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Learning Objectives:

Purpose: There are specific frequency hearing losses such as c4-dip(2kHz loss) in otosclerosis and c5-dip(4kHz loss) in case of noise induced hearing loss. The c3-dip(1kHz loss), however, is seldom mentioned in clinical field. We found a group of patient with 1 kHz hearing loss fortuitously and report it with review of literature.

Method: Tertiary academic referral center-based retrospective chart review and review of audiogram was done. Otologic history, audiogram, diagnosis, occupation, history of noise exposure were reviewed with chart and telephone interview. We compared the c3-dip group with 98 patients of c5-dip group(4kHz hearing loss group).

Results: Thirty one patients met the criteria of 1kHz audiometric notch. There are eleven males and 20 female with mean age of 40.6 years old. The pure tone threshold of 1kHz was 37.97 dB and the hearing threshold was 22.38 dB with other frequencies. Tinnitus was most the common complaints of c3-dip group compared with c5-dip group. The most common diagnoses of the c3-dip group were sudden sensorineural hearing loss(n = 8) and idiopathic tinnitus(n = 8). Female patients and unilateral cases were more common in c3-dip group than c5-dip group. Ear fullness was the more common symptom in c3-dip group than c5-dip group. The duration of occupation-related noise exposure was longer in c5-dip group than c3-dip group. The history of head or ear trauma was more frequent in c3-dip group than c5-dip group.

Conclusion: We defined a new clinical entity of 1 kHz hearing loss group as c3-dip group.

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ID: IP083

Perilymph Gush during the Stapedotomy for a Suspicious Osteogenesis Imperfecta Conductive Hearing Loss

Presenting Author: **Kyu Hwan Jung**

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Learning Objectives:

A 38-year-old woman visited our clinic with her left progressive hearing loss for 2 months. She had characteristic blue sclera and experienced frequent fractures from minor trauma in her teens. She looked normal in her appearance and stature. She did not have family history of hearing loss. Her ear drum was clear and pure tone audiogram showed left side 40 dB air-bone gap conductive hearing loss. Her right hearing was normal. Temporal bone CT revealed nothing special. Exploratory tympanotomy was performed to find stapes fixation and decided to do the stapedotomy. However, profuse perilymph gush developed when

performing the foot plate. Piston wire prosthesis was placed with struggling effort. Lumbar drain was placed right after finishing the operation. Although she had immediate post-operative dizziness, hearing loss, and tinnitus for 3 days, her hearing gradually improved and air-bone gap was closed 2 months after the surgery. Her good hearing was maintained for the 6 months on the follow-up audiogram.

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ID: IP084

Operative Management of External Auditory Canal Cholesteatoma

Presenting Author: **Hany Kamel**

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Learning Objectives:

We present our experience of Ten cases of EAC cholesteatoma treated in a UK district general hospital (serving a population of approximately 275,000) between 2007 and 2014. We discuss the clinical presentation, appropriate investigation, and subsequent surgical management of these cases. Cholesteatoma of the external auditory canal is rare, but has potential for serious complications such as erosion into the temporo-mandibular joint, facial nerve, and skull base. The most common presenting symptoms were unilateral otorrhoea and otalgia. Clinical findings included erosion of the inferior aspect of the bony canal wall, with accumulated keratin and bony sequestrum. Computed Tomography confirmed the presence of bony canal wall erosion, with an overlying soft-tissue attenuation mass in most cases. The middle ear was normal in most of cases. Examination under anaesthesia and biopsy of the EAC lesion was used to differentiate between EAC cholesteatoma, necrotising otitis externa, and squamous cell carcinoma of the EAC skin. Histological analysis of biopsy specimens showed keratin, with no evidence of malignancy. In each case, the disease was at a relatively advanced stage with erosion of the petrous temporal bone. Bony canal-meatoplasty was done via a post-auricular approach. The cholesteatoma was excised, and the resulting cavity was filled with grafted tragal cartilage and perichondrium or temporalis fascia to achieve a smooth, self-cleaning ear canal.

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Is There Hearing Loss In Sjogren's Syndrome? A Cohort Matched Cross-sectional Observational study

Presenting Author: **Usama Kamel**

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Learning Objectives:

Introduction: Previous studies showed inconsistent findings about deafness in Sjogren's syndrome(SS).

Aims: The study objective was to assess the prevalence of deafness in SS

Methods: A cohort matched, prospective, cross sectional observational study. Ethical approval was granted. Patient and control subjects gave informed consent. History and otoscopic examination of patient and control groups were performed. Pure tone audiogram was performed. Means of hearing thresholds at 0.25, 0.5, 1, 2, 3, 4, 6, & 8KHz were calculated in both groups.

SPSS statistical package was used for statistical analysis. SS patient hearing threshold was classified abnormal if the threshold was 20 dB at least worse at one or more frequencies compared to controls.

Results: 28 SS patients (F = 25:M = 3) with mean age 59 years old (range 36–83) according to the American European criteria for SS diagnosis and 34 controls (F = 32:M = 2) with mean age 56 years old (range 35–78) had been enrolled according to inclusion criteria.

Hearing acuity was found to be highly correlated with age (Pearson 0.707 p

Conclusions: These results suggest that SS does not have an effect on hearing levels. SSyndrome does not appear to be associated with hearing loss.

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ID: IP086

What is the predominant presentation in Juba's ENT clinic?

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Learning Objectives:

Introduction: A medical mission was set up in Juba. Juba has the only teaching hospital in South Sudan; it provides medical service to 9.8 m. Their Healthcare heavily depends on foreign aids and medical missions. South Sudan is a 4 year old country since they had independence.

Methodology: Registration and agreement with South Sudan Ministry of Health were pursued. Earlier communication to establish resources was sought. No previous ENT missionary Clinics were set up in the hospital, therefore this clinic had publicity through the ministry of health public announcement and TV adverts. Daily theatre sessions were allocated for the surgeries. One

ENT doctor ran the clinics, surgeries and on call for the week's mission. Database was setup for the clinic registry and patient management. The clinic was run for a morning and afternoon session. Theatre was run in the evening after clinics. Limited theatre resources made it difficult to perform microscopic and endoscopic surgeries.

Results: 129 cases seen in a week. 32% were allergic rhinitis, 15% otitis externa, 7% acute otitis media, 6% chronic suppurative otitis media and 6% recurrent tonsillitis. Fifteen cases (12%) had operations. Training sessions were also run to medical doctors to help them develop their ENT skills.

Conclusion: South Sudan ENT clinic presentations showed that third of cases were allergic rhinitis and a sixth were otitis externa. There is a great need for ENT service in South Sudan to help combat infections and common ENT conditions. Aid is needed to build ENT service in the capital.

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Management of labyrinthine fistula in cases with cholesteatoma

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Learning Objectives: To introduce our management strategy for labyrinthine fistula caused by cholesteatoma

Purpose: Complete removal of matrix on fistula and preservation of bone conduction (BC) hearing level are required in cases with labyrinthine fistulae (LF) caused by cholesteatoma. The purpose of this study is to introduce our management strategy for LF caused by cholesteatoma.

Study Design: Retrospective medical chart review.

Patients and methods: Twenty patients with LF caused by cholesteatoma (M: F = 11 : 9, mean age: 62.8) were enrolled in this study. All patients were underwent tympanomastoidectomy with removal of cholesteatoma matrix on fistula between April 2009 and February 2016. Location and depth of fistulae, surgical procedure how to seal fistulae, and change in BC hearing level before and after surgery were analyzed.

Summary of Results: Distribution of fistulae locations were lateral semicircular canal (N = 16), superior semicircular canal (N = 1), and multiple organs (N = 3) which included two cases with cochlear fistulae. Depth of fistulae revealed erosion of bony labyrinthine with intact endosteum (N = 8), opened perilymphatic space with perilymph leakage (N = 8), and destruction of membranous labyrinth (N = 4). Fistulae were closed by multi-layered reconstruction using fascia, bone putty with or without bone tips in 12 cases, by single-layered reconstruction using fascia or bone putty in 7 cases. Two cases showed scaled-out BC hearing level preoperatively. Postoperative BC hearing level analysis showed improvement more than 20 dB in 2 cases, preservation in 13 cases, and decreased more than 10 dB in 3 cases. BC hearing level was maintained in most cases.