

Introduction: The aim of cholesteatoma surgery is to eradicate the disease process with minimal morbidity and preservation of hearing. The use of the oto-endoscope as a surgical tool is becoming increasingly popular for safe cholesteatoma surgery. We believe that the combined use of the oto-endoscope and microscope helps in achieving the above goals and reduce the need for second look procedures or revision surgery.

Methods: We did a retrospective review of 43 cases of mastoidectomy performed between January 2011 and January 2016 in our otology unit in East London.

Results: We reviewed cases of combined approach tympano-mastoidectomy, atticotomy, revision mastoid surgery and cholesteatoma eradication from antrum in anteriorly lying sigmoid sinus. Our study group involved both adults and paediatric population. After the full microscopic work all cases were assessed using oto-endoscope for any residual diseased epithelium particularly on the on the lateral wall of epitympanum, anterior attic and sinus tympani. Residual disease was dealt with micro-instruments and/or KTP LASER. In 21 cases, residual diseased epithelial remnant was still present.

Conclusion: A combined oto-endoscopic and microscopic approach in the management of cholesteatoma cases helps to achieve a good outcome without any additional morbidity. This has reduced the need for revision surgery and second look procedures.

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Training in revision mastoid Surgery: Challenges, Pitfalls and Tips

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Learning Objectives: i Meticulous pre-operative planning and discussion with multidisciplinary team. ii Availability of appropriate instruments and experienced theater staff. iii Proficiency in lateral skull base anatomy and surgery

Introduction: Surgical management of recurrent complex cholesteatomas can be highly challenging. Our busy otology service in northeast London caters to a unique mixed racial demographic group where there is a high preponderance of such cases. In this study we would like to share the challenges we faced and our subsequent learning journey.

Methods: We undertook a retrospective review of 156 cases of revision mastoid surgeries done between January 2009 and December 2015 in our otology unit in East London.

Results: Following a review of our cases, we found that the pathologies that made surgical management challenging included dehiscent sigmoid sinus, tegmen erosion, eroded bony facial canal and lateral semicircular canal. We hereby

present our pre-operative management planning, operative techniques and post-operative outcome of these complex ear cases. We also share our experience of the individualised care of these complex patients using a multidisciplinary team approach.

Conclusions: Revision mastoid surgery is challenging. A multidisciplinary team consisting of the ENT surgeon, radiologist, neurosurgeon and senior anaesthetist is helpful for pre-operative planning of complex ear cases. Moreover, intra-operative use of oto-endoscope, KTP LASER, facial nerve monitor and post-operative availability of high dependency unit are important aspects to consider for safe and appropriate management of revision mastoid surgery.

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Depth of the Sinus Tympani is Unrelated to Mastoid Pneumatization: A Cartesian Coordinate Study

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Learning Objectives: To learn from a study of minimally and maximally pneumatized temporal bones, the depth of the sinus tympani relative to the adjacent facial nerve and to the round window.

Background: Cholesteatoma involving the sinus tympani is notoriously difficult to assess and control. Otolologists would be happy for every sinus tympani to be shallow. Correlates of sinus tympani depth are unknown, although some suggest that increased depth correlates with large mastoid pneumatization.

Objective: To describe the depth of the sinus tympani, relative to both the adjacent facial nerve and distance from the round window, and how depth correlates with mastoid size.

Methods: Ten clinically ear-normal crania underwent computed tomography in a custom non-metallic positioning device that referenced the Frankfort horizontal plane. The crania, from a series of 41, were the five with the largest mastoids, and the five with the smallest mastoids, as assessed by plain lateral radiograph. Each landmark (midst of round window [RW], apex of sinus tympani [ST] and midst of facial nerve [FN] is that slice) was twice independently identified in xyz Cartesian space. The midst of the facial nerve was chosen even though not surgically accurate, so as to better consistently landmark the facial nerve for this study.

Results: The mean direct distance from RW to ST ranged from 3.4 to 7.7 mm, median 6.1 mm for right ears; 4.1–8.0, 5.0 left. For FN to ST, the range was 1.6–4.0 mm, median 3.2 right; 1.8–3.2, median 2.5 left. Neither bilateral symmetry nor relationship with mastoid size was found.