Case presentations: Case 1 was a 31-year-old female with right conductive hearing loss and no episodes of facial paralysis. CT/MRIs revealed a facial neuroma located in the genu through the tympanic segment. During the TMA the tumor was found to involve the labyrinthine segment, and thereby supralabyrinthine MF plate was drilled out to search the normal facial nerve proximally. This addition of partial craniectomy facilitated successful removal and cable graft.

Case 2 was a 42-year-old male with right conductive hearing loss. CT scans showed an epitympanic cholesteatoma extending to supralabyrinthine cells. Since the pathology was intraoperatively found to extend over the labyrinth and to invade the superior semicircular canal, tentative removal of the MF plate was decided during the TMA to achieve the complete removal without damaging the labyrinth.

Discussion: MF craniotomy usually needs an assistance of neurosurgeons, and therefore this approach seems difficult to add to TMA in a single operation depending on the intraoperative findings. Supralabyrinthine lesions still have a chance to be removed via TMA alone. If the pathology is found to extend more medially than expected during the TMA, an additional removal of the MF plate enables us to treat the lesions more easily under the more familiar surgical view.

Conclusion: Transmastoid MF craniectomy provides ear surgeons with better surgical access for laterally localized lesions in the petrous apex, and is indicated into supralabyrinthine cholesteatomas and facial neuromas.

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ID: IP047

The Natural History of Advanced Pars Tensa Retraction Pockets

Presenting Author: **John Cutajar**

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Learning Objectives:

Intro: The limited evidence available to guide management has rendered very controversial the management of pars tensa retraction pockets.

Since 2003, we have adopted a policy of minimal intervention for pars tensa retraction pockets and this has allowed us to monitor the natural behaviour of this disorder.

Method: Successive patients with pars tensa retraction pockets that a) contacted the promontory yet b) were not accumulating keratin ("advanced retraction pockets") have been monitored at least once a year and followed either until surgery was required, the patient was lost to follow-up or some other pathology intervened. Follow-up was censored at five years.

Results: 95 cases were enlisted and followed up.

25% ears advanced to need surgery.
40% ears remained advanced without further progression.
38% ears returned to normal.
4% ears developed pars tensa perforation.
3% ears developed attic cholesteatoma.

Conclusions: Only a minority of advanced pars tensa retraction pockets progress to require surgery.

More advanced pars tensa retraction pockets return spontaneously to normal than progress to require surgery.

Some ears that present with a retracted pars tensa progress to develop attic retraction and then attic cholesteatoma, without devloping cholesteatoma via the pars tensa.

Learning Points: It is not correct to consider an advanced pars tensa retraction pocket as necessarily pre-cholesteatoma.

Because most advanced pars tensa retraction pockets do not progress to become cholestatoma, surgery on advanced pars tensa retraction pockets cannot be justified on the grounds that it is prophylaxis against the development of cholesteatoma.

Attic and pars tensa retraction disease sometimes have a common aetiology.

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Posterior ear canal reconstruction as a simple alternative to mastoid obliteration

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Learning Objectives:

Intro: The treatment of discharging mastoid cavities is hampered by long-term deterioration of the surgical reconstruction.

We hypothesised that it would be optimal to use a graft that would become incorporated into, and indistinguishable from the skull bone.

We developed a simplified technique of posterior canal wall reconstruction using a free cortical bone graft in patients who have discharging mastoid cavities.

Method: Technique: Reconstruction of the posterior canal wall with a free cortical bone graft harvested from the cortex of the mastoid process.

Patients: 40 patients with discharging mastoid cavities.

The following were assessed at one year following surgery:

1. Integrity of the barrier formed by the cortical bone graft.
2. Integrity of the keratinising epithelium of the ear canal.
3. Patient report of ear discharge.

Results: Adequate bone grafts were obtainable in all cases.

An intact barrier between the mastoid cavity and a new, physiological ear canal were maintained at one year in all cases, bar one, when a recurrent cholesteatoma developed through a defect between the graft and facial ridge, whereafter the technique was modified.

All but one patient grew intact keratinising epithelium lining their ear canal and tympanic membrane. Healing was initially prolonged, so a pericranial flap was incorporated into the technique.

All but one patient reported a dry ear at one year.

The small number of revision operations allowed us to confirm that the bone grafts had become fully incorporated into the temporal bone.

Conclusions: Reconstruction of the posterior ear canal using a cortical bone is an effective procedure for treating mastoid cavities which are unstable and symptomatic.

Learning Points: Cortical bone becomes vitalised and incorporated into the skull and so has the potential to be exceptionally robust in the long term.

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ID: IP049

A pilot study to investigate the therapeutic effect of Valsalva maneuver on otitis media with effusion in adults

Presenting Author: **Jung ju Han**

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Objectives: This pilot study was performed to investigate the therapeutic effect of Valsalva maneuver on otitis media in adults and to evaluate the prognostic factors for the good response.

Materials and methods: Thirty nine ears of 32 adult patients who were diagnosed as otitis media with effusion and managed by one-week Valsalva maneuver (>30/day) without any other medication were included in this study. Its therapeutic efficacy was evaluated and the prognostic factors which predict the response of Valsalva maneuver were analyzed by comparing various clinical and audiological factors between success and failure groups.

Results: Mean duration of otitis media in the study subjects was 30.9 days (SD 31.6 days). Success rate of 1-week Valsalva maneuver as a single therapeutic modality was up to 64.1% (25/39 ears) and hearing were significantly recovered in success group. No recurrence or side effects were observed. Successful Valsalva maneuver checked and confirmed as bulging of tympanic membrane by otoendoscopic examination was an excellent indicator for therapeutic response in a week. ($p<0.05$) Age, sex, duration of otitis media, history of previous upper respiratory tract infection, initial hearing levels and type of audiogram were not significant prognostic factors for therapeutic efficacy of Valsalva maneuver. Conclusion: One-week Valsalva maneuver seems to be considered as a first line therapeutic modality in otitis media with effusion in adult patients who demonstrate the successful maneuver result on oto-endoscopic examination.

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Temporal bone HRCT features of the congenital middle ear cholesteatoma

Presenting Author: **Yuechen Han**

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Learning Objectives:

Objective: To find out the features of the temporal bone high resolution computer tomography (HRCT) of the congenital cholesteatoma of middle ear.

Method: The HRCT image of 29 patients (30 ears) of congenital middle ear cholesteatoma were reviewed retrospectively and the location of the lesion, the type of mass, the erosion of the ossicular chain and other malformation of the middle ear were Investigated. All of the cases were confirmed by operation and pathyology.

Result: Of these 29 patients (30 ears) with congenital middle ear cholesteatoma, the cholesteatoma localized to the tympanic cavity in 18 patients while the mastoid cavity was involved together with the tympanum in 12 ears. According to the shape of the mass, 21 cases were classified as open type while the other 9 cases were close type. The ossicles were affected in all of these patients. Erosion of the long process of the incus combined with super structure of the stapes, which was detected in 29 ears, was most common.

Congenital malformation of ossicular chain was found accompanied with the cholesteatoma in 3 cases. In addition, abnormal hyperosteogeny was seen in 2 cases. The facial nerve canal erosion was identified in 3 cases and the semicircular canal fistula was found only in 1 patient.

Conclusion: Temporal bone HRCT was very helpful for the early diagnosis of the congenital middle ear cholesteatoma. The open type cholesteatoma were much more common than the close type in our clinic. Other malformation of the middle ear sometimes could be found with the congenital middle ear cholesteaoma together.

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Miringoplasty and Tympanoplasty without Mastoidectomy