

respectively. However, the statistical evaluation of the data revealed no significant effect of this factor.

Conclusions: Tympanoplasty type I with underlay grafting using temporalis fascia in children aged between 5 to 8 years, gives good anatomical and functional results.

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ID: IP199

Tympanic impedance measurement with standardised nasopharyngeal air pressures – a new test of Eustachian tube function

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Learning Objectives: To understand a novel method of measuring ET dysfunction.

Introduction: Eustachian tube (ET) dysfunction is a common and varied condition with significant associated morbidity. In most cases it is caused by a failure of the ET to adequately open, however there is currently no reliable method of assessing this opening. Tubomanometry is a test that has recently shown good inter-individual repeatability as a measure of ET opening and function, by measuring middle ear pressure after the application of regulated nasopharyngeal pressures during swallowing. We present the first reports of a novel test: middle ear impedance measurements during standardised nasopharyngeal positive pressure bursts (tuboimpedance). We assess repeatability in healthy ears, and whether this new assessment provides any advantages over tubomanometry.

Methods: Ethical approval was obtained. Tubomanometry and tuboimpedance assessments were performed in 20 screened, healthy ears (10 volunteers). Each ear underwent tests while the patient swallowed a water bolus during applied nasopharyngeal pressures of 20, 30, 40 and 50mbar. Immediate and delayed repeats were performed at each pressure.

Results: ET opening was detected more frequently with the tuboimpedance method, with a 100% detection rate using a nasopharyngeal pressure of 30mbar or more. ET opening at 20mbar was detected more frequently with tuboimpedance. Repeatability of both tests, as measured by Intraclass Correlation Coefficient, was very good for both immediate and delayed repeats. Repeatability for the tubomanometry R value was mixed.

Conclusions: Tuboimpedance may provide a repeatable measure of ET opening that is easier to perform, due to lower required nasopharyngeal pressures and fewer issues with poor ear-probe sealing. Further assessment in patients with different forms of ET dysfunction is required.

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Petrous bone cholesteatoma: our recent experience

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Learning Objectives:

Introduction: Petrous bone cholesteatoma is a rare condition affecting the temporal bone. It can be congenital or an evolution of a middle ear cholesteatoma. Usually at clinical presentation it involves labyrinth, facial nerve or vascular structures. We presented 7 cases of petrous bone cholesteatoma treated in our department in the last 4 years.

Methods: We retrospectively review 7 cases of temporal bone cholesteatoma recently treated in our department.

Results: Three patients presented a previous history of middle ear surgery neglected and they presented at the consultation for pain in ear region. Two had already total hearing loss on that side. In the other 4 cases the cholesteatoma was congenital and the diagnosis was made by magnetic resonance for facial palsy in three cases and paralysis of the VI nerve in one case. The surgical approach was transcochlear in 2 cases, translabyrinthine in 4 cases and 1 patient was treated by supralabyrinthine approach. Facial nerve was interrupted in one case and an end to end anastomosis was performed. We were able to preserve hearing in only 1 case. Facial nerve function improve but normalized only in 1 case.

Conclusions: Facial nerve function is the challenging problem in case of petrous bone cholesteatoma. Hearing can be preserved only in case of supralabyrinthine extension.

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Summarising cholesteatoma surgery and A new method of closing the mastoid cavity

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Learning Objectives:

Anatomically there are two separate layers in ear, first middle ear cleft comprising mastoid air cells, antrum, aditus, middle ear and Eustachian tube all lined by contiguous mucosa which secretes mucus and is drained finally to