structures including jugular bulb, carotid artery, middle and posterior cranial fossa dura. Resection of the disease from the labyrinth and facial nerve may cause devastating long term effects and must be considered in light of patient preference for revision surgery against long term deficits. We present a series of patients from the Manchester Skull Base Unit and the management of their disease.

Methods: A prospective database has been collated with all patients with petrous bone cholesteatoma managed in the unit. Surgery was dependent on site of disease. All patients were monitored with yearly DWI Propeller Sequence MRI to ensure no recurrence of disease.

Results: We present 63 patients who have presented with petrous bone cholesteatoma at a tertiary referral skull base unit, aged 10 to 87. 38 patients (60%) presented with a good functioning facial nerve (House Brackmann equivalent 1–2) and 21 (33%) presented with useable hearing. The most common location of disease was supralabyrinthine 33%) although 28 (44%) had apical disease.

Complications were limited with one patient developing a CSF leak, one patient an abdominal wall haematoma, and one patient an infection in the wound. Only 7 (11%) had residual hearing following surgery. 40 (63%) have a good functioning facial nerve (HB 1–2) post operatively at 1 year. 19 patients (30%) had residual or recurrent disease requiring repeated procedures.

Conclusions: Most patients can expect to maintain good facial nerve function despite aggressive surgery. Residual or recurrent disease can be monitored using advanced MRI technique and repeat surgery can be performed as necessary.

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Clinical outcomes of tympanoplasty without mastoidectomy for chronic otitis media

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Learning Objectives:

Introduction: Since 2009, we perform tympanoplasty (TP) without mastoidectomy (w/o M) for chronic otitis media (COM), aiming preservation of the ventilating function in the mastoid air cells. In this paper, clinical outcomes of that surgery were reviewed.

Methods: We analyzed 54 cases with COM, who underwent the first operation of TP w/o M. Age distribution was 8–78 (median 61) and the minimum follow-up period was 12 months. We compared the rate of complete closure, hearing outcome, and preoperative CT findings between type I and type III cases. As for hearing, successful outcome means meeting one of the following criteria using an average (0.5, 1.0, 2.0 kHz); 1. Air-bone gap is less than 15db. 2. Hearing threshold improved more than 15db. 3. Hearing threshold is less than 30db.

Results: Type I TP was performed in 31cases and type III TP was done in 23 cases. Autologous bone was used as columella in all cases with type III TP. The TM closure rate of type I and type III at 12 months follow-up was 74.2% and 82.6%, respectively ($p = 0.68$). The successful hearing rates of type I and type III were 80.6% and 78.2%, respectively ($p = 0.82$). Only 1 case with type I TP presented with soft tissue density area in the mastoid in the preoperative CT, whereas 16 cases with type III TP was shown to have such area. There was no statistically significant difference in TM closure rate between cases with and without soft density area in the mastoid (81.2% vs. 85.7%, $p = 0.35$).

Discussion: There was no significant difference in either TM closure rate or hearing outcome between type I and type III. In type III TP, incus and the head of malleus are usually removed to secure the ventilation route from the Eustachian tube through the mastoid. This may be the reason for less disadvantage of TP w/o M even for COM with mastoid granulation. Another factor should be searched on the failure of TP w/o M.

Conclusion-Type III TP w/o M has similar benefit to type I TP even on COM with mastoid granulation.

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A Clinical Study on 87 Cases of Congenital Cholesteatomas Based on Potsic's Staging System

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Learning Objectives:

Objectives: We investigated the clinical features and surgical results of congenital cholesteatoma according to Potsic's staging system. Potsic proposed a classification system comprising four stages to evaluate the extent of disease as follows: I, disease confined to a single quadrant; II, cholesteatoma in multiple quadrants, but without ossicular involvement or mastoid extension; III, ossicular involvement without mastoid extension; and IV, mastoid disease.

Methods: A total of 87 patients who had undergone surgery at our hospital were retrospectively analyzed for presenting symptoms, the location of cholesteatoma, and surgical results according to Potsic's staging system.

Results: Of the 87 patients, 25 were classified as Potsic stage I, 13 as stage II, 35 as stage III, and 14 as stage IV. More than half of the patients with early-stage congenital cholesteatoma