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From 1996 to 1998 in Marseilles, we lectured two courses on Endoscopic Ear Surgery. Today, in the world, many congresses are organized.

One of the important benefits of an endoscope compared to the microscope is the wide field of view during ear surgery. Altogether there are numerous applications in the surgery of the middle ear.

The routine, which uses optical systems for all Tympanoplasties, familiarises the surgeon with the endoscopic anatomy and provides a training for him.

doi:10.1017/S0022215116002541

Endoscopic Ear Surgery 1 (R674)

ID: 674.3

Endoscopic exclusive transcanal approach to the tympanic cavity cholesteatoma in pediatric patients: our experience

Presenting Author: **Matilde Porcaro**

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Learning Objectives: The aim of the present study is to describe our experience in the management of tympanic cavity cholesteatoma in pediatric patients, treated with endoscopic exclusive transcanal approach.

Objectives: Describe our experience in the management of tympanic cavity cholesteatoma in pediatric patients treated with endoscopic exclusive transcanal approach.

Methods: Review of surgical cases performed between January 2007 and December 2013. Patients presenting with cholesteatoma of the tympanic cavity with no mastoid involvement were included in the first group and underwent an exclusive transcanal endoscopic approach (TEA). Patients with mastoid extension of the pathology were included in the control group and underwent a canal wall up microscopic technique (CWU).

Results: 59 ears of 54 patients were reviewed. Median age was 9.6 years (range 4–16 years). 31 cholesteatomas underwent a TEA approach, while 28 underwent a CWU approach, based on inclusion criteria. No differences from congenital vs acquired form was made. The ossicular chain was preserved in 26.6% of patients (16 ears): 42% of patients (13 ears) undergoing a TEA and 10% of patients undergoing a CWU approach (3 ears) ($P = 0.006$). Second look surgery was executed in 41.6% of patients (25 ears). In partial ossicular prosthesis reconstructions, the mean preoperative pure-tone average (PTA) was 29.4 dB, while the mean postoperative PTA was 27.1 dB, with a mean increase of 2.3 dB.

In total ossicular prosthesis reconstructions, the mean preoperative PTA was 47.8 dB, while the mean postoperative PTA was 26.5 dB, with a mean increase of 21.3 dB. Recurrence rate was 12.9% (4 ears) for the TEA group and 17.2% (5 ears) for the CWU approach. Residual disease was present in 26.6%: 19.3% (6 ears) for the TEA and 34.4% (10 ears) for the CWU approach. The mean follow up was 36 months (range 8–88). Kaplan-Meier analysis at 36 months showed a lower recurrence risk for the TEA compared with the CWU approach, but this data was not statistically significant ($P = 0.58$).

Conclusion: TEA represents a feasible, minimally invasive and conservative technique for the management of pediatric middle ear cholesteatoma.

doi:10.1017/S0022215116002553

Advances in Understanding of Eustachian Tube Dysfunction and Cholesteatoma (N675)

ID: 675.1

The effects of smoking on Eustachian tube function and chronic ear surgery

Presenting Author: **David Kaylie**

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Learning Objectives: After this presentation, the attendee will understand the effects of smoking on Eustachian tube dysfunction and its impact on chronic ear disease. They will understand how smoking increases the severity of cholesteatoma and how smoking leads to more extensive surgery.

Smoking is a known to be a risk factor for cardiac disease, chronic obstructive lung disease, head and neck cancer and lung cancer. Cessation of smoking will reduce a person's risk for cardiac and lung disease over time, but will not reduce it back to the risk level of life long non-smokers. Cigarette smoking is also known to worsen outcomes in plastic surgery and sinus surgery. Smoking has multiple deleterious effects on ciliary function, some of which are reversible and some of which are permanent. We will examine, in depth, the effects of cigarette smoking on the severity of chronic ear disease and its effects on surgical outcomes for chronic ear disease.

This talk will describe the effects of cigarette smoking on ciliary function and Eustachian tube function. We will then discuss a large series of patients who underwent surgery for tympanic membrane perforation with or without cholesteatoma and analyze their surgical outcomes with regards to their smoking status. We will show how short term and long-term abstinence from cigarettes smoking effects their surgical outcomes compared to life long non-smokers.