facial nerve monitoring in helping to avoid complications is discussed.

The careful auditing of the surgeon's own results and their utilisation in obtaining informed consent, intellectual honesty and the ability to know when not operate are then presented. The reasons for failure to obtain a dry ear, the unsatisfactory mastoid cavity and sites where bone removal may be inadequate are considered. The preoperative discussion with the patient and the risk of specific complications and how to avoid them are outlined. Finally newer techniques such as the use of the laser and endoscopy are discussed in relation to reducing risk.

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Mastoidectomy: How I do it (2) (V747)

ID: 747.1

Long term comparison of hearing results of LASER facilitated ossicular preservation versus ossiculoplasty in cholesteatoma surgery using a patient oriented outcome measure

Presenting Author: **John Hamilton**

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Learning Objectives: To establish how ossicular preservation with the 'gold standard' for hearing treatment in cholesteatoma surgery. To compare the resilience of these techniques over a five year period.

Intro: This study compares the long term usefulness to patients of two different techniques of hearing reconstruction after cholesteatoma surgery: reconstruction using ossicular prosthesis on top of an intact, mobile stapes versus LASER facilitated ossicular chain preservation.

Method: At the end of surgery, ears with an intact ossicular chain were allocated to one group. Ears with a disrupted chain and an intact stapes superstructure onto which an ossiculoplasty had been performed were placed in the second group. All ears had primary cholesteatoma surgery using an intact canal wall technique with the use of a fibre-guided LASER.

Hearing after surgery was assessed with the Belfast rules of thumb. Audiograms were performed annually after surgery until the patient was discharged from regular follow-up or defaulted from follow-up.

The two sets of Belfast scores were assessed using survival analysis. The two groups were compared with the log-rank test.

Cox's model was used to investigate confounding influences.

Results: 80 ears with intact chains and 69 with an intact stapes and ossiculoplasty were included.

By five years, 76 per cent of patients with intact chains retained normal hearing.whilst 56 per cent in reconstructed ears.

Log-rank analysis gives $\chi 2 = 10.6$, $n = 1$, $p = 0.001$.

The intact ossicular chain (odds ratio: 2.78, CI 1.51–5.07, $p = 0.001$) and lower bone conduction hearing threshold (odds ratio: 1.1 per decibel, CI 1.07–1.13, $p < 0.001$) predicted the likelihood of maintaining socially useful hearing. A weaker effect of younger age (odds ratio 1.02, CI 1.00–1.04, $p = 0.04$) increasing the likelihood of loss of useful hearing was also detected.

Conclusions: Whenever the presentation permits, LASER facilitated preservation of the intact ossicular chain provides more durable useful hearing for our patients than 'gold standard' ossiculoplasty.

There is a gradual deterioration in outcomes in both groups which is more marked in the ossiculoplasty group.

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Mastoidectomy: How I do it (2) (V747)

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Bone Obliteration technique in recidivistic cholesteatoma

Presenting Author: **Manoj M P**

M P Manoj

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Learning Objectives: Video presentation on the technique of using bone pate and Cortical bone chips for reconstructing the cavity in recidivistic cholesteatoma.

Introduction: Recidivistic cholesteatoma presents a serious surgical challenge. The demands to the surgical team is high- we are supposed to remove disease, improve hearing and give a dry, self cleansing ear. At our institute where we deal with a large amount of recidivistic cholesteatomas, the bone obliteration technique with scar tissue graft has helped us to give a fair result to most of our patients. The video demonstration is designed to give a step by step demonstration of the technique used in over a hundred cases over the past four years.

Methods: The case series is from a tertiary care otologic center in South India, all operated by a single surgeon, under general anesthesia. Standard post auricular method is adopted, with harvesting of the scar tissue graft intially, bone chips from the cortical bone and collection of bone pate by an indigenously developed apparatus. After a complete canal wall down mastoidectomy and removal of disease, the cavity is obliterated with bone pate mixed with antibiotic solution, and covered with the cortical bone chip carefully harvested. The middle ear is reconstructed with cartilage and grafted over with the dried and thinned out scar tissue. Ossiculoplasty is either performed at the same sitting or staged according to the disease.

Results: We have achieved the objectives of a dry, self cleansing mastoid cavity in a large majority of cases with acceptable hearing. Hearing results have been poor where the stapes superstructure was absent where staged ossiculoplasty was often performed. The number of post operative visits also were minimal with this technique.