

Short Communications

Conchal flap meatoplasty

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Abstract

A meatoplasty technique is described which has proved successful in the treatment of chronic otitis externa. The procedure opens the superficial meatus by eliminating the sharp rim at the junction of the conchal bowl and the posterior canal wall cartilage; thinning the skin and increasing the circumference of the external auditory orifice.

Key words: Otitis externa; Ear canal, surgery

Introduction

High humidity combined with retention of keratin promotes maceration and thereby saprophytic bacterial and fungal growth. A narrow external auditory meatus leading to poor ventilation is associated with chronic otitis externa, or recurrent acute otitis externa. The creation of a widened, well-aerated, dry, self-cleaning external auditory canal discourages further infection and facilitates aural toilet.

A simple transposition flap meatoplasty is presented which both abolishes the acute angle created by the cavum conchae and posterior canal wall cartilage and provides adequate meatal skin circumference.

Surgical procedure

The skin of the external auditory meatus is coated with Emla® cream one hour before the operation. Anaesthesia is completed by injecting Xylocaine two per cent with 1:200 000 adrenaline solution beneath the perichondrium of the concha, external auditory meatus and ascending limb of the aural helix.

The pre-operative appearance of the meatus is shown in Figure 1, displaying the antero-inferior position of the narrow external auditory orifice, the excess conchal cartilage and the small meatal circumference.

A semilunar, V-shaped skin flap is cut from the conchal bowl based at the ascending limb of the helix, skirting the posterior aspect of the external auditory canal to six o'clock inferiorly (Figure 2). The posterior incision of the flap will determine the margin of the new external auditory orifice.

An incision is made in the roof of the external auditory canal at 12 o'clock and joined to the base of the flap. The skin over the concha and posterior ear canal is elevated and a generous C-shaped wedge of conchal cartilage excised (Figure 3).

The V-shaped flap is transposed to lie in the roof of the external auditory canal and the conchal defect closed with a subcuticular interrupted 4/0 vicryl. The posterior canal wall skin is joined to the conchal skin by interrupted 5/0 prolene (Figure 4). A 1.25 cm wide BIPP impregnated ribbon gauze dressing is packed into the superficial external auditory canal and left *in situ* for two to three weeks.

The healed result is shown in Figure 5 (patient's opposite ear). Note the correction of the anterior projection of the cavum conchae and the increase in circumference of the external canal.

Discussion

The technique described above was first devised by Mr W. Hinds, Consultant Plastic Surgeon and Mr J. Duncan Gray, Consultant Otorhinolaryngologist in the late 1950s at Sheffield (N. J.

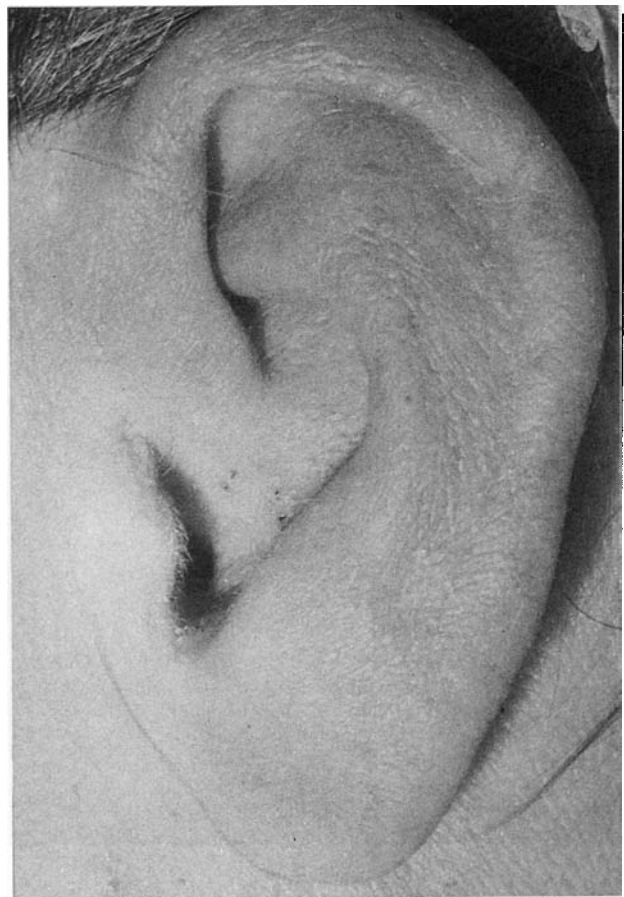


FIG. 1

Pre-operative appearance of meatus.

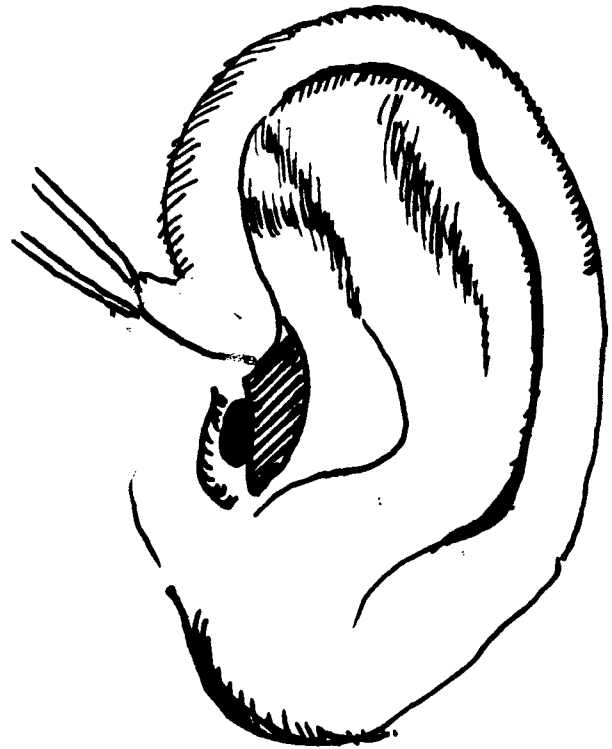
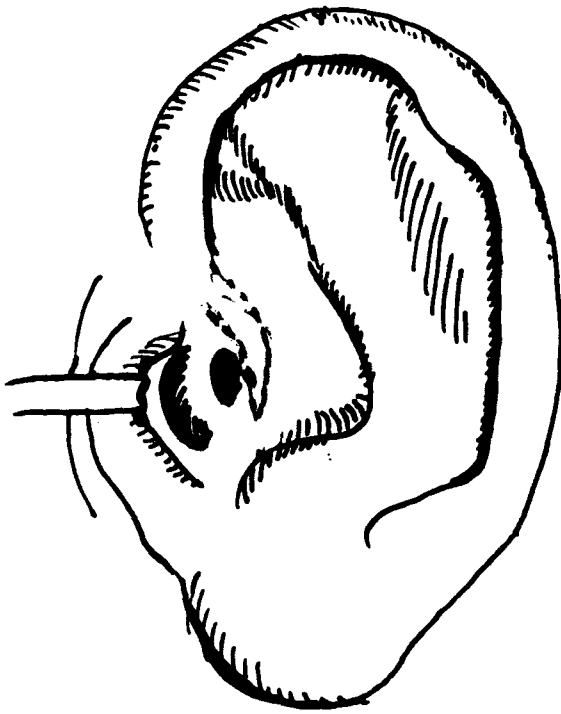


FIG. 2

Semilunar V-shaped conchal flap.

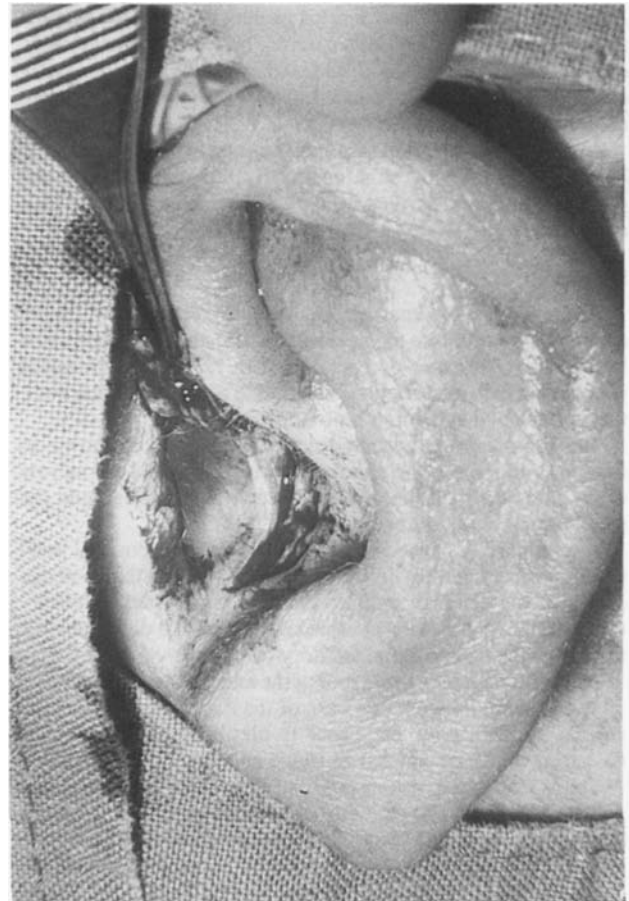


FIG. 3

Elevation of flap and removal of conchal cartilage.

Badham: Personal communication). The utilization of a transposition flap of skin in meatoplasty has been subsequently described in relation to the aeration of mastoid cavities. Osbourne *et al.* (1985) described the elevation of an inferiorly

pedicled flap of conchal skin used to line and re-epithelialize the mastoid cavity. An alternative method (Osbourne and Martin, 1989) was to elevate a full thickness pretragal skin flap, transposed into the superior meatus of the ear canal when performing

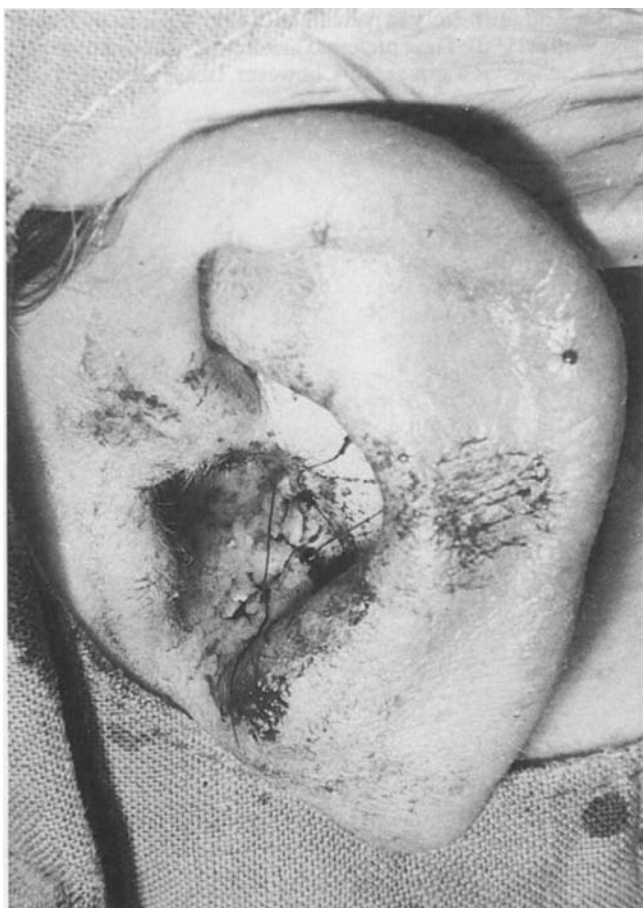
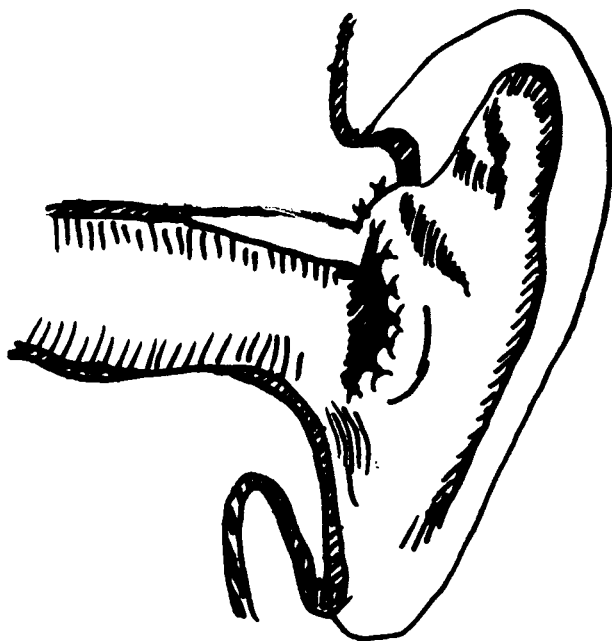


FIG. 4

Transposition of flap and closure.

mastoidectomy *via* an endaural approach. Mikaelian (1989) cited a technique similar to the one described applied to revision meatoplasties after mastoidectomy.

To date over sixty-five conchal flap meatoplasties for intractant otitis externa have been performed by one of the authors (G.J.C.S.) and all patients (except one) have derived benefit from the procedure.

The procedure is usually performed in the presence of a low-

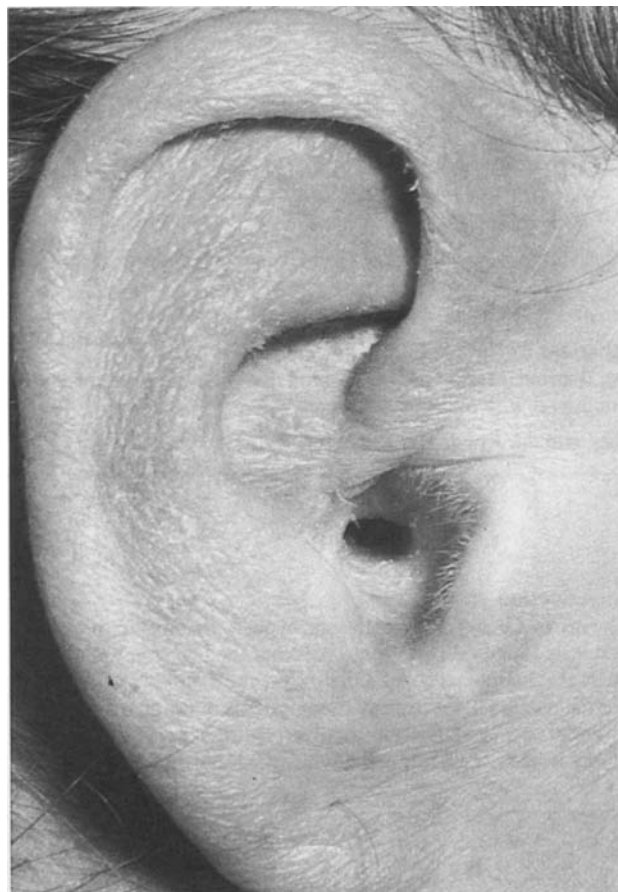


FIG. 5

Healed result of previous meatoplasty (some patient's opposite ear).

grade infection and the commonest complication is wound infection. This occurs in one in four cases and is settled with topical or/and systemic antibiotics. Intravenous Augmentin is given pre-operatively in the face of severe recalcitrant otitis externa. Two wound abscesses have had to be incised and drained.

With bilateral otitis externa the most severely affected ear is corrected first. If successful and there is still otitis in the other ear a second meatoplasty is undertaken; to date, all bilateral cases have proceeded to the second ear.

Four operations have undergone revision: three for widening the bony meatus and in one case further trimming of the meatal skin.

References

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