

Audiological Results Following Cartilage Tympanoplasty

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Objectives: The aim of this study is to assess hearing improvement following cartilage tympanoplasty procedure.

Background: Chronic middle ear disease includes a wide variety of symptoms such as otalgia, otorrhea, impaired balance, and hearing loss. In patients with a perforated tympanic membrane, tympanoplasty is the surgical procedure performed to patch the perforation. Re-establishing an intact tympanic membrane can eliminate disease and improve hearing.

Methods: 15 patients presenting with subtotal perforations in ENT OPD at the Grey Nuns Community Hospital and the Edmonton Ear Clinic. All reported patients had normal bone conduction thresholds (25 dB HL). Pre-operative audiometry was completed before tympanoplasty and approximately 3 months post-operatively.

Results: Closure rate was 93% with tympanometry indicating normal ear canal volume measures. Mean PTA gain was 21 dB HL with significant improvements noted from 250Hz to 4000Hz. Improvement was greatest in the lowest frequencies and less towards the higher frequencies.

Conclusions: Cartilage tympanoplasty results in successful restoration of middle ear status and subsequent hearing improvement. Surgical intervention proves an important role in both medical management and audiological rehabilitation.