically, the ME is anterior and distal to the AT. The entry point for the guidewire is approximately 5mm anterior and distal to the AT, which lies between the AT and the ME (Fig 1). All these landmarks are felt with the guidewire before it is drilled through at the correct site.

DISCUSSION

We have used the above technique in 13 patients. Evaluation of postoperative radiography revealed that the entry point made using above technique was on average 5.18mm (range: 0–11.7mm) from Schottle's point (Figs 2 and 3). Only in one knee was the entry point beyond 9mm.

Our technique is very simple to use. It makes use of well defined anatomical landmarks that are easily felt rather than guessing where the isometric point could be. It reduces multiple passes of the guidewire, and also avoids radiation exposure to the patient and the surgical team.

Figure 1 Anatomical landmarks indicated on a knee model

Figure 2 Radiographic isometric point of insertion of medial patellofemoral ligament as described by Schottle *et al*¹

Figure 3 Postoperative x-ray of a patient with medial patellofemoral ligament reconstruction using free hand technique

References

- Schottle PB, Schmeling A, Rosenstiel N, Weiler A. Radiographic landmarks for femoral tunnel placement in medial patellofemoral ligament reconstruction. *Am J Sports Med* 2007; **35**: 801–804.
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