Figure 5 The tip of the Flexor® ureteral access sheath

urethrotomy is justified as this stepwise approach increases safety by direct visual as well as fluoroscopic control of the procedure, avoiding blind dilation or sharp dissection.

References

1. Tang VC, Bott SR. A better way to insert urethral catheter with guide-wire. *Ann R Coll Surg Engl* 2006; **88**: 693.
2. Hampson LA, McAninch JW, Breyer BN. Male urethral strictures and their management. *Nat Rev Urol* 2014; **11**: 43–50.

Controlled eversion of the patella during total knee replacement surgery

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BACKGROUND

Patella eversion is a useful method to improve access during total knee replacement.¹ However, it is often difficult to carry out due to the force needed to overcome the extensor mechanism and due to fat-pad scarring from previous surgery. It must be carefully controlled to prevent avulsion of the patellar tendon, and also to avoid unnecessary rough handling of tissues (especially if the patella is not to be resurfaced).

TECHNIQUE

We have developed a technique for patellar eversion that is relatively easy to carry out. A six-claw rake retractor is placed on the juxta-articular medial inner surface of the soft tissues of the patella. A three-claw 'cat's paw' retractor is placed on the lateral patella, on the edge of the soft tissues. The larger retractor allows external rotation of the patella, so the smaller retractor lifts the lateral edge to facilitate patella eversion. The knee is flexed slowly, initially to only 45°, to allow the soft tissues surrounding the patella to relax. At this stage, we also routinely remove the most superficial scarred layer of the fat pad, before the knee is finally flexed to 90°.

DISCUSSION

Eversion of the patella can be a technically challenging part of total knee replacement. However, our reproducible technique allows for

Figure 1 Placement of the cat's paw and rake retractors

Figure 2 Slow flexion is applied to the knee as the patella is rotated externally

Figure 3 Superficial portion of the fat pad (held in forceps) is removed

easy, controlled patella eversion and good access for the remainder of the procedure. We have found that the technique works well even in obese patients or in stiff knees. We have used this technique in 1,100 consecutive knee replacements (including revisions) and no ruptures of patella tendons have been observed.

References

1. Reid MJ, Booth G, Khan RJ, Janes G. Patellar eversion during total knee replacement: a prospective, randomized trial. *J Bone J Surg Am* 2014; **5**: 207–213.