Using a cartilage butterfly graft to repair a damaged bony canal wall in combined approach tympanoplasty surgery

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BACKGROUND

Thinning of the posterior canal wall is a technique used in combined approach tympanoplasty (CAT) to treat cholesteatoma in the middle ear. The cortical mastoidectomy requires a thinned posterior canal wall, allowing access to the middle ear through a posterior tympanotomy. Occasionally, the wall can be over thinned, leading to a defect. We report a novel technique for repairing the defect with cartilage to form a butterfly graft, similar to butterfly grafts used in myringoplasty surgery.

TECHNIQUE

In the event of a damaged bony canal wall, harvesting conchal cartilage for grafting is possible as the area will already be exposed. Harvest sufficient cartilage to cover the area of the hole plus a small margin of 1–2mm for the flanges to sit astride the defect. Sculpt your butterfly graft as you would in a myringoplasty repair. This can be done under direct vision or with an operating microscope by holding the circular disc of cartilage with crocodile forceps and scoring along the narrow edge circumferentially with a 15 blade until it is bi-disc in shape. Next, place the graft carefully in the defect in a similar manner to grommet insertion (Fig 1). The operation ends as normal with ear packing and wound closure.

DISCUSSION

In the three cases where we have performed this technique, the graft has integrated well into the bone and remineralisation has occurred, stabilising the canal wall. No infection or extrusion has occurred in our experience; the graft is beneath canal wall skin and therefore remains protected.

Figure 1 Left: schematic diagram illustrating bony canal wall defect and location of the bi-disc conchal cartilage graft repair. Right: intraoperative image at the end of the combined approach tympanoplasty, with the cartilaginous graft secured in the posterior canal wall defect

Fishing method of appendix extraction during laparoscopy

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BACKGROUND

During laparoscopic appendicectomy, the specimen is traditionally removed in an endobag. We describe a simple method of removing the appendix without an endobag.

TECHNIQUE

We use two 10mm ports and one 5mm port. Appendicular vessels are clipped and the appendicular mesentery is disconnected. A polyglactin endoloop is applied to the base of the appendix, and the excess thread is cut and removed. A second endoloop is applied to the base of appendix 2cm above the first endoloop. Once the endoloop is tightened, the thread is left in situ, the plastic tube of the endoloop is removed, and the appendix base is cut between the first and second endoloops. After cutting the base, the appendix is extracted via a 10mm port by simply pulling the endoloop.

If one 10mm and two 5mm ports are used for appendicectomy, the endoloop thread attached to the specimen can be left long and pushed into the 10mm camera port. The appendix may still be extracted via a single 10mm port without a bag.

DISCUSSION

This method avoids routine use of an endobag and requires only endoloops. When the appendix is friable, an endobag is still needed. If the appendicular mesentery is bulky, the appendix can be kept inside the 12mm port, which needs to be removed to extract the appendix. We do not claim that this technique is original but recommend it for selective use, thereby saving the cost of an endobag.

The modified mallet splint for closed central slip injuries

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BACKGROUND

An accepted method of management of acute closed central slip injuries is splinting.¹ The aim is to immobilise the proximal interphalangeal joint (PIPJ) in extension to allow tendon healing while leaving the distal interphalangeal joint (DIPJ) free. There are many commercial splints available but their use is limited by lack of availability in emergency departments and clinics. Mallet splints are more

Figure 1 Cutting of mallet splint and application

commonly available and we describe a method to modify them for use with such injuries.

TECHNIQUE

An appropriately sized splint is selected for the injured digit. It should be tight enough to limit flexion at the PIPJ but still sufficiently loose to not constrict the digit. The splint is cut at the distal end using a large pair of plaster or bandage scissors. Care is taken to trim any sharp edges. The splint is then passed over the DIPJ on to the PIPJ and secured with tape to ensure the splint does not slip (Fig 1).

DISCUSSION

The technique described is an elegant solution for temporary immobilisation of the PIPJ pending definitive splintage for the required 4–6 weeks.² It is less cumbersome and easier to apply than an improvised foam padded aluminium Zimmer® splint (Warsaw, IN, US) employed in the acute setting and more readily available than many of the custom made or spring loaded splints.

References

1. Griffin M, Hindocha S, Jordan D *et al.* Management of extensor tendon injuries. *Open Orthop J* 2012; **6**: 36–42.
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An adjunct to safe cement removal in revision shoulder arthroplasty

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BACKGROUND

Intraoperative humeral shaft fracture is a possible complication during revision shoulder arthroplasty when removing cement.¹ Drilling to disrupt the cement mantle followed by cement removal is an established technique but it can lead to cortical perforation and fracture. We describe a simple technique to minimise these risks during drilling.

Figure 1 Intraoperative use of the technique with syringe guiding the drill down the centre of the humeral shaft

Figure 2 2ml syringe allowing easy passage of a drill bit up to 6.5mm in size

TECHNIQUE

After removal of the existing humeral stem, a 2ml syringe with the plunger removed and the end cut off is wedged into the proximal cement mantle in line with the humeral canal. Drilling of the distal mantle is performed through the syringe with reassurance that the drill will be guided down the canal rather than towards the humeral