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One-handed KTP laser application with suction, for ear surgery

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BACKGROUND

The KTP laser has found a place in ear surgery, for procedures including stapes surgery, the 'painting' of mastoid cavities after cholesteatoma removal and in obliterative otitis externa. It is suitable in that it has a small depth of penetration yet also has a fibre delivery system that is practical for the limited access characteristic of ear surgery. Laser application causes vaporisation of tissue and smoke formation, which is suctioned away to maintain visibility. This requires the suction catheter to be manipulated in the ear, requiring the use of the other hand and hindering vision. Our technique allows the fibre delivery system and suction device to be combined, leaving more space or the other hand free for further instrumentation.

TECHNIQUE

A disposable, angled, fenestrated suction tube is connected to flexible silastic tubing, and this to the suction machine. An 18-gauge venflon is inserted through the silastic tubing, the needle advanced such that it enters the proximal end of the catheter (Fig. 1). The inner needle is then removed, leaving the outer sheath through which the fibre for laser delivery can be advanced, until it emerges from the distal end of the suction tube. The venflon sheath is then removed, leaving the fibre gripped in place by the silastic tubing.

DISCUSSION

This simple set-up allows for continuous suction, in one hand, with minimal interference on field of view. A fenestrated catheter prevented eddying currents that might cause minor movements at

Figure 1 Materials assembly for KTP laser application with suction.

the fibre tip, and effect accuracy of application. The equipment used is all standard, readily available and inexpensive. The system has application elsewhere, such as within the nasal cavity for laser reduction of the inferior turbinates or division of adhesions.

An alternative vascular access technique for haemodialysis; the loop mid-thigh graft

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BACKGROUND

Permanent vascular access for haemodialysis is a key issue in management of chronic renal failure.¹ Exhaustion of all upper limb extremity sites requires either placement of a thigh graft or prolonged use of dialysis catheters.² We present a technique for loop mid-thigh grafts as a useful alternative.

TECHNIQUE

The patient is positioned supine. The femoral vessels are surgically approached in the adductor canal through an incision (7 cm) on the medial aspect of the thigh. Retraction of the sartorius and division of the deep fascia exposes the vessels, the vein lying posterior to the artery. A 6 mm minimum diameter graft (not ring reinforced graft) is then placed in a superficial tunnel (Fig. 1) as a loop over the anterior mid-thigh region and anastomosed to the femoral vessels using 6/0 prolene suture, arterial anastomosis being distal to the venous end (Fig. 2). The facial layer is closed with 3/0 vicryl suture and skin using subcuticular 4/0 vicryl suture.

DISCUSSION

The approach we describe has the advantage of a small incision and is away from the groin, thereby preserving the groin for

Figure 1 Mid-thigh loop graft.

Figure 2 Diagrammatic summary of mid-thigh loop graft.

further use. The fistulae can be used for dialysis within 4–6 weeks making it advantageous. The patients are satisfied during dialysis, as exposure does not involve the groin. The cumulative graft survival rate at 1 year from our series of 20 patients is 60%³ comparable to other thigh graft series² and is substantially higher than the corresponding 9% rate reported for tunnelled dialysis catheters.⁴

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A model for developing psychomotor skills in arthroscopic knot tying

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BACKGROUND

Learning to tie arthroscopic knots requires the orthopaedic trainee to develop new psychomotor skills and understand the concepts of sliding and locking knots. These new skills require sufficient time and repeated exposure to be developed.^{1,2} We have developed a cheap and easy-to-construct jig, for practising arthroscopic knot tying.

TECHNIQUE

A piece of wood has a trough routed out and an elastic band is suspended between two protruding screws. At the side of the

Figure 1 (A) The elastic band (labrum) is sutured to the eyelets (suture anchors) on the jig. (B) Full jig assembly with cannula *in situ*.