doi:10.1017/S0022215116002723

Free Papers (F712)

ID: 712.4

Ossicular chain reconstruction during primary cholesteatoma surgery or during staged surgery?

Presenting Author: **Mark Heukensfeldt Jansen**

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Learning Objectives: To learn if different strategies for ossicular chain reconstruction in cholesteatoma surgery have effect on the hearing results.

Background: Diffusion-weighted MRI imaging lowers the need for second-look surgery to evaluate the presence of residual disease. This strategy will increase the need to perform the best hearing restoration within the primary surgery to avoid a second surgery. It is unknown if single-stage management of cholesteatoma will achieve equal or better hearing results than a staged procedure.

Objective: To analyze the hearing results in ossicular chain reconstruction (OCR) during primary surgery compared to staged OCR in canal wall up mastoidectomy for cholesteatoma.

Study design: Retrospective comparative cohort study.

Patients: All patients with canal wall up mastoidectomy for cholesteatoma from 2003 to 2015 were consecutively selected. Patients who underwent OCR and met the inclusion criteria were divided in two groups: 45 patients with OCR during primary surgery and 46 patients with OCR during staged surgery.

Main outcome measure: Air-bone gap (ABG) improvement.

Results: Overall hearing results showed 56% of the patients achieving an ABG primary surgery OCR versus 7.6 dB for the staged OCR. The outcome measures were corrected for the confounders (age, type of OCR, destruction of malleus/incus/stapes). Only destruction of the stapes proved to be of significant influence. After correction for stapes destruction, the found difference in ABG improvement could not be assigned to the performance of primary or staged OCR.

Conclusion: There is no difference in ABG improvement after OCR during primary surgery compared to OCR during staged surgery.

doi:10.1017/S0022215116002735

Free Papers (F712)

ID: 712.5

TORP Ossiculoplasty Outcomes With and Without a Stapes Footplate Prosthesis

Presenting Author: **Matthew Cox**

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Learning Objectives: Compare hearing outcomes with and without the use of a footplate prosthesis as a method of optimizing ossicular coupling during TORP ossiculoplasty.

Objective: The titanium stapes footplate prosthesis (FPP) was designed to ensure a stable connection of a total sossicular replacement prosthesis (TORP) to the stapes footplate and optimize acoustic coupling by centering the footplate on the oval window. Our goal was to assess the impact of the FPP on TORP ossiculoplasty outcomes.

Study Design: Case series with chart review.

Setting: Tertiary care center.

Subjects: Adult patients undergoing TORP ossiculoplasty with (n = 53) or without (n = 108) a stapes FPP.

Methods: Rate of prosthesis displacement and audiologic outcomes were tabulated for statistical analysis.

Results: A lower rate of prosthesis displacement and statistically better audiologic outcomes were seen in FPP patients. The pure-tone average air-bone gap (PTA-ABG) was closed to ± 11.7 dB (standard deviation, SD) and 12.6 dB ± 11.0 dB (SD) in the study and control groups, respectively (p = 0.0012).

Conclusions: Use of the titanium stapes FPP during TORP ossiculoplasty provides a significant advantage in short-term PTA-ABG closure and a higher rate of successful rehabilitation of conductive hearing loss. Further studies are necessary to assess any long-term advantages a FPP may offer.

doi:10.1017/S0022215116002747

Free Papers (F712)

ID: 712.6

New Prostheses for Tympanoplasty: Assessment in Cadaveric Temporal Bones

Presenting Author: **Mansour Alshamani**

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