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The Pope Wick as a myringoplasty ear canal dressing

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Abstract
A study of 50 consecutive patients undergoing myringoplasty using a Merocel Sponge Pope Ear wick as an ear canal dressing showed the wick to be complication free with potential advantages over the time honoured Bismuth Iodoform Paraffin Paste dressing.

Introduction

Much discussion has occurred in the literature over the last 40 years regarding the most suitable tympanic membrane graft material for patients undergoing myringoplasty (Hall, 1956; Chalat, 1964; Marquet, 1968; Smyth and Kerr, 1969). There has been no such discussion regarding the most suitable ear canal dressing. At The Royal London Hospital our usual dressing had been Gelfoam placed lateral to the graft and tympanic membrane with either a small square of Bismuth Iodoform Paraffin Paste (BIPP) impregnated ribbon gauze or silastic just lateral to this to protect the graft from adhesion to a substantive BIPP impregnated ribbon gauze ear canal dressing. After a fortnight the dressings were removed using the operating microscope. In 1990, our usual suppliers of BIPP gauze ceased production and xeroform was substituted as the substantive dressing for patients undergoing mastoidectomy and myringoplasty. It soon became evident that this dressing was associated with an unacceptable incidence of infection in the mastoidectomy patient (Chevretton *et al.*, 1991) and it was thought prudent to look for an alternative ear canal dressing for those patients undergoing myringoplasty. The Merocel Pope Ear Wick was thought most suitable since it expanded transversely but not longitudinally on contact with moisture and it could be placed with precision using the operating microscope, within the external ear canal. It was hypothesized that if appropriately positioned, expansion of the wick with antibiotic ear drops would sterilize and splint the ear canal but not disturb the layer of gelfoam. To test this hypothesis the authors decided to monitor 50 consecutive patients undergoing myringoplasty using a Pope Wick as the substantive ear canal dressing.

Methods

All patients in our study were councilled pre-operatively regarding the importance of using ear drops to keep the Pope wick moist. All had a permeatal or postauricular underlay myringoplasty using a temporalis fascia graft. Particular care was taken to stop all capillary ooze before inserting the wick so it did not expand with blood. After the wick had been placed two or three millimetres lateral to ear canal gelfoam and expanded with Sofradex® ear drops, a head dressing was applied and removed on the first post-operative morning. The patient was advised to apply two drops of Sofradex® three times a day onto the otowick to keep it moist until its removal on the eighth post-operative day. Noted were the ease of removal of the otowick and whether this caused external ear canal trauma. The otowick was inspected for adherent gelfoam and the patients reviewed at six weeks and four months post-operatively to inspect the graft and obtain a pure tone audiogram.

Results

Of the 50 patients monitored, 28 had a left and 22 had a right myringoplasty. Five perforations were subtotal, 14 were large central and the remainder medium central. In each case removal of the moist Pope Wick was easy and caused no ear canal trauma. Inspection of the otowick showed no adherent gelfoam and all ears remained free of infection. Forty-nine grafts had taken at six weeks and 47 at four months. Where tympanotomy had shown a normal ossicular chain with no evidence of middle ear adhesions and the graft had taken, closure of the air—bone gap to within 5 dB occurred in 39 patients and to within 10 dB in the remaining six.

Discussion

We have shown that careful positioning of the Pope Wick within the ear canal ensures no disturbance of the graft/gelfoam bed. We think it important that the surgeon is meticulous in achieving haemostasis before inserting the Pope Wick. A blood soaked wick becomes hard, crusty and adherent to the ear canal and in particular the tympanomeatal flap. Its subsequent removal will be uncomfortable and may traumatize the canal and flap which may in turn disturb the graft. The moist otowick is extremely easy to remove and neither adheres to, nor traumatizes, the ear canal. The canal remains infection free

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and well splinted while the wick is in place and removal of the ear canal dressing on only the eighth post-operative day does not compromise the operative results which compare well with other reported series (Sheehy, and Anderson, 1980; Gibb and Chang, 1982). The only potential disadvantage of the wick is patient non-compliance in applying the Sofradex ear drops. In our study compliance occurred in every case. BIPP gauze has several potential disadvantages. The most medial square of dressing adjacent to the graft/gelfoam bed is often difficult to identify overlying the liquifying gelfoam sponge so there is the risk of a piece of gelfoam being inadvertently grasped, in turn disturbing the graft. The substantive BIPP ear canal dressing must be gently packed on to this medial dressing; if it is packed too tightly it may disturb the graft and if too loose it may extrude early. Finally it may adhere to the ear canal and in particular the tympanomeatal flap, traumatizing these and disturbing the graft on removal.

In conclusion the Pope Wick is a simple, quick, safe, effective, complication free dressing which has for the authors replaced BIPP gauze as the ear canal dressing of choice in patients undergoing myringoplasty.

Key words: Myringoplasty.

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