Introduction: Cochlear implantation (CI) is typically performed though a mastoidectomy and posterior tympanotomy approach. Successful implantation via this approach depends upon accurate identification of the round window niche (RWN), which can be difficult in patients with limited RWN visibility.

The facial recess (FR) is defined as the mastoid air cells between the chorda tympani nerve and the vertical segment of the facial nerve (FN). If the space between the external auditory canal (EAC) and the FN is more than 2–3 mm, the width of the facial recess can be considered as normal. We present a case with a narrow FR diagnosed on preoperative CT and provide a description of the surgical technique used for CI.

Case Presentation: A 50-year-old female with bilateral profound sensorineural hearing loss (SNHL) presented for CI evaluation. CT demonstrated the space between the vertical segment of the FN and EAC in her right ear to be normal whereas in the left ear the space was narrow; the vertical segment of the FN was positioned nearly beneath the EAC.Therefore, the bony part of the EAC (approximately 0.5 cm in diameter) adjacent to the FN was removed while preserving the integrity of the overlying skin. This permitted greater access to the middle ear. The electrode array was placed via RW approach uneventfully through this technique. The defect in the EAC was reconstructed with a cartilage graft obtained from the concha and the EAC skin was returned to its original position.

Conclusion: When HRCT images indicate limited RWN visibility, surgeons must be prepared to use alternative procedures rather than the posterior tympanotomy approach alone. Removal of a part the posterior EAC wall can increase RWN exposure instead of further enlargement of the FR. The borders and width of the FR can be estimated by measuring the distance between the EAC and vertical segment of the FN. The optimal surgical method can be chosen intraoperatively by an experienced CI surgeon.

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Congenital cholesteatoma of the mastoid: case report and literature review

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Learning Objectives: Congenital cholesteatoma located in the posterior portion of the mastoid is very slowly growing and some may be treated conservatively.

Introduction: Congenital cholesteatoma of the temporal bone is a relatively rare disease. Most of them occur in the middle ear causing hearing impairment and thereby early detection. Congenital mastoidal cholesteatoma, on the other hand, prevalent in the posterior portion of the mastoid, causes no or few, mostly non-specific symptoms and therefore the diagnosis is delayed. In all previously reported cases eradicating surgery was performed.

We present the so far oldest case of congenital mastoidal cholesteatoma, a 87- year old woman. The process was found incidentally on radiology when admitted for dizziness.

The symptoms, radiological and intraoperative findings, and treatment is discussed in the light of previously reported cases.

Methods: We assessed the patient's medical history retrospectively. A conservative approach was applied with clinical follow-ups and radiology to evaluate any progress or new symptoms correlated to the cholesteatoma.

The Pub Med database was used to search for previously reported cases of congenital mastoidal cholesteatoma.

Results: There was no aural history and the tympanic membrane as well as audiometry were normal at admission. The initial high resolution CT and MRI with cholesteatoma protocol were conclusive. Large bone destructions were present. A one year follow-up with watchful waiting including aural examination and radiology will be presented. Previously, around 30 cases were reported, all being operated at ages ranging between 7 and 77.

Conclusions: This case shows the very slow progress of congenital mastoidal cholesteatoma as it had obviously prevailed during her 87 years of life. The case raises the question should congenital mastoidal cholesteatomas not be treated surgically but instead be handled conservatively, with watchful waiting, in the absence of disabling symptoms?

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Quality of Life After Mastoid Cavity Obliteration: The Blackburn Experience

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Learning Objectives:

1. Use of cartilage in MCO and PCR.
2. Effect on QOL of patients after using cartilage for MCO/PCR.

Introduction: Otologists have tried indigenous alterations in mastoidectomy technique to improve outcomes of chronically discharging ear(CDE). Currently, the surgical management of CDE entails modified radical mastoidectomy(MRM). However it leaves cavity open & prone for discharge along with problems such as wax formation & giddiness.Literature review suggests that mastoid cavity obliteration(MCO)/posterior wall reconstruction(PWR) has low complication rates. Various materials such as cartilage,bone cement & soft tissue are commonly used.

Objective: Pts with MCO require less cavity care and thus decreased dr dependence. Our study was aimed at finding

pt satisfaction and QOL after MCO using cartilage. It was also directed to find out post-op dry ear, wax problems, dizziness & recurrence.

Methods: In our cohort study, 29pts with CDE underwent revision mastoidectomy with MCO/PCR during Jul'11-Jun'15. They were followed at 6wks, 4, 6 & 12mths post-op.Symptoms were noted in pt files during followup visits & collated on excel chart. QOL was assessed using Glasgow Benefit Inventory Score. Response was obtained by posting proformas to pts.Ethical approval was obtained from trust R&D.

Results: The procedure was successful in improving QOL in majority. 26/29 pts reported dry ears. 2 pts continued to have discharge &1 underwent repeat surgery. Frequency of clinic visits has reduced significantly. >90%pts reported significant improvement in QOL & less visits to GP surgery.

Conclusion: The outcome and QOL improvement after MRM/PCR using cartilage is satisfactory. Frequently encountered problems of chronically discharging ear, wax and dizziness are reduced.

Keywords: **C**hronic otitis media, mastoid cavity obliteration, cartilage graft, QOL, Glasgow Benefit Inventory Score.

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Delayed presentation of a giant congenital cholesteatoma with cerebrospinal fluid fistula

Presenting Author: **Sherif Habashi**

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Learning Objectives: Cholesteatoma can exist for many years with little or no symptoms before presentation with life-threatening complications. Patients with persisting ear discharge should undergo CT scanning of the temporal bones.

Introduction: Cholesteatoma is usually acquired. Congenital cholesteatoma is rare and occurs at three important sites: the middle ear, the Petrous apex, and CPA. For the diagnosis to be made the following three conditions should normally apply: there should be a mass medial to the tympanic membrane; the tympanic membrane should be normal and intact and there should be no previous history of ear discharge, perforation or ear surgery. Presentation of congenital middle ear cholesteatoma is normally as a conductive hearing loss in childhood. Petrous apex and cerobellopotine cholesteatomas may present with CPA symptoms or be picked up as in incidental radiological finding in early adult life.

Method: A 54 year old man presented with a short history of hearing loss and ear discharge. He was treated for otitis externa and wax. Microsuction was performed several times before a CT scan of the temporal bones was requested which showed a massive erosive lesion consistent with a giant cholesteatoma (images). As he was leaving the consultation he asked for further micro suction. This provoked a profuse CSF leak. Urgent tertiary referral was made and the patient underwent craniotomy and petrosectomy(operative photographs).

Results: The patient recovered well with no cranial nerve deficits or other complications and is managing well a CROS hearing aid. Four years on he remains well with no sign of recurrence on two diffusion weighted MRI scans(images). He remains under lifelong surveillance.

Conclusion: Congenital cholesteatoma can remain silent for many years presenting late in life as a giant cholesteatoma with bony erosion and extension into the cranial cavity. CT and diffusion weighted MRI imaging can help in diagnosis and pre-operative planning.

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External ear canal cholesteatoma: Two in a day!

Presenting Author: **Sherif Habashi**

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Learning Objectives: External Ear Canal Cholesteatoma, even when very extensive, can be successfully treated with excellent hearing outcomes.

Introduction: The aetiology of external ear canal cholesteatoma (EECC) may be traumatic, iatrogenic or spontaneous. It is a rare entity with an estimated incidence of around 1 in 1000 patients requiring otologic surgery. Remarkably, we present two cases operated on same the day by the senior author!

Methods: 2 cases are presented including pre-operative imaging. An 80 year old female who presented with a 3 month history of left-side hearing loss. Microsuction for "hard wax" was performed several times before CT scan was requested. A 61 year old female with a short history of left-sided hearing loss and pain. Hard "wax" was removed by microsuction several times. The tympanic membrane was seen to be normal and she was discharged before representing with the same symptoms. Eventually a CT scan was requested. Both patients underwent modified radical mastoidectomy. In the first case the cholesteatoma sac was seen to be originating from the anteroinferior wall of the ear canal and extending into the mastoid. The tympanic membrane was intact and middle ear uninvolved. The second patient was found to have cholesteatoma arising from the posteroinferior wall of the ear canal with extension into the mastoid and petrous bones.Middle fossa dura was widely exposed by the disease. The lateral SCC was dehiscent. The tympanic membrane was normal and the middle ear uninvolved.