Figure 1 Image of subcutaneous fragment of glass.

ultrasound unit to identify and locate foreign bodies prior to exploration either in the emergency department or in theatre. Using the probe, the exact depth and location of the foreign body (including proximity to surrounding structures) is calculated. Prior to exploration, the skin is marked. The ultrasound probe can also be used intra-operatively in conjunction with a sterile latex cover to identify and locate residual fragments.

DISCUSSION

We have found that this method is easy to learn and quick to perform. It uses equipment readily available in emergency and operating departments and does not require extra staff. It negates the need to expose the patient and the operator to radiation. Its use in the emergency department in combination with local anaesthesia can prevent unnecessary operation. Using the probe intra-operatively can help prevent unnecessarily extensive tissue dissection.

Reference

- 1 Schlager D, Sanders AB, Wiggins D, Boren W. Ultrasound for the detection of foreign bodies. *Ann Emerg Med* 1991; **20**: 189–91.

Trapeziectomy with a capsular interposition flap

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BACKGROUND

Osteoarthritis of the first carpo–metacarpal joint is a common cause of hand and wrist pain. Indications for trapeziectomy are worsening pain and joint instability. The gap between the first metacarpal base and the scaphoid can be filled with artificial

Figure 1 Square-shaped dorsoradial capsular flap is marked.

Figure 2 Tip of the capsular flap is sutured to flexor carpi radialis tendon at base of the cavity.

Figure 3 Final position of the capsular interposition flap. The base of the flap is sutured to adjacent capsule.

implants or with autologous soft tissue.^{1–3} After bone excision there is an excess of dorsoradial capsule. A method of performing a trapeziectomy incorporating a capsular interposition flap is described.

TECHNIQUE

After exposure of the dorsal joint capsule, a square, distally based flap of capsule is elevated, exposing the trapezium (Fig. 1). The

trapezium is removed with preservation of all the surrounding soft tissues. No bone is removed from the metacarpal base. A 3/0 polypropylene suture is passed percutaneously at the base of the trapeziectomy defect through the flexor carpi radialis tendon. The end of the suture is pulled out from within the cavity and this suture is passed through the tip of the capsular flap. The suture is tied, creating a capsular interpositional flap (Fig. 2). The radial capsule is plicated and the base of the flap is sutured to the divided joint capsule over the scaphoid (Fig. 3). The capsular repair interposes soft tissue, adducts the base of the first metacarpal and secures the base of the first metacarpal into the trapeziectomy defect.

DISCUSSION

This simplified method utilises excess joint capsule, which remains after removal of the trapezium. Further studies are needed to confirm the utility of this method in clinical practice. It is worth noting that the capsular flap steers the metacarpal base into adduction at the trapeziectomy defect. Local tissue is used for the soft tissue interposition and creates a secure capsular repair, which is necessary for a stable and pain-free result. The need to import tissue from elsewhere or use an artificial implant is avoided.

References

1. O'Leary ST, Grobbelaar AO, Goldsmith N, Smith PJ, Harrison DH. Silicone arthroplasty for trapeziometacarpal arthritis. *J Hand Surg* 2002; **27**: 457–61.
2. Illarramendi A, Boretto J, Gallucci G, De Carli P. Trapeziectomy and inter-metacarpal ligament reconstruction with the extensor carpi radialis longus for osteoarthritis of the trapeziometacarpal joint: surgical technique and long-term results. *J Hand Surg* 2006; **31**: 1315–21.
3. Menon J. Partial trapeziectomy and interpositional arthroplasty for trapeziometacarpal osteoarthritis of the thumb. *J Hand Surg* 1995; **20**: 700–6.

A novel introducer for the Hardinge Cement Restrictor used in cemented total elbow arthroplasty

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BACKGROUND

Contemporary cementing techniques aim to improve cement penetration into bone, resulting in increased initial fixation strength, a more enduring micro-interlock fixation and reduced failure by aseptic loosening.¹ Intramedullary plugging is integral to this and in humeral preparation prevents cement migration towards the shoulder, which may hinder future surgery. Several humeral plugs

Figure 1 Hardinge Cement Restrictor on a 2-mm threaded guide wire.

Figure 2 Postoperative anteroposterior X-ray.

have been described.^{2–4} The humeral canal lumen is, however, narrowest distally and insertion of an introducer can compromise this canal. We believe that the Hardinge Cement Restrictor (DePuy UK, Leeds, UK) is in popular use but have found the bulky size of the Hardinge introducer problematic.

TECHNIQUE

We describe a technique of introducing the Hardinge Cement Restrictor into the humeral canal on a readily available and cheap 2.0-mm threaded guide wire. The flanges of the restrictor are trimmed to the appropriate size then threaded onto the guide wire producing a secure construct for insertion (Fig. 1). Once inserted at the correct level, the wire is unscrewed and removed, leaving the restrictor *in situ*.

DISCUSSION

The Hardinge Cement Restrictor is familiar to most orthopaedic surgeons and benefits from being on-hand in most orthopaedic units. However, the differences in humeral and femoral anatomy