INTRODUCTION

Objectives: To examine and report results for tympanoplasties performed in a tertiary-care city teaching hospital serving one of the most ethnically diverse neighborhoods in the United States.

Study Design: Retrospective chart review.

Methods: Adult patients who underwent type I tympanoplasty from January 2009 through July 2010 were eligible. Charts were reviewed for pre- and postoperative drum status, patient characteristics, temporal bone CT scans and audiologic data. The primary outcome measure was successful repair, defined as an intact drum at last follow-up visit. A secondary outcome measure was postoperative hearing improvement, defined as a difference between air-conduction and bone-conduction pure-tone averages of less than 20 dB.

RESULTS

• 28 patients aged 22 to 85 underwent type I tympanoplasty from January 2009 through July 2010. Many factors have been reported to influence the outcome for type I tympanoplasty results. The primary aim of this paper is to describe our experience at a tertiary-care city hospital, serving an ethnically diverse population, and is also a teaching hospital for training otolaryngology residents.

• 28 patients aged 22 to 85 underwent type I tympanoplasty from January 2009 through July 2010. Only one patient was excluded from the study because post-operative status of the tympanic membrane could not be assessed as the patient was lost to follow-up.

• Of the 27 patients included in this study, 18 patients (67%) had closure of the tympanic membrane perforation post-operatively.

• Patient age, ethnicity, perforation size, surgical approach, and bilateral versus unilateral disease were not predictive factors of success of closure.

• Differences in preoperative temporal bone CT scan results, however, were statistically significant in patients with successful repairs compared to those with failed repairs (Table 1).

• Ten patients had normal CT scans and 7 patients had CT scans showing changes consistent with chronic otomastoiditis.

• Ten out of the 10 patients with normal CT scans had successful repair of their tympanic membrane perforation (100%), while only 2 out of 7 patients with chronic otomastoiditis (29%) had successful repair of their tympanic membrane perforation (*p*< 0.0034).

• Of the 20 patients who had post operative audiograms, 13 patients had closure of the tympanic membrane perforation and 6 patients had failed repairs.

• Twelve of the 13 patients (84.6%) with successful repairs had improved hearing (ABG<20dB).

• Eleven out of the 13 patients (84.6%) with successful repairs had improved hearing (ABG<20dB).

• The primary outcome measure was successful tympanic membrane reconstruction with type I tympanoplasty repair, defined as an intact tympanic membrane at last follow-up.

METHODS AND MATERIALS

• 28 patients aged 22 to 85 underwent type I tympanoplasty from January 2009 through July 2010. Many factors have been reported to influence the outcome for type I tympanoplasty, including age, gender, size and location of perforation, status of infection of the ear at the time of surgery, surgical technique (underlay or overlay) and the level of training and experience of the surgeon. Patient selection for successful tympanic membrane reconstruction with type I tympanoplasty is essential. Ethnically diverse patient populations in city hospital institutions may be more difficult to treat because of a higher incidence of bilateral chronic middle ear disease, larger perforations, and radiographic otomastoiditis. Meticulous surgical technique with experienced attending surgeon-resident supervision, along with review of preoperative CT temporal bone imaging and assessment of the need for an aerating mastoidectomy may lead to improved surgical success for type I tympanoplasty in this patient population.

CONCLUSIONS

Ethnically diverse patient populations found at a city teaching hospital may be more difficult to treat because of a higher incidence of active chronic otitis media with perforations. Meticulous surgical technique with close attending surgeon-resident supervision, review of preoperative CT imaging and evaluation for aerating mastoidectomy may lead to improved success for tympanoplasty in this population.

REFERENCES


