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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?

Presenting Author: **Usama Kamel**

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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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ID: IP087

Management of labyrinthine fistula in cases with cholesteatoma

Presenting Author: **Rie Kanai**

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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 perilynphatic 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.

Conclusion: Removal of cholesteatoma matrix and sealing should be performed in one-stage procedure in LF, because its disease progression and additional infection may cause. We think that the multi−layered reconstruction of LF is desirable to prevent postoperative perilymph leakage and deterioration of BC hearing level.

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Review on external auditory canal cholesteatoma and proposal of more clinical classification

Presenting Author: **Shoji Kaneda**

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Learning Objectives:

Introduction: External auditory canal cholesteatoma (EACC) is a relatively rare disease and its etiology is uncertain. There seem no guidelines of its management throughout the world.

Methods: Eighteen ears of 17 cases with EACC, which we operated during the past 6 years, were reviewed on its extension and management.

Results: The median age was 58 years old (16–80). There are 4 males (1 with bilateral EACC) and 13 females. Preoperative CT showed the lesion localized in the EAC in 18 ears; only bony erosion in 5 ears and bony destruction in 13 ears. Out of 13 ears, extension to the middle ear was found in 2 ears, to the mastoid in 2 ears, and to the both in 2 ears. Canaloplasty alone was performed in 8 ears. Canaloplasty with mastoidectomy was performed in 1 ear. Tympanoplasty was performed in 9 ears; type I in 6, type IIIc in 2, and type W0 (without ossiculoplasty) in 1.

Discussion: Although Naim et al reported a classification of EACC based on macroscopic and histological criteria, we here propose alternative, more simple classification based on its extension and treatment modalities; Stage 0 : only surface lesion without bony lesion, Stage I: only bony erosion , Stage II: bony deficit localized in the external auditory canal, Stage III: invasion into the tympanic cavity (T), mastoid (M) or combined (T + M), Stage IV: the adjacent anatomical structure complications (e.g. facial palsy (FP), labyrinthine fistula (LF), petrous bone/skull base destruction (PB), and temporo-mandibular joint destruction (TJ)) Following our classification, there are 5 ears in Stage I, 7 in Stage II, 6 in Stage III (2 in T, 2 in M, and 2 in T + M), 0 in Stage IV. Conservative treatment is recommended in cases of Stage I EACC. For Stage II cases with severe otorrhea, canaloplasty may be needed. Cases of Stage III need tympanoplasty, mastoidectomy, or the both. Treatment for Stage IV cases needs more argument.

Conclusion: More clinically applicable classification of EACC is proposed.

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ID: IP089

Regenerative treatment for tympanic membrane perforation with cholesteatoma, tumor, or severe calcification

Presenting Author: **Shin-ichi Kanemaru**

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Learning Objectives: How to regenerate the TM with cholesteatoma, tumor, or severe calcification.

Background: We developed a new regenerative treatment for large tympanic membrane (TM) perforations without the need for conventional surgical therapy. This treatment was performed on patients with cholesteatoma, tumor, or severe calcification of the TM.

Methods: Twenty-five patients (Age: 9–85; M = 10, F = 15) were selected from patients with or without TM perforation. Ten patients had cholesteatomas, 3 had tumors and 12 had severe TM calcification. They were classified into three groups based on TM perforation size: less than 1/3 of the TM as Grade I (n = 4), 1/3 to 2/3 as Grade II (n = 13) and over 2/3 as Grade III (n = 8). Materials for the TM repair included gelatin sponge with b-FGF and fibrin glue. After lesions were removed through the TM perforation, gelatin sponge immersed in b-FGF was placed over the perforation. Fibrin glue was then dripped onto the sponge. Treatment efficacy was evaluated 6 months post-treatment. Treatment was repeated up to 4 times if complete closure of the TM perforation was not achieved after the first treatment.

Results: Complete closure of the TM perforation was achieved in 92% (n = 23/25) of the cases. The average hearing level in all patients with successful TM repair was improved or maintained. No serious sequelae were observed in any patient.

Conclusions: This new regenerative therapy is useful not only for patients with simple TM perforations but also for those with cholesteatoma, tumor, or severe calcification without requiring conventional surgical procedures. This innovative regenerative therapy is an easy, safe, cost-effective and minimally-invasive treatment.

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Cholesteatoma recurrence after endoscopy assisted tympanoplasty

Presenting Author: **Emilia Karchier**

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