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Learning Objectives: Surgical training is constantly evolving with greater emphasis placed on simulation. In particular, the understanding of complex three-dimensional anatomy in temporal bone dissection necessitates significant additional training outside of the operating theatre. While virtual reality systems have been developed recently, cadaveric dissection remains the gold standard for simulation.

Several variations of temporal bone holder have been developed but all have limitations. The ideal temporal bone holder should remain stable in multiple orientations but also adjust easily. It should not obstruct the surgical view and should simultaneously provide adequate drainage of bony debris.

The temporal bone holders that are currently commercially available for both ENT departments and temporal bone laboratories, are expensive and have scope for refinement. With this in mind we have produced an extremely cheap alternative that allows trainees to maintain a stable surgical position and facilitate excellent surgical orientation.

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The Management of Petrous Bone Cholesteotoma: A Challenging Clinical Entity

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Learning Objectives: 1. To demonstrate that petrous bone cholesteotomas are a complex clinical entity. 2. To show that patients with this condition often present late with significant morbidity present prior to intervention 3. To describe our clinical outcomes following surgical intervention in the context of the current literature.

Introduction: Cholesteotomas occurring or extending medial to the otic capsule and labyrinth are regarded as petrous bone cholesteotomas (PBC). Important anatomical structures within this area makes the management of these cases demanding. We report our experience and outcomes following surgery.

Methods: Case notes of patients who underwent PBC surgery over an 11 year period (2003–2014) were retrospectively analysed.

Results: 23 patients were identified. Median age 50 years (range 19–81). The commonest symptom was hearing loss (78.3%) with facial nerve dysfunction (69.6%) and disequilibrium (26.1%) being experienced by many. 12 (52.2%) patients had a facial nerve palsy prior to operative intervention. 11 (47%) had previously undergone ear surgery with 7 (30.4%) being for cholesteotoma. 1 (4.3%) patient had multiple episodes of meningitis and 1 (4.3%) had developed a cerebellar abscess prior to operative intervention. Preoperatively, 6 (26.1%) had a "dead" ear with 5 (21.7%) having a profound hearing loss.

In our series, 14 (60.9%) patients had a total petrosectomy with closure of the ear canal, eustachian tube and obliteration of the cavity with an abdominal fat graft. The remaining had subtotal petrosectomy (4), revision petrosectomy (3) or a combined middle fossa and trans-mastoid approach (2). Operative findings confirmed extensive disease in most cases with facial nerve (56%), dural (39%), vestibular (26%), cochlear (21%) and carotid (13%) involvement being encountered. 9 patients had post-operative complications including: wound infections (3), post aural fistula (2), facial palsy (2) and dead ear (2). Within an average follow up period of 43 months, there was 1 (4.3%) recurrence.

Conclusion: In our series, PBC had often become advanced prior to intervention, despite advances and increased availability of imaging techniques. Extensive PBCs are difficult to "cure" by surgery but we show good control rates with little increased morbidity from intervention.

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A Comparison of Operative Time Outcomes in Endoscopic and Open Tympanomastoid Surgery

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Learning Objectives: Initial concerns regarding increased operative times when developing a novel EES practice are unfounded and should not deter otologists from becoming proficient at this technique.

Introduction: Endoscopic Ear Surgery(EES) has recently developed from being an adjunct to traditional microsurgery to becoming the principle methodology in select cases. Surgical use of the endoscope provides a wider field of view, increased depth of field and the ability to directly visualise 'hidden' areas of the middle ear.

Prolonged operative time is often considered a drawback when developing a novel application for minimally invasive surgery. There is limited data on the specific operative time of endoscopic tympanomastoid surgery compared to a conventional open approach.