

#### A0040: Anatomical and Audiological Outcomes of Cartilage Tympanoplasty

Prajwal S. D.

**Aim** To evaluate anatomical and audiological outcomes of cartilage tympanoplasty.

**Materials and Methods** A prospective, observational study (pilot study) was undertaken at a tertiary referral institute in North Karnataka. The study included 30 patients with chronic otitis media requiring tympanoplasty. Tympanic membrane reconstruction was done using 0.5 mm thickness conchal cartilage. Patients with tubotympanic and atticofacial disease were included in the study. Patients were assessed at first and third postoperative months for graft uptake and hearing evaluation was conducted using pure tone audiometry for the frequencies 500 Hz, 1 K, 2 K, and 4 K.

**Results** A successful outcome was defined as complete healing of graft without retraction and lateralization for minimum 3 months of follow-up. Twenty-eight patients had fully epithelialized, completely healed grafts postoperatively at 1 month. Two cases had small residual perforation which healed on chemical cauterization on subsequent follow-up. The mean air-bone gap considerably reduced from  $30.4 \pm 4$  dB preoperatively to  $16.1 \pm 5$  dB postoperatively.

**Conclusion** Tympanic membrane reconstruction using 0.5 mm thickness cartilage provides good anatomical and audiological results with significant improvement in hearing, especially in subtotal perforation, where healing of tympanic membrane has much poorer prognosis irrespective of surgical technique used.

**Clinical Significance** In India, temporalis fascia is the widely used graft material despite the proven publications, reiterating the efficacy of cartilage tympanoplasty. The present paper highlights the good anatomical and audiological outcomes.

#### A0041: Tegmen Tympani Defect and Temporal Lobe Encephalocele, Secondary to Mastoid Surgery

Rekha R.<sup>1</sup>

<sup>1</sup>Vydehi Institute of Medical Sciences and Research Centre, Bangalore, Karnataka, India

**Case Report** Tegmen tympani defect and temporal lobe encephalocele, secondary to mastoid surgery.

**Introduction** Brain herniation into middle ear is very rarely seen in addition to reasons like congenital factors, trauma, and infection. Tegmen defect may develop as a result of iatrogenic events secondary to chronic otitis media surgery with or without cholesteatoma. Since it may cause life-threatening complications, patients must be evaluated and monitored for tegmen defect.

**Case Presentation** A 47-year-old male patient underwent modified radical mastoidectomy for chronic otitis media with cholesteatoma, by surgeons in West Bengal, followed by a growing mass observed after 2 years postoperatively at the right external auditory canal. CT and MRI showed defect in tegmentum tympani with temporal lobe herniation with CSF. The transmastoid approach was done

by otorhinolaryngologist, and cystic lesion in external auditory canal was aspirated and CSF confirmed. Neurosurgeon excised the herniated glial tissue using bipolar cautery. Duroplasty was done, and fibrofatty tissue, bone wax, and temporalis fascia graft were placed. No postoperative complications were noted.

**Discussion** Bone erosion and dural injury can be observed due to chronic suppuration or as a complication of mastoid surgery in chronic otitis media. It can be due to cholesteatoma or bone erosion with involvement of inflammatory process due to enzymatic destruction. Surgical approaches for meningoencephalocele, due to tegmen defect, transmastoid approach, middle fossa approach, and combination of both. In our case, transmastoid approach was chosen by considering the localization and small size of defect. Postoperative complications like, epileptic seizures, CSF leak, transient ischemic attack/stroke, can be expected. However, these complications were not observed in our case.

**Conclusion** Patients who underwent operation due to chronic otitis media with or without cholesteatoma must be evaluated for tegmen defect and brain tissue or dural structures that may be herniated through this defect during and after the surgery. Possible defects must be repaired with appropriate surgery methods and graft materials by considering the localization and the size of the defected area.

#### A0042: Study on Use of Platelet-Rich Plasma in Myringoplasty

Sanchit Bajpai

**Introduction** Success rate after myringoplasty has a wide range from 70 to 80%. Therefore, there is still a need to search for methods to enhance tympanic membrane healing after myringoplasty to increase success rate. In our study, we have compared the use of platelet-rich plasma (PRP) in myringoplasty. The platelets are best known for their importance in clotting blood. However, platelets also contain hundreds of proteins called growth factors which are very important in the healing of injuries. PRP is plasma with many more platelets than what is typically found in blood. The concentration of platelets and, thereby, the concentration of growth factors can be 5 to 10 times greater (or richer) than usual. The study focuses on the use of prepared autologous PRP which is kept on the lateral surface of graft and TM remnant postmyringoplasty and results were noted with respect to the uptake of graft in such patients.

**Aim** To assess the topical use of autologous PRP to improve success rate of myringoplasty.

**Objectives** To compare pre- and postoperative graft uptake and audiological benefit, following myringoplasty with and without PRP.

**Methods** Patients were diagnosed cases of chronic suppurative otitis media tubotympanic type who were divided into groups of 35 each. Patients in first group underwent myringoplasty with PRP, while those in second group underwent myringoplasty without PRP. Pre- and postoperative

graft status and pure tone audiometry were performed for all the patients and the outcomes were compared.

**Results** Out of 35 patients in each group, four in the study group and eight in the control group had residual perforation. Graft uptake in case group was 88.57% and graft uptake in the control group was 77.1%. Result was better in cases that underwent myringoplasty with PRP. Out of 35 patients in case group, audiological improvement (> 10 dB) was seen in 31 patients (88.57%); in the control group of 35 patients, 27 (77.1%) had audiological benefits.

**Conclusion** This study shows there is definite benefit by using PRP in myringoplasty. As the PRP can be easily prepared, PRP myringoplasty can be routinely performed.

#### **A0043: Management of Recurrent Collaural Fistula: A Case Report**

Shalima P. S., Shashikant A. Pol, Arjun Dass, Nitin Gupta

**Introduction** Collaural fistula or cervicoaural fistula is a rare anomaly accounting for less than 8% of first branchial cleft anomaly. Aberrant development of first branchial cleft may lead to formation of a cervical cyst or sinus in the region of ear.

**Case Report** We reported a case of a 4-year-old girl who presented with recurrent swelling in right infra-auricular region from 6 months of age. She had undergone incision and drainage of the swelling thrice at various peripheral hospitals over past 3.5 years. On examination, two sinuses were noticed surrounding lobule of right pinna of which one was present posterior to the lobule and second was present just above lobule at lateral most part of conchal cartilage.

**Discussion** Diagnosis of recurrent infected collaural fistula requires detailed clinical examination for presence of multiple sinuses surrounding the lobule and external auditory canal. In case of nonvisibility of sinus in external auditory canal, microscopic examination should be done. CT sonogram and MRI are useful diagnostic tools for recurrent infected fistulas. Surgical excision of whole tract is the definitive treatment but superficial parotidectomy along with it can reduce chances of recurrence significantly. If more than 30% of the circumference of external auditory canal is involved then split skin grafting is required for the coverage.

**Conclusion** Diagnosis of collaural fistula should be kept in mind whenever there is recurrent postaural or infra-aural swelling mainly in pediatric patients. Superficial parotidectomy along with complete excision reduces the recurrence rate. Facial nerve palsy can be a devastating complication of surgery.

#### **A0044: Case Report: Delayed Facial Nerve Paralysis—An Uncommon Complication of Tympanomastoid Surgery**

Spandana. S. Pardikar

**Introduction** Facial nerve paralysis after ear surgery is a troublesome postoperative complication for both patient and the surgeon. Delayed postoperative facial nerve paralysis (DPOFNP) occurs a few days after ear surgery. The cause for this condition is supposed to be reactivation of dormant herpes zoster virus present in geniculate ganglion.

**Case Presentation** We, hereby, present a case of 25-year-old male, a case of chronic suppurative otitis media atticoaural disease who underwent canal wall down mastoidectomy with tympanoplasty. He presented with complaints of facial nerve paralysis, 7 days after the surgery. Patient had a House–Brackmann grade-3 paralysis. Treatment was initiated with oral corticosteroids and oral acyclovir. Patient was recovered completely after the therapy.

**Discussion** DPOFNP is an uncommon complication following uneventful tympanomastoid surgery. It is due to mechanical reactivation of HSV-1 virus in geniculate ganglion following mechanical disturbance of chorda tympani or operating in close vicinity to the facial nerve. It can also occur following neuro-otological surgery like acoustic neuroma and vestibular neurectomy, following stapedectomy or cochlear implantation.

**Conclusion** Patient presenting with facial nerve paralysis a few days after uneventful tympanomastoid surgery should be diagnosed as DPOFNP. The patient should be reassured and given a course of oral corticosteroids and acyclovir. Overall prognosis is good.

#### **A0045: Ancient Schwannoma Mimicking Glomus Jugulare**

Sreenivas Kamath K.

**Introduction** Schwannomas are benign tumors arising from the nerve sheath. Schwannoma of the jugular foramen (JF) is rare. We report a case of ancient schwannoma arising from the JF, the first of its kind to be reported in the literature.

**Case Report** A 37-year-old male presented with ear pain, pulsatile tinnitus, reduced hearing in the left side since 6 months and ear discharge since 3 months. Past history of ear surgery was done for ear discharge 15 years back. No history of difficulty in speech and swallowing, nasal regurgitation, facial deviation, hemifacial spasms, or dizziness was reported.

On examination: left EAC—reddish polyp was present, did not bleed or pain on touch. Post aural scar was present. Right ear: normal. Audiological testing was suggestive of moderate conductive hearing loss on left and minimal hearing loss on right. There were no obvious neurological deficits on examination.

Investigations: HRCT showed skull base isodense lesion with extension into jugular foramen—glomus jugulare (GJ). Contrast MRI well defined extra-axial, soft tissue enhancing mass in relation to the left CP angle involving petrous part of temporal bone with extension into the middle ear and external ear with salt and pepper appearance—GJ/ Nerve sheath tumor. MRA showed encasement of the ICA by the lesion with no obvious feeders.

Treatment: patient underwent left side transmastoid transtemporal excision of the tumor. Intraoperatively ECV and IJV were ligated. Facial nerve was identified and transposed. Tumor mass completely removed in peacemeal, reconfirmed with endoscopic evaluation. Defect was sealed using abdominal fat graft. Postoperative grade-4 facial palsy noted. HPE: spindle cells arranged in sheets having elongated nuclei