ABSTRACT

Objective. To see the efficacy of cartilage tympanoplasty in retraction pockets of tympanic membrane.

Method. Prospective study conducted in Department of Otolaryngology, Pt. B.D. Sharma P.G. Institute of Medical Sciences, Rohtak.

Subjects studied. Twenty seven Tertiary centres.

Interventions. The retraction pockets were managed with cartilage tympanoplasty using tragal cartilage and perichondrium. The cases were followed up for a period of 6 months.

Results. A total of 20 patients were operated. There were 11 male (55%) and 9 female (45%). Patient’s age ranged from 14-30 years (50%). In most of the patients ear involvement was unilateral 17 (85%); bilateral ear involvement was seen in 3 (15%). Graft was taken up in 16 (80%) cases with residual perforation in 2 cases and recurrence of retraction pockets in 2 cases.

Assessment. All the operated patients were regularly followed up for a 6 months period and condition of the graft, residual perforations or retractions of the drum were noted. The parameters noted on follow-up of both groups were compared and statistical significance was calculated.

RESULTS

20 patients were operated. There were 11 male (55%) and 9 female (45%). Patient’s age ranged from 14-30 years (50%). In most of the patients ear involvement was unilateral 17 (85%); bilateral ear involvement was seen in 3 (15%). Graft was taken up in 16 (80%) cases with residual perforation in 2 cases and recurrence of retraction pockets in 2 cases.

The average postoperative hearing loss 39.3±14.4 decibels, while the average postoperative hearing loss was 26.7±13.6 decibels with gain of 12.75 decibels (P value less than 0.01).

DISCUSSION

Surgery has a very well defined role in these grade III and IV retractions where the lamina propria of tympanic membrane has undergone irreversible degeneration. In the present study all the cases included were of grade III or grade IV retraction pockets.

This is usually indicated if there is deterioration in hearing or if a non-cleansing pocket is formed, predisposing to a higher risk of cholesteatoma and erosion of the ossicles, especially the long process of incus. Cartilage graft harvested from concha or tragus is easy to obtain, thick, with hard composition, resistant to resorption and, convenient for shaping according to the size of the perforation. Consequently it can allow exact placement of the graft material. 20 cases of grade III and grade IV retraction pockets were operated with 80% cases showing graft take up and residual perforation in two cases and recurrence of retraction in two cases. The hearing gain of 12.75 decibels (P value less than 0.01) was noted.

CONCLUSIONS

Retraction pockets management by excision and cartilage tympanoplasty provides the tympanic membrane with greater strength and greatly increases the rate of tympanic membrane closure without affecting audiometric results. Graft take-up and improvement in hearing was noted in 80% of the cases (P<0.01).

REFERENCES


INTRODUCTION

Tympanic membrane retraction, i.e., the medial displacement of the drum from its normal position, is a commonly encountered pathology. Restractions can involve the pars flacida, pars tensa or both. Retraction pockets are more frequently observed in pars flacida than in pars tensa. Most of these cases are seen in middle ear inflammatory pathologies, notably, otitis media with effusion (OME), and acute suppurative otitis media (ASOM) can predispose to retractions. For severe retractions (grade III and IV), tympanoplasty procedures, usually involving composite graft of tragal cartilage and perichondrium can be employed. The cartilage is considered to provide good re-enforcement for the healing tympanic membrane. This prospective study was undertaken to assess the role of tragal cartilage in management of retraction pockets.

METHODS AND MATERIALS

The present study was conducted in the Department of Otolaryngology, Pt. B.D. Sharma Post Graduate Institute of Medical Science, Rohtak. Twenty seven patients in the age group of 10-40 having documented hearing & evidence of retraction pocket were selected for the study during the period 2009-2010.

TECHNIQUE

A skin incision was given 1-2 cm behind postauricular groove, extending from highest point of pina to the tip of mastoid. Minimal subperichondrial incision between 1 to 4 o’clock position was given for right ear and 11 to 7 o’clock position for the left ear. 5-6 mm incision was made. Two radial incisions at the site of cartilage incision were given. Cartilage wall was elevated and thus the entire canal wall and attic area was exposed. Postaural incision was extended bone deep and anteriorly based subtotal - mucele - posterior flap was elevated. Drilling was started posterior to retraction pocket. Drilling was continued posteriorly to expose the attic, aditus and extent of the positional pocket.

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