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ABSTRACTS

RBS Poster Award
RBS Lecturer Award in Rhinology
RBS Lecturer Award in Otology-Audiology
RBS Lecturer Award in Laryngology, Head and Neck Pathology
Temporal Bone Contest

ROOM 1

RBS Lecturer Award in Otology-Audiology

Title: Facial nerve stimulation after cochlear implantation in patients with a cochlear facial dehiscence

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Abstract

Introduction and aim: Cochlear implantation is the primary treatment for severe to profound sensorineural hearing loss. Rarely, electrical stimulation from the implant can activate the facial nerve, causing involuntary facial muscle contractions (facial nerve stimulation, FNS). Cochlear–facial nerve dehiscence (CFD), defined as the absence of a bony separation between the cochlea and facial nerve, is a recognized risk factor for FNS. The aim of this study was to evaluate the relationship between CFD, electrode type, defect size, and intraoperative impedance measurements as potential predictors of FNS.

Material and methods: We analyzed a database of five cochlear implant patients with FNS and compared them to 20 controls without FNS. Electrode types, imaging evidence of CFD, defect measurements (perimeter and surface area), and intraoperative impedance values were assessed. For Slim Modiolar electrodes, impedance patterns were compared among patients with both FNS and CFD, patients with CFD without FNS, and normal controls without CFD.

Results: All patients with FNS had a CFD, while 8 of 20 controls also had a CFD, representing a higher incidence than previously reported. No statistically significant differences in defect size were observed between FNS and non-FNS groups, although a trend toward larger defects was noted in the FNS group. Intraoperative impedance measurements showed localized decreases around electrodes adjacent to the facial nerve in FNS patients, suggesting increased current spread. These impedance patterns normalized one year after implantation. The onset of FNS ranged from immediately after implant activation up to five years post-implantation.

Conclusions: CFD is strongly associated with the occurrence of FNS in cochlear implant recipients. While defect size shows a non-significant trend, characteristic intraoperative impedance changes may indicate current spread to the facial nerve. Preoperative identification of a CFD and monitoring intraoperative impedance may improve prediction and management of FNS.

Title: Outcome of cochlear implantation in patients with intralabyrinthine schwannoma: a case series study

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Abstract body

Introduction and aim: Intralabyrinthine schwannomas (ILS) are rare, benign tumours situated in the inner ear. Restoring hearing with a cochlear implant (CI) in these patients is possible, although hearing outcomes are variable. We would like to present our experience and outcomes of cochlear implantation in patients with ILS.

Materials and methods: This is a retrospective case series study of seven patients with an ILS who underwent cochlear implantation in one tertiary referral centre.

Results: The ILS-location was intravestibular in 3, intracochlear in 3 and transmodiolar in 1/7 patient(s). All patients underwent CI surgery, with simultaneous tumour removal performed in 6 patients. The mean phoneme discrimination score for monosyllabic words in quiet with the CI ear was 63% (SD = 27%), 67% (SD = 37%) and 70% (SD = 30%) at 3, 6 and 12 months postoperatively, respectively. Sentences in noise testing in the best-aided condition showed a signal-to-noise ratio of -2,1 (SD = 5,5) dB, -5,8 (SD = 2,6) dB and -5,6 (SD = 3,0) dB at 3, 6 and 12 months postoperatively.

Conclusions: Favourable results were obtained in ILS patients with a CI and were comparable to CI outcomes in patients with vestibular schwannoma or other causes of single-sided deafness.

Hearing preservation after cochlear implantation: a comparative analysis of four electrode designs

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Introduction and aim: A critical determinant of successful hearing preservation (HP) after cochlear implantation is the electrode array, which interfaces with delicate intracochlear tissues surrounding neural targets. The optimal electrode design for HP remains debated. This study primarily evaluates HP 1 month post-implantation in patients with preoperative residual hearing (RH), comparing four electrode designs. A secondary objective is to examine the influence of patient characteristics, time interval, and electrode array design on HP.
Material and methods: A retrospective analysis was performed on patients with RH who received Slim Straight, Slim J, Slim Modiolar or Mid-Scala arrays between February 2014 and May 2025 at Ghent University Hospital. Unaided pure-tone thresholds were measured preoperatively and at 1, 3 and 12 months postoperatively. HP was quantified as (1) absolute threshold shift (dB HL) and (2) relative HP (%) using the HEARRING Group formula for low-frequency pure-tone average (LFPTA: 250-500Hz) and four-frequency pure-tone average (PTA4: 250-2000 Hz).
Results: 120 patients (mean age: 50 years) were included. At 1 month, no complete RH loss occurred; most showed partial or complete preservation. For relative HP based on PTA4, electrode design significantly affected outcomes (p=.005), with Slim Straight outperforming Slim Modiolar and Mid-Scala. Absolute HP declined markedly at 1 month, then stabilized. Slim Straight yielded superior absolute HP for LFPTA and PTA4 compared to Slim Modiolar and Mid-Scala. Older age correlated with greater shifts at 1 month. A significant Electrode x Time interval interaction for PTA4 indicated that HP trajectories varied by array design.
Conclusions: In CI candidates with preoperative residual hearing, partial hearing preservation was observed at 1 month post-implantation for LFPTA and PTA4. Slim Straight provided the best initial HP, while age, time interval, and electrode design were key predictors. These findings highlight the importance of electrode selection and patient counselling regarding postoperative HP outcomes.

Otorrhea in children with cleft palate after ventilation tube placement: a retrospective study

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Introduction and aim

Otitis media is common in children with cleft palate and associated with hearing loss and reduced quality of life. Placement of ventilation tubes is the first-line treatment to resolve middle ear effusion, but it may be associated with prolonged or recurrent otorrhea. This study aimed to evaluate the burden of parent-reported and physician-confirmed otorrhea in children with cleft palate.

Material and methods

We conducted a retrospective review of children with cleft palate managed by a multidisciplinary cleft team over a two-year period. Data collected included the incidence and duration of otorrhea, microbiological findings, and treatment.

Results

Thirty-nine children were included. Over one-third (38.5%) failed newborn hearing screening due to early-onset middle ear effusion. Ventilation tubes were placed at 6 months of age during

definitive lip closure or at 9 months during soft palate closure. Otorrhea occurred in 28% of patients at the first postoperative visit and in 67% during follow-up. The median duration of otorrhea was 22 days (IQR 14–53) in the right and 32 days (IQR 17–67) in the left ear. *Staphylococcus aureus*, *Streptococcus pneumoniae*, and *Haemophilus influenzae* were the most frequent pathogens. Eighteen children required repeat placement, and 27 patients still had at least one tube in situ at 12-month follow-up.

Conclusion

All children with cleft palate required ventilation tube placement due to middle ear effusion. Postoperative otorrhea was frequent, prolonged, and recurrent. Parents should be counseled regarding the likelihood of postoperative otorrhea and the need for prompt management. Further studies are needed to identify strategies to reduce postoperative otorrhea in this population.

Long-Term (24-month) outcomes of endolymphatic sac decompression, clipping, and ablation versus intratympanic corticosteroid injection in refractory ménière's disease

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Introduction and aim: Endolymphatic sac surgery is a non-ablative surgical treatment for patients with refractory Ménière's disease, but its therapeutic efficacy remains controversial. This study aimed to evaluate the long-term (24 months postoperative) clinical outcomes of endolymphatic sac decompression, clipping, and ablation (ESD-CA) in patients with definite Ménière's disease, in comparison with intratympanic corticosteroid injection (ITC).
Materials and methods: This retrospective study included patients with definite Ménière's disease and magnetic resonance imaging-confirmed endolymphatic hydrops who underwent either ESD-CA or ITC between February 2015 and February 2024. Pre- and postoperative vertigo attack frequency and postoperative outcomes were collected and analyzed. A total of 51 patients were included in this study. Four patients from the ITC group subsequently underwent ESD-CA after a minimum 24-month washout period. Twenty-nine patients were included in the ESD-CA group and 26 patients underwent ITC.

Results: Mean preoperative vertigo attacks were 7.1 per month in the ESD-CA group and 5.3 per month in the ITC group, with no significant difference between groups (p=0.161). At 24 months follow-up, the ESD-CA group demonstrated a mean vertigo improvement of 83.5% (SD 26.2) compared to 60.2% (SD 51.4) in the ITC group. This difference was statistically significant (p=0.036). Mean postoperative vertigo attacks were 1.7 per month in the ESD-CA group and 1.8 in the ITC group.

Conclusion: Both ESD-CA and ITC significantly reduce vertigo attacks in patients with refractory Ménière's disease. However, the effect of endolymphatic sac decompression, clipping, and ablation is significantly higher.

Virtual reality–based optokinetic after-nystagmus as an objective diagnostic tool for PPPD: a pilot study

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Introduction and aim: Persistent Postural-Perceptual Dizziness (PPPD) is a common chronic vertigo disorder triggered by postural changes, motion, and complex visual environments. The diagnostic criteria are entirely subjective, and no objective biomarkers are currently available. Optokinetic after-nystagmus (OKAN) has recently been proposed as a potential objective marker for PPPD. However, traditional OKAN measurement techniques are not feasible for routine clinical practice. The aim of this study is to determine whether Virtual Reality (VR) can reliably induce and measure the OKAN, and whether VR-derived OKAN parameters can distinguish PPPD patients from healthy controls.

Materials and Methods: In this prospective cross-sectional pilot study, twelve healthy participants and thirteen PPPD patients underwent VR-based optokinetic stimulation with integrated eye-tracking. The optokinetic stimulus consisted of a 40°/s full-field visual motion pattern presented for 60 seconds. All patients received standard clinical audiovestibular testing (vHIT, VNG, audiometry) and MRI. Outcome measures included OKAN presence, OKAN time constant (TC, s), OKN nystagmus score (%), test acceptability questionnaires (5 point Likert scale) and test well-being questionnaires (5-point Likert scale).

Results: PPPD patients demonstrated significantly lower OKAN TC (3.05s vs. 19.72s in controls, $p = 0.003$) and lower OKN nystagmus scores (70.21% vs. 77.03% in controls, $p = 0.032$). The OKAN TC showed a sensitivity of 79% and a specificity of 83%. Test acceptability and wellbeing scores did not differ significantly between groups and consistently met predefined minimal viable product (MVP) thresholds ($p > 0.05$).

Conclusions: The pilot study demonstrated that VR-based OKAN measurement is technically feasible, well tolerated, and enables OKAN assessment without specialized rotation chairs or optokinetic drums. The significant differences in optokinetic parameters between PPPD patients and healthy controls suggest that VR-OKAN could serve as a promising objective diagnostic tool. Further validation in larger and longitudinal cohorts is warranted to determine its clinical potential.

Bilateral Profound Sensorineural Hearing Loss in Sarcoidosis: A Case Report

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Introduction and aim

Sarcoidosis is a multi-system inflammatory disease characterized by non-caseating granulomas in one or more organs. Neurological involvement is reported in 3-10% of patients, in which involvement of the cochleovestibular nerve can lead to presentation with isolated sudden sensorineural hearing loss (SNHL). Early recognition of underlying sarcoidosis in this presentation is crucial, since delayed treatment can lead to permanent hearing loss, resulting in considerable disability. We discuss a case of bilateral profound SNHL in sarcoidosis, emphasizing challenges in diagnosis and treatment.

Case report

A 54-year-old patient presented with sudden onset bilateral hearing loss since four days. Clinical examination was normal, with pure tone audiometry showing bilateral profound SNHL. The patient had a history of ischemic stroke one year prior. Previous brain MRI showed supra- and infratentorial leukoencephalopathy, and PET-CT (performed because of atypical ANCA-positivity) showed metabolically active mediastinal lymphadenopathies. Treatment with high-dose oral corticosteroid therapy was initiated, with repeat MRI showing persistent leukoencephalopathy and new bilateral inflammatory contrast enhancement of the labyrinth. New audiometry following treatment with oral and intratympanic corticosteroids showed partial improvement of SNHL. Mediastinal lymph node biopsy during hospitalization showed non-caseating granulomas, confirming the diagnosis of sarcoidosis. Infliximab was started combined with a tapering course of corticosteroids. Despite early initiation of corticosteroid therapy followed by infliximab, follow-up audiometry six weeks after initiation demonstrated persistent bilateral profound SNHL with only slight improvement.

Conclusions

Bilateral profound SNHL is a rare presentation of neurosarcoidosis. Diagnosis is based on a combination of clinical, radiological and histopathological findings. Early treatment initiation with corticosteroids and immunosuppressives is necessary for maximal audiometric recovery, but persistent profound SNHL often remains. Sarcoidosis should be considered in the differential diagnosis of patients presenting with bilateral SNHL, especially with concomitant neurological or systemic symptoms.

Preclinical development of an allele-specific antisense oligonucleotide therapy for late-onset sensorineural hearing impairment DFNA9

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Introduction and aim: DFNA9 is characterized by progressive hearing loss and vestibular dysfunction, typically with onset between the 3rd and 5th decades of life. The most common mutation in Belgium and the Netherlands is the p.P51S mutation in the COCH gene, encoding cochlin. Currently, there are no treatments available to halt or reverse disease progression.

Our aim was to optimize antisense oligonucleotides (ASOs) that specifically target the mutant COCH transcript to suppress its expression in an allele-specific manner. This approach holds promise for early intervention by degrading mutant RNA transcripts while sparing the wildtype allele.

Material and methods: We designed gapmer ASOs consisting of a DNA core flanked by chemically modified RNA nucleotides with 2'OMe, MOE, or LNA chemistry. These ASOs target either the p.P51S mutation site or an intronic variant that is unique to the mutant allele. After testing their efficiency *in vitro*, we selected five promising candidates for *in vivo* evaluation in a humanized DFNA9 mouse model. In this model, we injected the ASOs unilaterally into the posterior semicircular canal of the inner ear to assess both molecular effects and safety.

Results: *In vitro*, all ASOs significantly reduced *COCH* expression, with three candidate ASOs performing best. *In vivo*, similar trends were observed. However, none of the tested ASOs displayed clear allele-specificity. Importantly, hearing thresholds one week after injection were unchanged, supporting the safety of all tested chemistries.

Conclusions: Overall, our findings confirm the potential of ASOs as a therapeutic strategy for DFNA9. Several candidates proved effective both *in vitro* and *in vivo*, though allele-specificity remains a challenge. Our next steps include further safety and biodistribution studies to decide whether to optimize the current ASOs or advance a lead candidate.

The value of extended high frequency audiometry in the assessment of inner ear barotrauma.

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Introduction and aim**:** Inner ear barotrauma (IEBT) is a rare but potentially debilitating diving-related injury, characterized by cochleovestibular symptoms, following inadequate pressure equalization during descent. Conventional audiometry may underestimate cochlear damage, as it is limited to frequencies up to 8 kHz. Extended high-frequency (EHF) audiometry allows to reveal additional trauma in the more basal region of the cochlea. This study aimed to characterize the audiometric profile of IEBT using both conventional and EHF testing.

Material and methods**:** A retrospective monocentric study was conducted at a referral center for diving-related ENT disorders. Patients diagnosed with IEBT between December 2016 and June 2024, in whom both conventional (125 Hz-8 kHz) and EHF (9-16 kHz) audiometry were available, were included.

Results**:** Twenty patients (mean age 39.8 years) with IEBT were analyzed, consisting of 13 males (65%) and 7 females (35%). Tinnitus and hearing loss were the most frequent presenting symptoms (75% each). Conventional audiometry showed pancochlear sensorineural hearing loss in only two patients (10%), while the remaining patients had interaural differences of less than 15 dB between 0.5 and 4 kHz. EHF revealed significant interaural asymmetry (>20 dB) in 18 patients (90%), including three patients who exhibited normal thresholds on conventional pure-tone audiometry. Statistical analysis demonstrated a frequency-dependent increase in asymmetry ($\chi^2(13) = 142.3$, $p < 0.001$), peaking between 8 and 12.5 kHz and declining at 14-16 kHz.

Conclusion**:** In patients with IEBT, EHF hearing thresholds are often affected, which indicates that the more basal cochlear regions are particularly vulnerable to barotraumatic stress. As

subtle alterations may be missed by conventional audiometry, this study highlights the added diagnostic value of EHF testing in the assessment of diving-related inner ear injury and supports its inclusion in the audiological evaluation and follow-up of suspected IEBT.

Influence of Diameter of Stapes Prosthesis on Functional Outcome of Stapedotomy in Patients with Otosclerosis: A Retrospective Study

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Introduction and aim: The influence of piston diameter on postoperative hearing outcomes after stapedotomy remains debated. This study evaluated the influence of the diameter of stapes prosthesis (0.4mm vs. 0.6mm) on the functional outcome of stapedotomy in patients with otosclerosis.

Material and methods: This retrospective single-center cohort study included 133 patients with otosclerosis in which 150 primary stapedotomies were performed. Patients received a 0.6mm (group A, n = 44) or 0.4mm (group B, n = 106) Teflon prosthesis. Pre- and postoperative audiograms were compared between the groups, mainly focusing on improvement in air conduction (AC) and closure of the air-bone gap (ABG).

Results: Both groups demonstrated hearing improvement with closure of the ABG to different degrees for each frequency. Group A showed a mean improvement in AC pure tone average of 26.7dB (±2.7 SD) compared to 23.8dB (±2.9 SD) in group B. The mean postoperative ABG (0.5–4 kHz) was 2.95dB in group A and 5.41dB in group B. No significant differences between groups were observed. ABG closure to ≤10 dB and ≤20 dB was achieved in 90.9% and 97.7% of patients in group A and 82.0% and 99.0% in group B, respectively. No cases of sensorineural hearing loss occurred in both groups.

Conclusions: We did not find evidence to support the use of a larger diameter piston in postoperative improvement of AC hearing levels and closure of the ABG. However, the success rate of stapedotomy defined as ABG closure to ≤10dB was higher when using a 0.6mm piston.

Altered neural pitch encoding in vestibular schwannoma: evidence from frequency-following responses

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Introduction and aim
Vestibular schwannomas (VS) often lead to hearing complaints that are not fully explained by pure-tone audiometry. Standard clinical tests mainly assess hearing thresholds or neural conduction but provide limited information on how speech is encoded at the subcortical level. The frequency-following response (FFR) is an objective electrophysiological measure that reflects neural encoding of speech sounds. This study investigated whether unilateral VS affects neural speech encoding beyond what can be explained by hearing loss alone.

Material and methods
Twenty-three adults with untreated unilateral VS underwent monaural testing including pure-tone audiometry, speech-in-noise testing, auditory brainstem responses (ABR), and FFR recordings using a speech stimulus (/dao/). Within-subject comparisons were performed between the VS-affected ear and the contralateral ear. In addition, VS ears were matched to a cohort with sensorineural hearing loss (SNHL) based on age, sex, and hearing thresholds to isolate tumor-specific effects. FFR parameters related to voice pitch and vowel structure were analyzed.

Results
Within subjects, VS-affected ears showed reduced neural encoding of voice pitch compared to contralateral ears, reflected by lower pitch strength and reduced signal-to-noise ratio at the fundamental frequency. ABR wave V and interpeak I–V latencies were prolonged in the affected ear. In the matched comparison, reduced pitch strength remained the only significant difference after correction for multiple testing. Encoding of formant structure did not differ between ears or groups.

Conclusions
Vestibular schwannomas are associated with reduced neural encoding of voice pitch, suggesting impaired temporal processing in the auditory pathway beyond hearing threshold loss. The FFR may provide complementary information to conventional audiological tests by revealing subtle deficits in speech encoding that are not captured by standard clinical assessments.

Title: Mal de Debarquement Syndrome: diagnostics and therapy

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Abstract

Introduction and aim: Mal de Debarquement Syndrome (MdDS) is a debilitating neuro-vestibular disorder characterised by a persistent perception of self-motion, typically described as rocking or swaying. It can be triggered by passive motion or arise spontaneously, for example after a vestibular disorder, anaesthesia, or hormonal changes. A pathognomonic feature is the temporary disappearance of symptoms during passive motion such as driving a car or a train trip.

Material and methods: To evaluate Vestibulo-Ocular Reflex (VOR) readaptation therapy, we assessed 211 consecutive patients treated at ZAS Augustinus Hospital. Eighty percent were female, with equal proportions of motion-triggered and non-motion-triggered MdDS. Treatment consisted of optokinetic stimulation (OKS) combined with head roll at 0.167 Hz for three to four consecutive days. Additionally, resting-state fMRI was performed pre- and post-treatment in 30 MT-MdDS patients. Functional connectivity was analysed using a cortical vestibular atlas-based region-of-interest approach.

Results: Significant pre- to post-treatment improvement was observed on visual analogue scale and posturography measures. Overall, two-thirds of patients benefited, with equal efficacy in motion-triggered and non-motion-triggered MdDS. Post-treatment fMRI showed altered activity in vestibular-related regions, including the entorhinal cortex. A standardised treatment protocol is proposed.

Conclusions: VOR readaptation is an effective therapy for MdDS, with comparable efficacy in motion-triggered and non-motion-triggered subtypes. MRI functional connectivity results further show substantial involvement of the amygdala and entorhinal cortex, pointing towards a functional CNS aetiology.

“The impact of multimodal stimulation on the neural tracking of speech in young adults with impaired speech perception in noise”

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ABSTRACT

Introduction and aim

A growing number of young adults with normal peripheral audition have difficulties understanding speech in noisy environments. Also known as hidden hearing loss, this impaired speech-in-noise perception (ISPiN) remains poorly understood.
Our magnetoencephalographic (MEG) study aims to assess the differential impact of visual speech and speech-derived vibrotactile stimulation on their cortical tracking of speech (CTS), a phenomenon known as the alignment of neural activity with speech envelope features. Indeed, atypical patterns of CTS were previously evidenced in individuals with hidden hearing loss.

Material and methods

For this study, we recorded MEG signals of 10 highly selected adults with impaired speech perception in noise (9 females, mean age: 27 years) and matched healthy subjects while they were listening to 4 recordings of stories with 9 different conditions (audio, audio-visual, audio-tactile, visual, tactile) with or without babble noise (i.e. cocktail party effect) while keeping the same signal-to-noise ratio at 0 dB (SNR). Afterwards, coherence, a way to analyze the synchronization between two phase-locked signals, was used to quantify the CTS between the magnetoencephalographic signals and the speech temporal envelope of the attended speech stream. We assessed comprehension after each video using forced-choice questions.

Results and conclusion

Our results showed that behavioral deficits were most apparent under noisy and multisensory conditions, while neurophysiological findings revealed enhanced phrasal CTS (<1 Hz) in patients with ISPiN, particularly in the left hemisphere, potentially reflecting compensatory mechanisms. In contrast, no significant syllabic CTS (4-8Hz) differences between groups were observed, supporting the notion of a functional dissociation between frequency bands. Moreover, congruent vibrotactile stimulation enhanced syllabic-level CTS across groups, suggesting a robust neural sensitivity to tactile cues even in the absence of behavioral gains.

Possible protective effects of ketamine on noise-induced hearing loss

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Introduction and aim: Ketamine, an N-methyl D-aspartate (NMDA) receptor antagonist, is a commonly used anesthetic in rodent models. Research has already observed minimal effects of ketamine on auditory brainstem response thresholds. In this preclinical animal study, we aimed to investigate the effect of ketamine on noise-induced hearing loss.

Material and methods: Permanent hearing loss was induced through narrowband noise exposure in *CDH23*-corrected C57BL/6N mice aged 10 months. Baseline and post-noise auditory functions were assessed using auditory brainstem responses and distortion product otoacoustic emissions. Auditory functions of animals exposed to noise while awake were compared with those of animals exposed to noise while under ketamine (100 mg/ml) and xylazine (20 mg/ml) anesthesia.

Results: Preliminary findings demonstrate significantly elevated hearing thresholds at all hearing frequencies in the cohort exposed to noise while awake when compared to the cohort exposed to noise while under anesthesia, indicating a possible protective effect of ketamine on noise-induced hearing loss.

Conclusions: Based on findings of the present study, we suggest a possible protective effect of the NMDA receptor antagonist ketamine on noise-induced hearing loss.

To Operate or Not to Operate : Management of Traumatic Stapedovestibular Luxation

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Introduction and aim :
Traumatic internal dislocation of the stapes into the vestibule is extremely rare due to the stapes' protected anatomical location. There is no standardized management , and treatment decisions require careful consideration of conservative versus surgical approaches. We report a case in which initial conservative management was complicated, ultimately requiring surgery.

Case report :

A 48-year-old woman sustained a right ear injury with a cotton bud and presented with hearing loss, vertigo, and nausea. Examination revealed a posterior tympanic membrane perforation, horizontal nystagmus, mild conductive hearing loss (air conduction 50–70 dB, bone conduction 10–20 dB), and pathological VHIT in all right semicircular canals. High-resolution computer tomography (HRCT) showed a fracture of the stapes footplate displaced into the vestibule without pneumolabyrinth. Conservative management included methylprednisolone, ciprofloxacin ear drops, and betahistine.Despite initial improvement in vertigo, 38 days post-injury the patient experienced severe recurrent vertigo, new tinnitus, and complete right-sided hearing loss. Repeat HRCT demonstrated persistent footplate indentation, superior footplate fracture, and vestibular pneumolabyrinth. Surgical intervention via a transcanal approach involved disarticulation of the incudostapedial joint, diode laser removal of the stapes suprastructure, and oval window obliteration with a composite graft of perichondrium and cartilage. Intraoperative dexamethasone was instilled into the tympanic cavity. At follow-up, the patient was fitted with a TriCross hearing device with right-sided white noise, reporting high satisfaction. A persistent optokinetic-type vertiginous sensation remained, and vestibular rehabilitation continued with good effect.

Conclusions :
There is no standardized management for stapedovestibular luxation. This case illustrates that an initial conservative approach may be associated with complications and may ultimately require surgical intervention. Nevertheless, this management approach resulted in a favorable functional outcome, allowing the patient to resume normal daily activities.

ROOM 1

Free communications Otology-Audiology

Phenotyping vestibulocochlear manifestations in Susac syndrome: a cohort study

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Introduction and aim Susac syndrome (SuS) is a rare immune-mediated endotheliopathy of cerebral, retinal and inner ear microvasculature causing a triad of encephalopathy, branch retinal artery occlusions and sensorineural hearing loss. Our aim is to characterize vestibulocochlear involvement in patients with SuS, since these manifestations have not yet been extensively studied in literature.

Materials and methods The electronic patient files of 23 patients with SuS are reviewed for data on demography, clinical presentation, disease course and audiovestibular testing.

Results All 23 patients experienced some form of audiovestibular complaints during the disease course, with vertigo and instability being most frequently reported, followed by hearing loss, tinnitus and aural fullness. These audiovestibular symptoms did not always coincide. Seventeen patients had objectified predominant low- to midfrequency sensorineural hearing loss and 10 out of 20 patients showed abnormalities on vestibular testing, most frequently vestibular evoked myogenic potential-abnormalities, indicating otolith dysfunction. Treatment protocols consisted of uniformly extensive immunosuppressive therapy and hearing loss remained mostly mild.

Conclusions Audiovestibular involvement is very common in patients with SuS. Characteristic findings include a “reverse-slope” configuration on audiological testing and otolith dysfunction on vestibular testing. Aggressive immunosuppression may prevent severe audiovestibular dysfunction. Symptoms as aural fullness and otolith dysfunction may indicate an underlying hydrops. Further investigations are necessary to elucidate the histopathological mechanisms underlying these preferentially involved cochleovestibular areas. Early recognition and treatment of SuS are important to stabilize or decrease disease activity and might also have beneficial effects on inner ear outcome.

Involvement of proprioceptive acuity in sensory reweighting processes in older adults: biomechanical and electroencephalographic correlates

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Introduction and aim: Sensory reweighting (SR) is an adaptive mechanism in changing sensory environments by adjusting the relative contributions of sensory systems in proportion to their reliability during maintaining balance. Yet, natural aging is associated with decreased SR efficiency. SR has been extensively explored using biomechanical measures which does not provide any insight into its neural correlates. This study aimed to investigate age-dependent changes in SR dynamics at the biomechanical and cortical level.
Material and methods: Seventeen healthy young and fourteen healthy old adults stood on a force plate, equipped with 64-channel EEG cap while kinetic perturbations at amplitudes of 0.4º, 0.8º, 1.6º, and 3.2º implied as rotational support surface movements about the ankle joint, each lasted 5 min, repeated twice in a random order. Temporal response function (TRF) of the center of pressure (COP) and cortical activity signals (EEG) were estimated with respect to the stimuli for each condition. A 2nd order polynomial was fitted to TRF amplitude plotted as a function of stimulus amplitude. SR indexes, were calculated as the opposite of the ratio of the 2nd-order coefficient to the 1st-order coefficient, were compared between groups with a paired t-test, and within groups with an independent t-test.
Results: COP-SR was higher in the young adults compared with the older adults. In contrast, EEG-SR of the young group and the old group did not significantly differ from each other. Within the old group, there was a non-significant trend of difference between modalities.
Conclusions: This could be the manifestation of compensatory strategies : a subject whose proprioceptive and motor faculties are reduced will be less able to reweight at the kinetic level. To maintain balance, they will have to increase their attentional resources to integrate information at the cortical level. This is reflected in functional tests: subjects with better performances in Timed Up and Go had better proprioceptive acuity and RS-COP.

Use of bioactive glass (S53P4) as obliteration material in subtotal petrosectomy: hygienic and otologic outcomes

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Introduction and Aim

Subtotal petrosectomy (STP) is a surgical procedure used to treat chronic suppurative otitis media (COM) without serviceable hearing. The procedure involves complete exenteration of all air cell tracts within the temporal bone, obliteration of the mastoid cavity and closure of the external auditory canal and eustachian tube. The aim is to isolate the middle ear and mastoid from the external environment, creating a sterile field offering a definitive solution for eradicating disease and preventing recurrent infection or complications related to open mastoid cavities in complex ears. Autologous abdominal fat graft is the most common obliterative material. However, complication rates range between 10 to 40%, including fat infection, necrosis and resorption, and umbilical wound infection. S53P4 bioactive glass, which possesses antibacterial properties, represents an excellent alternative. This study evaluates postoperative outcomes and complications of STP with S53P4 bioactive glass obliteration.

Materials and methods

We retrospectively reviewed patients who underwent STP with S53P4 bioactive glass obliteration at our institution between March 2022 and January 2026. Postoperative outcomes assessed included complications, functional perceptive hearing, and retro-auricular wound healing.

Results

13 patients were included, of whom 61,5% (n=8) had COM with cholesteatoma, 23,1% (n=3) had COM without cholesteatoma, and 15,4% (n=2) had spinocellular carcinoma of the external auditory canal. The mean age was 58 ± 17,8 years and mean follow-up duration was 10,3 ± 7,1 months . An average of 9,2 ± 4,0 cc bioactive glass was used. At 1 month follow-up, complications were observed in 38,4% (n=5) of patients. No complications were observed at 3-month and 1-year postoperative follow-up. Radiological evaluation of patients with cholesteatoma at 1 year follow-up showed no evidence of residual or recurrent disease.

Conclusion

Subtotal petrosectomy with S53P4 bioactive glass obliteration appears to be a viable alternative to fat obliteration, providing comparable functional outcomes while potentially reducing the risk of complications.

Two neuroplasticity pathways in tinnitus: distinguishing deafferentiation and trigeminocervical phenotypes

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Introduction and aim:
Tinnitus is most commonly explained by deafferentiation and maladaptive central auditory plasticity. However, experimental data and clinical observations increasingly demonstrate modulation of auditory pathways by trigeminocervical (TC) inputs. To better structure these findings, we propose a framework distinguishing two interacting neuroplasticity pathways: (1) deafferentiation-related pathological plasticity and (2) trigeminocervical input–driven adaptive plasticity linked to listening effort and alertness. Particular attention is given to the tensor tympani–tensor veli palatini (TT–TVP) axis within this broader network.

Conceptual framework:
The trigeminocervical system can be understood as a distributed control network regulating sensory gain and urgency. Motor components (including TT, TVP and other V/C2 musculature) and sensory trigeminal and upper cervical inputs converge on auditory processing centers. Under physiological conditions, this system enhances perceptual precision during focused listening. Under sustained strain or sensitization, the same circuitry may contribute to variable tinnitus, continuous tinnitus with peripheral symptoms, and distinct hyperacusis phenotypes.

Clinical implications:
This framework suggests that not all tinnitus should be approached in the same way. Beyond assessing hearing loss, clinicians should actively evaluate peripheral symptoms such as variability, sound sensitivity, ear pressure, and jaw or neck modulation. Identifying whether tinnitus is predominantly deafferentiation-related or trigeminocervical-dominant may help define clinically meaningful subgroups and guide further diagnostic evaluation.

Conclusions:
The primary implication of this model is diagnostic rather than therapeutic. Current tinnitus treatments are often applied to heterogeneous populations, which may explain inconsistent results in larger studies. A more structured phenotyping approach aimed at distinguishing relevant subgroups may be essential before treatment effects can be properly evaluated. Improving diagnostic precision may therefore represent a necessary first step toward more effective and evidence-based management.

Sensory trigeminocervical modulation in tinnitus: exploratory observations with bupivacaine

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Introduction and aim:
Within a trigeminocervical control framework of tinnitus, sensory inputs from trigeminal and upper cervical territories may dynamically influence auditory perception. We explored whether transient sensory blockade of these inputs modifies tinnitus expression and whether such effects differ across tinnitus phenotypes.

Material and methods:
In this retrospective case series, patients with subjective tinnitus underwent targeted infiltrations with bupivacaine 0.5% in selected trigeminal and upper cervical muscles and dermatomes, guided by clinical modulation testing. Tinnitus was categorized as continuous or variable (somatosensory, reactive or pulsatile). Degree and duration of perceived change were recorded using predefined clinical categories.

Results:
Transient tinnitus reduction was predominantly observed in patients with variable tinnitus, whereas continuous tinnitus showed limited or inconsistent change. Effects were not confined to a single anatomical structure, suggesting involvement of a distributed trigeminocervical sensory network.

Conclusions:
These observations provide preliminary support for a sensory trigeminocervical contribution to tinnitus modulation, particularly in variable phenotypes. Although causal inference is limited by the retrospective design and absence of placebo control, the findings refine the sensory arm of the trigeminocervical control model and warrant prospective controlled investigation.

Motor trigeminocervical modulation in pain hyperacusis: exploratory observations with botulinum toxin

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Introduction and aim:
Within a trigeminocervical control model of sound-related disorders, motor components may play a differential role across phenotypes. Pain hyperacusis, characterized by sound-evoked otalgia, may reflect a stronger motor trigeminocervical contribution than tinnitus alone. We explored whether targeted motor modulation with botulinum toxin is associated with phenotype-specific responses.

Material and methods:
In this exploratory case series, patients with pain hyperacusis received botulinum toxin injections primarily targeting tensor veli palatini and additional trigeminocervical muscles as clinically indicated. Concomitant pharmacotherapy was frequently administered. A contemporaneous tinnitus cohort treated in routine care served as a comparative reference; treatment protocols were not matched. Outcomes were based on patient-reported pain reduction and functional sound tolerance.

Results:
Several patients with pain hyperacusis reported meaningful functional improvement, including reduced sound-evoked pain and increased daily participation. In contrast, the tinnitus reference cohort demonstrated inconsistent and often transient changes. No serious adverse events were observed.

Conclusions:
Although placebo effects, co-treatment and non-standardized protocols preclude causal inference, the differential response pattern suggests a more prominent motor trigeminocervical contribution in pain hyperacusis than in tinnitus alone. These findings refine the motor dimension of the trigeminocervical control framework and highlight the need for structured, placebo-controlled studies with standardized phenotyping.

Title:
Simultaneous cochlear implantation following translabyrinthine vestibular schwannoma resection guided by intraoperative eABR

Authors:
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Introduction and aim:
Sporadic vestibular schwannomas (VS) frequently lead to progressive sensorineural hearing loss (SNHL). Even when the cochlear nerve is anatomically preserved during microsurgical resection, functional hearing preservation is often limited. In cases of post-operative single-sided deafness, rehabilitation options such as CROS devices do not restore binaural hearing, and delayed cochlear implantation (CI) may be compromised by cochlear fibrosis. Simultaneous CI following translabyrinthine resection, guided by intraoperative electrically-evoked auditory brainstem recording (eABR), has been proposed to restore auditory perception. The aim of this study was to evaluate early audiological outcomes of this approach.

Material and methods:
Five patients with sporadic VS underwent translabyrinthine tumor resection with anatomical preservation of the cochlear nerve and simultaneous cochlear implantation at our institution between 2021 and 2025. Intraoperative eABR was recorded using Auditory Nerve Test System (ANTS) to assess cochlear nerve integrity. Recordings were obtained before labyrinthectomy and after tumor resection. Simultaneous CI was performed in case of reproducible (wave V) responses. Audiological outcomes were evaluated pre-operatively and during follow-up.

Results:
Vestibular schwannomas were graded Koos I (n=3) and II (n=2). Mean age at implantation was 56.4 years. All patients showed positive intraoperative eABR and received simultaneous CI. Mean preoperative pure-tone average (PTA, at 500, 1000 and 2000 Hz) was 57.8 $\pm$ 17.4 dB HL. At last follow-up (6 or 12 months after fitting), mean PTA was 36.8 $\pm$ 7.4 dB HL. No major peri-operative complications occurred.

Conclusions:
Simultaneous CI following translabyrinthine VS resection, guided by intraoperative eABR, should be considered to restore binaural hearing. Our findings support the role of simultaneous implantation in carefully selected patients with preserved cochlear nerve function.

Genetic testing for hearing loss: results of a survey among Belgian ENT specialists

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Introduction and aim: The Belgian members of the genetic hearing loss workgroups of ERN CRANIO (European Reference Network for rare and/or complex craniofacial anomalies and ENT disorders) and VNZZ (Flemish Network of Rare Diseases) aimed to investigate current practices and opinions regarding genetic testing in patients with hearing loss.
Material and methods: Questions were prepared by the members by mutual agreement and presented via Google Forms. Members of the Royal Belgian Society for Ear, Nose, Throat, Head and Neck Surgery were invited to participate by e-mail and during the annual congress.
Results: Forty-five ENT doctors participated in the survey, with a good distribution in terms of geography, work setting, and years of experience. Eighty percent had prescribed genetic testing for hearing loss in the past year. The advantages for clinicians of establishing a genetic cause are numerous (prediction of disease evolution, possible syndromic involvement, recurrence risk counselling, etc). Forty-four percent replied that every ENT doctor should be allowed to prescribe genetic testing for hearing loss, whereas only 13% believe every ENT doctor should be allowed to counsel patients about the genetic result. The latter is preferably reserved for ENT doctors experienced in genetic hearing loss (58%) or for a reference center offering otogenetics consultation (27%). Ninety-six percent of respondents would appreciate receiving more information about the diagnostics of genetic hearing loss.
Conclusions: Genetic diagnosis in patients with hearing loss offers several advantages, although experience in counselling appears essential. Given the rapidly evolving nature of the field, additional information and updates would be appreciated.

Long-term safety and hygienic outcomes of canal wall up bony obliteration tympanoplasty in adult cholesteatoma surgery

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Introduction and aim

Canal wall up bony obliteration tympanoplasty (CWU+BOT) has been introduced to improve long-term safety and hygienic outcomes in the surgical management of extensive cholesteatoma by eliminating poorly ventilated mastoid and epitympanic spaces. Extensive cholesteatoma is typically associated with destruction of the ossicular chain and advanced middle ear disease. While favourable results have been reported in paediatric populations, long-term outcome data in adults with extensive disease remain limited. The aim of this study is to evaluate the long-term safety and hygienic outcomes of CWU+BOT in adults with extensive acquired cholesteatoma.

Materials and methods

A retrospective analysis was performed on adult patients treated with CWU+BOT for extensive acquired cholesteatoma in a tertiary referral centre between 2012 and 2018. Only cases with advanced disease requiring mastoid and epitympanic obliteration were included. Patients treated with partial bony obliteration tympanoplasty with an intact ossicular chain, patients without mastoid involvement (and therefore no mastoidectomy), subtotal petrosectomy, congenital cholesteatoma, external auditory canal cholesteatoma, and petrous apex cholesteatoma were excluded.

The surgical technique consisted of complete cholesteatoma removal with preservation of the posterior canal wall, followed by bony reconstruction and obliteration of the mastoid and epitympanic space, leaving no irregularities in the bony barrier by sealing them with hydroxyapatite cement. Follow-up included regular clinical examination with micro-otoscopy and non-echo planar diffusion-weighted magnetic resonance imaging for detection of residual disease. Outcome measures were residual and recurrent cholesteatoma rates, postoperative hygienic status, presence of otorrhoea, re-operative rate, and long-term complications.

Results

A total of 115 adult patients met the inclusion criteria. CWU+BOT resulted in stable, dry, and self-cleaning ears in the vast majority of patients at long-term follow-up. Residual and recurrent cholesteatoma rates were low. The residual rate at 5 years was 1.8% and the recurrence rate at 5 years was 3.0%. No major long-term complications related to the obliteration technique were observed. The overall re-operative rate was 23.5%.

Conclusions

In adults with extensive acquired cholesteatoma, CWU+BOT is a safe and reliable surgical technique providing excellent long-term hygienic outcomes with low residual and recurrence rates. It contributes to durable disease control while minimizing postoperative morbidity and the need for revision surgery.

ROOM 1

Free Communications: Laryngology, Head and Neck Pathology

Effectiveness of a standardized treatment including complete tumor and gland removal followed by adjuvant radiotherapy in patients affected by recurrent pleomorphic adenoma.

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Introduction and aim: The rate of recurrence after surgery for pleomorphic adenoma (PA) is around 2-3% even in the best series. Treatment of recurrent PA (RPA) is surgical, but there is no consensus on the extent of the procedure and the indication for adjuvant radiotherapy (RT). Surgery for RPA is affected by higher rates of complications and re-recurrences.
The present study aims to investigate the rate of re-recurrence and complications, together with any potential associated factor, in a cohort of patients who underwent a standardized treatment for RPA, including the complete removal of the scar, the macroscopic disease and the remaining glandular tissue with retrograde dissection of the facial nerve, followed by adjuvant RT.
Material and methods: Patients treated for RPA of the parotid or submandibular gland by the ORLHNS Department of the University Hospitals Leuven between 1989 and 2025 were included. Rates of re-recurrence and complications were calculated, potential prognostic factors for re-recurrence were investigated.
Results: Eighty-two patients were included, 68 of which underwent surgery and adjuvant RT, the remaining 14 surgery as monotherapy. Median follow-up was 9.2 years. The rate of re-recurrence among patients who underwent surgery and RT was 8.8%, while it reached 28.6% for those who underwent surgery monotherapy. There were no associations between the rate of re-recurrence and any studied variable. No patient treated with surgery and RT developed subsequent malignant transformation.
The rate of postoperative facial nerve weakness was 39.0%, higher compared to the rate after primary surgery (7.5%). The presence of a facial nerve deficit at primary surgery significantly increased the risk for the same deficit at radical surgery ($p<.0001$).
Conclusions: A standardized treatment encompassing complete surgery and adjuvant RT offers optimal local control for treatment of RPA. The addition of adjuvant RT reduces the rate of re-recurrence. Facial nerve complications in redo surgery are more frequent compared to primary surgery.
of the facial nerve, followed by adjuvant RT.

Title

Mucocutaneous Leishmaniasis with Head and Neck Involvement in a Non-Endemic Setting: Diagnostic Challenges in an ENT Case Series

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Introduction and aim

Mucocutaneous leishmaniasis (ML) is rare in Europe and may mimic inflammatory or malignant disease in the head and neck. We describe a case series of patients diagnosed with head and neck leishmaniasis in a non-endemic setting, highlighting diagnostic pitfalls and the importance of thorough history taking.

Case report

Three patients with head and neck involvement of leishmaniasis were identified at our institution. One case is presented in detail due to its atypical and misleading presentation. The patient developed progressive hyperplastic lesions of the nasal and oral mucosa, associated with chronic non-healing cutaneous toe lesions. Multiple biopsies revealed non-specific chronic granulomatous inflammation, resulting in a broad differential diagnosis including malignancy, autoimmune disease, vasculitis, syphilis, and infectious complications after intravesical bacillus Calmette–Guérin therapy. Travel history was not initially explored; retrospective assessment revealed travel limited to Europe, including Turkey and southern Spain (Málaga), both endemic regions. Definitive diagnosis was achieved by targeted biopsy with Giemsa staining and polymerase chain reaction (PCR), enabling species identification and appropriate antileishmanial therapy. Management required multidisciplinary collaboration.

Conclusions

ML may present with heterogeneous and deceptive mucosal lesions in non-endemic regions. In persistent granulomatous disease of the head and neck, especially in immunocompromised patients, leishmaniasis should be considered. Early consideration and systematic assessment of travel history may prevent diagnostic delay and unnecessary interventions.

Office-Based Blue-Laser Treatment for Reinke Edema and Vocal Fold Polyps

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Introduction and aim: To date, most laryngologists treat Reinke edema (RE) and vocal fold polyps (VFP) in the operating room. Few studies have reported multidimensional voice outcomes following office-based blue laser (OBL) resection. This study investigates the feasibility, kinetic regression, and voice outcomes of OBL for RE and VFP.

Material and methods: Patients with VFP or RE were consecutively recruited from a European voice clinic and were treated with OBL. Clinical evaluations were performed at baseline, 1 month, and 3 months post-OBL, including Reflux Symptom Score (RSS) and Reflux Sign Assessment (RSA). Voice quality was assessed using VHI, GRBASI, AVQI, DSI, MPT, intensity range, and acoustic parameters. Univariate analysis explored associations between variables.

Results: Twenty-three RE and 13 VFP were included; no adverse events occurred. RE showed significant decrease at 3-months, with significant increased F0 and HNR. No changes were objectified at 1-month post-treatment. VFP demonstrated complete regression at 3-months (75–100% in all cases). In this group, MPT, sCPP, and RSS significantly increased at 3-months, while %shimmer and HNR significantly improved at 1- and 3-months. Patient age was associated with the changes of MPT (r=-0.506), percent jitter (r=0.510), F0 range (rs=0.592), sCPP (rs=-0.516), and AVQI (rs=0.409). Reflux had no impact on voice outcomes.

Conclusion: OBL is a feasible and safe procedure for VFP and RE , achieving short-term maximum voice quality improvement after 3 months for Reinke edema and between 1- and 3-month post-OBL for vocal fold polyps.

Are autoimmune neuropathy and a history of cervical surgery contraindications to laryngeal reinnervation?

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Introduction

Unilateral recurrent laryngeal nerve reinnervation using the ansa hypoglossi is a well-established surgical technique in the management of unilateral vocal fold paralysis. Certain complex clinical scenarios, particularly a history of cervical spine surgery or autoimmune neuropathies, may raise concerns regarding suboptimal outcomes or even surgical failure.
The question therefore arises as to the feasibility and appropriateness of this approach, given that other validated therapeutic options are available.

Case Report

We report two cases illustrating these particular situations.

The first case involves a patient presenting with unilateral vocal fold paralysis following cervical discectomy. Postoperative tissue changes made surgical exposure and identification of neural structures challenging.

The second case concerns a patient with systemic lupus erythematosus, treated with immunosuppressive therapy, presenting with neuropathy responsible for laryngeal dysfunction. In this context, the surgical indication required careful consideration of the expected quality of reinnervation in an immunologically compromised patient.

In both cases, reinnervation was successfully performed without intraoperative complications. Excellent long-term functional outcomes were achieved.

Conclusion

Laryngeal reinnervation in non-conventional clinical settings represents a genuine surgical challenge, and both feasibility and relevance must be carefully assessed prior to surgical indication. However, a history of cervical surgery or autoimmune neuropathy should not be considered absolute contraindications.

Title

Pediatric Papillary Thyroid Carcinoma with Extensive Cervical Lymphadenopathy: Surgical Strategy, Radioiodine Decision-Making, and the Role of NIRAF

Authors

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Abstract

Introduction and aim: Papillary thyroid carcinoma (PTC) is a rare malignancy in children, with only one to three cases per 1 million children per year. Despite excellent long-term survival, pediatric PTC frequently presents with more advanced cervical nodal disease compared to adults. The key challenge is balancing durable locoregional control with minimal treatment-related morbidity. This case report aims to (1) illustrate a pediatric presentation with extensive lymphadenopathy, (2) summarize the surgical approach and postoperative decision-making regarding radioactive iodine (RAI), and (3) highlight the potential role of NIRAF (near infrared auto-fluorescence) to support parathyroid identification and preservation during extensive neck surgery.

Case report: A 7-year-old boy presented with a painless, firm left-sided swelling of the neck and multiple palpable cervical lymph nodes. Infectious and inflammatory causes were excluded, including negative tuberculosis screening and normal blood tests. Neck ultrasound demonstrated a suspicious thyroid nodule and multiple pathological left cervical lymph nodes. After multidisciplinary discussion, the patient underwent total thyroidectomy with compartment-based central neck dissection (level VI) and bilateral lateral neck dissection (levels IIa-IV). Histopathology confirmed PTC with metastatic nodal disease in the central compartment and left lateral neck (pT2N1b). Postoperative surveillance showed decreasing thyroglobulin (Tg) levels. Using a risk-adapted pediatric strategy, immediate RAI was deferred pending biochemical and structural follow-up.

Conclusions: This case underscores early recognition of rare pediatric PTC in persistent cervical lymphadenopathy to enable timely and individualized care. Compartment-oriented surgery can provide effective locoregional management, while adjunctive technologies such as NIRAF may help reduce morbidity related to parathyroid injury. Risk-adapted follow-up using Tg trends supports individualized decisions regarding RAI in infants.

Less bleeding, more safety : The impact of preoperative embolization in a giant infiltrating cervical angiolipoma – A case report

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Introduction
Giant infiltrating angiolipoma is a benign mesenchymal tumor composed of mature adipocytes associated with a prominent vascular component, resulting in marked hypervascularization that may represent a significant challenge during surgical excision. Although angiolipomas are relatively frequent in certain anatomical locations, involvement of the otorhinolaryngological (ENT) region remains rare, with only a limited number of cases reported in the literature.

Case report
We report the case of a 51-year-old patient presenting with a progressively enlarging right cervical mass, in whom radioclinical investigations established the diagnosis of a giant infiltrating intramuscular angiolipoma. Preoperative management consisted of selective arterial embolization performed by interventional radiology the day before surgical resection. Although preoperative embolization is a well-established and validated strategy for the management of hypervascular tumors in other anatomical sites, its application in the ENT region remains, to our knowledge, exceptional. Following a systematic review of the scientific literature, no previous cases of preoperative embolization for an ENT angiolipoma were identified, likely due to the extreme rarity of this entity in this location. This combined therapeutic approach enabled complete surgical excision of the lesion, without hemorrhagic complications or the need for blood transfusion, with a favorable postoperative course and no evidence of recurrence to date.

Conclusion
We report the first described case of a giant infiltrating cervical angiolipoma managed with preoperative arterial embolization. This observation highlights the major value of a multidisciplinary approach integrating interventional radiology in the management of rare hypervascular ENT tumors, allowing optimization of surgical safety through significant reduction of hemorrhagic risk.

ROOM 1

Free Communications: Rhinology

Identifying patients at risk for early dissatisfaction after rhinoplasty: a PROM-based prediction model

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Introduction and aim: Although septorhinoplasty often results in high satisfaction rates, a notable minority of patients remain dissatisfied during early recovery. Predicting which patients are at greater risk of early dissatisfaction using preoperative data remains a challenge. This study aimed to develop and internally validate a multivariable prediction model for early postoperative dissatisfaction after septorhinoplasty, using preoperative patient-reported outcome measures (PROMs) and demographic variables.

Material and methods: This retrospective single-center cohort study included 526 consecutive patients undergoing primary or revision septorhinoplasty between August 2019 and May 2025. Early dissatisfaction was defined as a global satisfaction VAS score ≤ 6 at 3 months postoperatively. Prespecified predictors included aesthetic (FACE-Q nostrils, FACE-Q nose, SCHNOS-C), functional (NOSE, SCHNOS-O), and psychological (UQ, BDDQ-AS) PROMs, as well as demographic and clinical variables. Missing data were handled using multiple imputation. Logistic regression models were fitted, followed by penalized regression (Ridge, LASSO, Elastic net) to address collinearity and overfitting. Model performance was assessed using discrimination, calibration, and internal validation in accordance with TRIPOD guidelines.

Results: Among individual PROMs, the preoperative FACE-Q nostrils score showed the strongest standalone discrimination for early dissatisfaction (AUC ≈ 0.61), with a graded association across score quartiles. A multivariable model including FACE-Q nostrils, age and revision status demonstrated improved discrimination (AUC ≈ 0.66). These predictors were

consistently retained across penalization strategies, without meaningful gains from elastic net modelling.

Conclusions: This study shows that early postoperative dissatisfaction after septorhinoplasty can be modestly predicted using a multivariable model based on preoperative PROMs and demographic factors, primarily supporting personalized risk estimation and improved preoperative counseling.

Disease-modifying effects of dupilumab on IL-4/IL-13–driven basal cell dysfunction and epithelial barrier remodeling in Chronic Rhinosinusitis with Nasal Polyps

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Introduction: Chronic rhinosinusitis with nasal polyps (CRSwNP) is characterized by type 2 (T2) inflammation, epithelial barrier dysfunction and airway remodeling. Airway basal cells (BCs) are epithelial progenitor cells essential for the epithelial integrity and tissue remodeling. Their dysregulation in AR has recently been reported by our research group.

Aim: To investigate BC migration and proliferation in CRSwNP, identify mediators driving BC proliferation *in vitro* and to evaluate the effects of dupilumab on BC abundance and barrier dysfunction in CRSwNP.

Material and methods: Nasal epithelial cells were isolated from inferior turbinates of controls and CRSwNP tissue. Double-positive BCs ($CD142^+CD151^+$) were sorted, cultured, and analyzed for their migratory capacity and proliferation with/without mediator stimulation (IL-4 and/or IL-13, EGF and TGF-β). In a double-blind, placebo-controlled trial, 24 CRSwNP patients received placebo (n = 6) or dupilumab (n = 18) for 6 months. Nasal biopsies were collected at baseline, 3 months and 6 months and stained for BCs ($KRT5^+$). Besides, bulk RNA sequencing was performed on nasal biopsies from both groups.

Results: CRSwNP patients showed increased abundance, hypermigration and hyperproliferation of BCs. Stimulation of healthy BCs with the combination of IL-4 and IL-13 significantly increased BC proliferation, whereas EGF and TGF-β did not. CRSwNP BCs were unresponsive to IL-4/IL-13. Dupilumab significantly decreased epithelial BC abundance at 3 and 6 months to levels similar of healthy controls and showed reduced BC remodeling markers (KRT13, KRT6B) on bulk RNA sequencing.

Conclusions: BCs in CRSwNP show hypermigration and hyperproliferation. Hyperproliferation of healthy BC is induced by type 2 cytokines IL-4 and IL-13. In patients, Dupilumab restores BC homeostasis by decreasing their abundance, proliferation and remodeling markers, demonstrating disease-modifying effects.

ROOM 2

RBS Lecturer Award in in Laryngology, Head and Neck Pathology

Mucous versus epidermoid vocal fold cysts: clinical, surgical, and phoniatric outcomes

F. Vandenbeylaardt; D. Morsomme; C Finck

ENT Department CHULiege, Liège, Belgium; Faculty of Medecine, Uliege, Belgium; RUCHE, Department of Speech and Language Therapy, Faculty of Psychology, Uliege, Belgium

Introduction:
Vocal fold cysts are a frequent cause of dysphonia and mainly include epidermoid and mucous types, which differ histopathologically and may present distinct clinical and postoperative outcomes. Comparative data on their functional evolution after phonomicrosurgery remain limited. This study compares clinical features, surgical outcomes, and short- and long-term voice results between epidermoid and mucous vocal fold cysts.

Methods:
A retrospective cohort study including 69 patients who underwent a mini-microflap excision (last author) of vocal cyst between 2014 and 2024.

Data collected include demographic characteristics, histological type, recurrence, contralateral involvement, follow-up duration, and voice evaluations performed preoperatively, postoperatively, and at last follow-up. Voice assessment comprise perceptual (GRBAS), aerodynamic (TMP), patient-reported (VHI), and acoustic parameters (jitter, DSI). Statistical analyses used nonparametric tests with significance set at $p \leq 0.05$.

Results:
The cohort is mainly female (88%), with a median age of 39.5 years. Thirty-five patients had epidermoid cysts and 34 had mucous cysts. Recurrence (11.1%) and contralateral vocal fold lesions (18.5%) occurred only in epidermoid cysts, which also had longer follow-up. Preoperative findings were similar between groups. Postoperatively, perceptual grade, VHI, and DSI favored mucous cysts. At last follow-up, GRBAS scores and VHI remained significantly worse in epidermoid cysts.

Conclusion:
Epidermoid cysts are associated with higher recurrence, contralateral involvement, and poorer long-term voice outcomes, supporting histology-based management and extended follow-up.

Non-selective unilateral laryngeal reinnervation for unilateral vocal fold paralysis: a retrospective case series

Authors: A. Petrosyan, J. Meulemans

Institution: KU Leuven, Leuven, Belgium

Introduction and aim:

Unilateral vocal fold paralysis (UVFP), most commonly caused by recurrent laryngeal nerve dysfunction, may result in dysphonia, dysphagia, aspiration, and dyspnea. First-line treatment is usually voice therapy, while the main surgical options include injection laryngoplasty and medialization thyroplasty. Although these static procedures improve glottic closure, their long-term benefits are limited. Non-selective, ansa cervicalis-to-recurrent laryngeal nerve (ANSA-RLN) reinnervation aims to restore dynamic muscle tone by re-establishing laryngeal innervation. This study evaluated the efficacy of ANSA-RLN reinnervation on objective and subjective voice outcomes and glottic function.

Material and methods:

A monocentric retrospective case series was conducted including 15 patients treated with ANSA-RLN reinnervation between Jan. 2019 and Dec. 2024. Laryngostroboscopy, laryngeal electromyography and vocal function assessment (including maximal phonation time [MPT], acoustic voice quality index [AVQI], dysphonia severity index [DSI], GRBASI scale and voice handicap index [VHI]) were performed pre- and postoperatively. Postoperative outcomes were analyzed at short-term (≤8 weeks), mid-term (≤8 months), and long-term (≤2 years) follow-up. The mean follow-up period was 13.4 ± 6.0 months, ranging from 4 to 24 months.

Results:

AVQI and VHI decreased significantly over time ($p = 0.027$; $p < 0.001$). Significant improvements were observed in GRBASI grade, asthenia, and instability, particularly at long-term follow-up ($p = 0.035$; $p = 0.018$; $p = 0.023$). Laryngostroboscopy demonstrated a significant improvement in glottic closure ($p < 0.001$). L-EMG confirmed reinnervation in 72.7% of patients from mid-term follow-up onwards ($p = 0.002$).

Conclusions:

ANSA-RLN reinnervation led to sustained improvements in voice quality an glottic closure, with objective evidence of reinnervation in most patients. These results support ANSA-RLN reinnervation as a safe and effective treatment for UVFP.

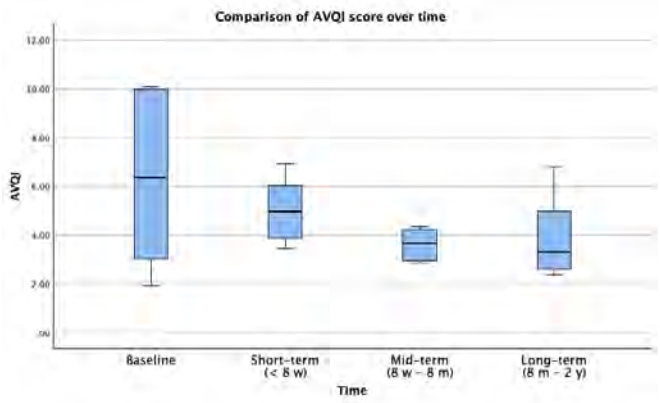

Figure 1: AVQI score: development over time points.

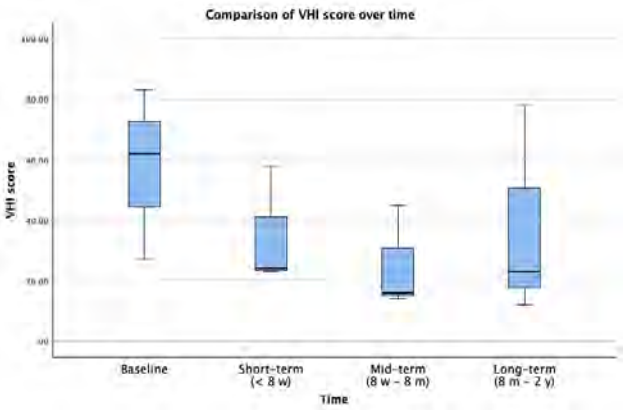

Figure 2: VHI score: development over time points.

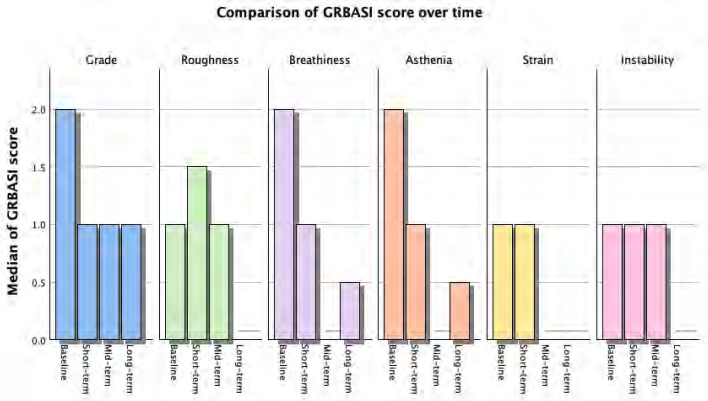

Figure 3: GRBASI score: development over time points.

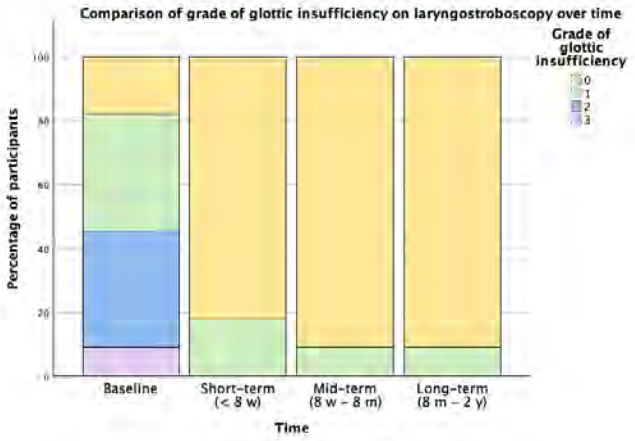

Figure 4: Grade of glottic insufficiency: development over time points.

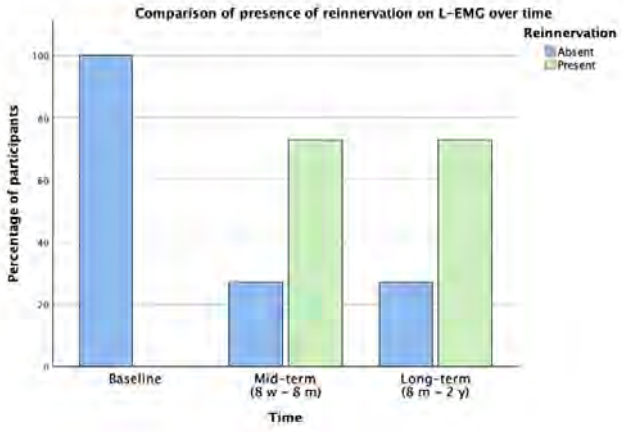

Figure 5: Reinnervation: development over time points.

Title: Study of the PD-L1 expression, T-cells density and immunoscore in paired baseline tumor biopsies and surgical specimens in squamous cell carcinoma of the oral cavity.

Authors: Beyaert S[1]*, Borys A[2]*, Baldin P[3], Dahou H[2], Magremanne M[4], Mahy P[4], Renwart W[5], Machiels JP[6], Schmitz S[1.]
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Abstract

Objectives: Primary objective was to evaluate the correlation between immune marker expression in baseline tumor biopsies and their respective surgical specimens in squamous cell carcinoma of the oral cavity (OCSCC). Secondary objective was to assess the impact of these markers on overall (OS) and disease-free survival (DFS).

Materials and methods: Patients with a histological diagnosis of oral squamous cell carcinoma treated surgically between 2012 and 2020 were included in this retrospective, translational monocentric study. The expression of PD-L1, T-cells markers and an OCSCC-adapted immunoscore were evaluated by multiplex immunohistochemistry.

Results: One hundred and four patients (mean: 58 years) were included. Seventy patients had paired samples available. Poor correlation was highlighted for PD-L1-positive surface expression ($r = 0.29$) and combined positive score (CPS). For CPS ≥ 20 and CPS ≥ 1, correlation coefficient r was 0.24 and 0.46 respectively. T-cells density showed also poor correlation with a r of 0.57 and 0.31 for CD3 and CD8 T-cells, respectively. Univariate survival analyses showed significant better OS and DFS ($P < 0.05$) for patients with stage III-IV OCSCC with a high compared to a low immunoscore, based on surgical samples only.

Conclusion: Our study showed poor correlation in PD-L1 expression, CPS, T-cells density and immunoscore between baseline tumor biopsies and surgical resection specimens. In addition,

the immunoscore may emerge as a potential prognostic factor in advanced squamous cell carcinoma of the oral cavity. If surgical specimens are available, they may be of interest for clinical practice decision.

Title A retrospective review of a 4,5-year experience in office based laryngeal procedures

Authors D. Vande Vyvere, M. Rathé
Institution AZ Delta

Abstract Introduction and aim:
Office based laryngeal procedures offer expanding diagnostic and therapeutic possibilities in the management of laryngeal pathology. This study aims to evaluate the indications, feasibility and outcomes of these procedures performed at a supraregional hospital.

Material and methods:
A retrospective cohort study was conducted including 204 procedures performed in 185 patients over a 4,5-year period. Demographic data were collected. For each procedure indication, patient tolerance, complications and need for a second intervention were compiled. In patients undergoing vocal fold augmentation, laryngeal pathology, final vocal fold position and mobility in cases of paresis and objective and subjective voice parameters were assessed. For biopsies, lesion location and the interval between initial presentation and histopathological diagnosis were reviewed. Foreign body removal and other procedures were also included.

Results:
Seventy-eight (37.3%) vocal fold augmentation were performed, 97 (47.5%) biopsies and 12 (5.9%) foreign body removals. Other interventions accounted for 19 (9.3%) procedures. Adequate tolerance was achieved in 198 procedures (97.1%), intolerance (2.9%) was mainly due to gag reflex and coughing. No major complications occurred in 198 procedures (97%). Occured complications (9%) included stress-related symptoms (hyperventilation, vasovagal reaction), need for additional hemostasis with local adrenaline and dyspnea.
Most augmentations were performed for vocal fold paresis (84.2%) and recovery of vocal fold mobility within one year occurred in 13 patients (20.3%). AVQI, DSI and GRBAS scores improved significantly after augmentation ($p < 0.05$). A second intervention was required in eight patients (14.5%). After biopsy eight patients (8.2%) required a second biopsy via direct laryngoscopy due to questionable initial result. Mean time between initial presentation and the procedure was 10.10 days. All foreign body removals were successful.

Conclusions:
With appropriate indication and careful patient selection, office based laryngeal procedures are safe and a valuable addition to current diagnostic and therapeutic strategies for laryngeal pathology.

TITEL

Multidisciplinary management of paradoxical vocal fold movement in infants: a case series and literature review.

AUTHORS

S. Aerts, R. Luscan, B. Thierry, A. Boudewyns, K. van Hoorenbeeck, A. C. Jansen, N. van der Poel

INSTITUTIONS

Universitair Ziekenhuis Antwerpen (Antwerp - Belgium), Hôpital Universitaire Necker-Enfants Malades (Paris - France)

ABSTRACT

Introduction and aim: Paradoxical vocal fold movement (PVFM) is an under-recognized cause of stridor and respiratory distress in infants, often misdiagnosed as laryngomalacia or bilateral vocal fold immobility (BVFI) due to overlapping clinical features. The condition is poorly understood in this age group, with limited data on its pathophysiology and management. This study presents a case series and literature review to emphasize the need for a multidisciplinary approach to diagnose and manage PVFM in infants.

Material and methods: We retrospectively reviewed infants diagnosed with PVFM before six months of age at two tertiary centers (UZA and Hôpital Universitaire Necker-Enfants Malades) between 2018 and 2025. Clinical presentation, diagnostic investigations, treatment strategies, and outcomes were analyzed. Furthermore, a literature review was performed to identify multidisciplinary diagnostic and therapeutic options.

Results: Thirteen infants, all referred for inspiratory stridor, were identified with PVFM on fiber laryngoscopy. Additional evaluations included direct laryngoscopy, polysomnography, neuroimaging, cardiac imaging, and genetic or neurological testing, depending on clinical presentation. Obstructive sleep apnea (OSA) was diagnosed in 62%. Management included continuous positive airway pressure (CPAP), anti-reflux therapy, nutritional support, and feeding interventions by speech therapists. Ten patients experienced resolution of symptoms within 4 months to 3 years (mean 7 months). Two infants required ongoing CPAP therapy; one was lost to follow-up.

Conclusion: PVFM should be considered in infants with persistent stridor after exclusion of laryngomalacia and differentiated from BVFI. Acute clinical awareness, appropriate diagnostic work-up, and tailored multidisciplinary management are essential. Further research is needed to clarify the epidemiology and develop standardized diagnostic and therapeutic protocols for PVFM in infants.

Title: laryngeal telangiectasia causing life-threatening airway obstruction during pregnancy: a case report

Authors: V. Quataert, P. Tomassen

Institution: Ghent University Hospital, Ghent, Belgium

Abstract body:

Introduction and aim:
Hereditary haemorrhagic telangiectasia (HHT) is a rare autosomal dominant vascular disorder characterised by mucocutaneous telangiectasia and visceral arteriovenous malformations. Laryngeal involvement is exceptionally rare, with only a few cases described. We report a case of severe laryngeal telangiectasia in a pregnant woman, leading to progressive airway obstruction and major multidisciplinary management challenges.

Case report:
A 30-year-old woman at 30 weeks of gestation presented with progressive dyspnoea, inspiratory stridor and dysphonia evolving over three weeks. She reported long-standing epistaxis, recurrent haemoptysis and mucocutaneous telangiectasia of the lips and oral cavity. Pulmonary function tests showed severely flattened inspiratory curves consistent with extrathoracic airway obstruction. Flexible laryngoscopy revealed diffuse telangiectatic lesions of the larynx, with marked bilateral submucosal swelling of the vocal folds, suggestive of vascular proliferation and possible submucosal bleeding.
Given the high bleeding risk, laryngeal biopsy and intervention were avoided during pregnancy. CT of the thorax showed no pulmonary arteriovenous malformations. Abdominal ultrasound was normal. Genetic testing demonstrated a pathogenic variant in *RASA1*, consistent with a vascular malformation syndrome in the differential diagnosis of HHT. The patient required systemic corticosteroids to maintain airway patency and was considered at high risk for both intubation and neuraxial anaesthesia. A planned caesarean section was performed in a tertiary care centre. Postpartum, laryngeal biopsies confirmed a benign vascular proliferation compatible with telangiectasia. The laryngeal symptoms gradually improved after delivery.

Conclusions:
Laryngeal telangiectasia is an extremely rare but potentially life-threatening manifestation of vascular malformation syndromes. Pregnancy may exacerbate symptoms due to haemodynamic and hormonal changes. This case highlights the importance of early recognition, cautious airway management and multidisciplinary coordination in pregnant patients with suspected HHT and upper airway involvement.

ABSTRACT B-ORL SPRING MEETING

Complications and Risk Factors After Total Thyroidectomy for Benign Disease: A Retrospective Monocentric Cohort Study

D. Coppens, N. Van De Putte, A. Laenen, D. Di Santo, J. Meulemans, V. Vander Poorten

UZ Leuven, Belgium

Introduction and aim:
Total thyroidectomy is a frequently performed procedure but remains associated with relevant postoperative morbidity. Understanding of complication rates and modifiable risk factors is essential to improve surgical outcomes. This monocentric retrospective cohort study aimed to determine the incidence of complications following total thyroidectomy for non-malignant indications and to identify associated risk factors. Particular emphasis was placed on the influence of surgical technique and the use of the harmonic scalpel (HS) on postoperative complications.

Material and methods:
We conducted a retrospective cohort study including all patients who underwent total thyroidectomy for benign thyroid pathology between January 2007 and December 2013 at UZ Leuven. Patients with malignant tumors were excluded. Demographic data, indication for surgery, comorbidities, surgical technique, and use of the HS were collected from medical records. Primary outcomes were postoperative complications: recurrent laryngeal nerve (RLN) palsy, hypoparathyroidism, hypocalcemia, post-operative infection, and post-operative hematoma. Univariate and multivariate analyses were performed to identify risk factors associated with complications and to evaluate the impact of surgical technique and HS use.

Results:
A total of 935 patients who met inclusion criteria were analyzed. Overall complication rates included transient (7,1%) and permanent (1,4%) RLN palsy, transient (27%) and permanent (6,5%) hypoparathyroidism, postoperative hypocalcemia (56%), wound infection (2,8%) and hematoma (1,9%). The use of the HS was significantly associated with less hypocalcemia (p= 0,018) and hypoparathyroidism (p= 0,003). This also applied to the group of the new surgical technique (p <0,0001). No effect was noted on the other complications. Multivariate analysis showed the independent effect of HS (p= 0,034) and new surgical technique (p<0,0001) to be still significant on the rate of hypoparathyroidism.

Conclusions:
Total thyroidectomy for benign disease is generally safe but carries a measurable risk of complications. Surgical technique and the use of advanced energy devices such as the HS may influence certain complication rates like hypoparathyroidism and this should be considered in efforts to optimize outcomes.

Submitted as oral presentation, eligible for award of best presentation in one of the categories (head and neck surgery). RIZIV-number Dr. D. Coppens: 1-05268-19-041

Table 1: Baseline characteristics

1. BASELINE CHARACTERISTICS: TOTAL GROUP AND BY HS

Variable	Statistic	Without harmonic scalpel	With harmonic scalpel	Total	P-value
age	N	510	424	934	0.294
	Mean	53.96	54.79	54.34	
	Std	14.801	15.617	15.174	
	Median	55.00	56.00	56.00	
	IQR	(43.00; 64.00)	(44.50; 66.00)	(43.00; 65.00)	
	Range	(18.00; 87.00)	(15.00; 91.00)	(15.00; 91.00)	
sex					
0	n/N (%)	111/511 (21.72%)	104/424 (24.53%)	215/935 (22.99%)	0.312
1	n/N (%)	400/511 (78.28%)	320/424 (75.47%)	720/935 (77.01%)	
BMI kg/m²	N	495	418	913	0.442
	Mean	26.89	27.11	26.99	
	Std	5.391	5.403	5.395	
	Median	26.10	26.30	26.20	
	IQR	(23.20; 29.66)	(22.94; 30.44)	(23.10; 30.10)	
	Range	(13.60; 53.41)	(16.85; 46.30)	(13.60; 53.41)	
history of neck radiation therapy					
no	n/N (%)	505/511 (98.83%)	421/424 (99.29%)	926/935 (99.04%)	0.523
yes	n/N (%)	6/511 (1.17%)	3/424 (0.71%)	9/935 (0.96%)	
history of neck surgery					
no	n/N (%)	488/511 (95.50%)	410/424 (96.70%)	898/935 (96.04%)	0.402
yes	n/N (%)	23/511 (4.50%)	14/424 (3.30%)	37/935 (3.96%)	
ACE_27	N	511	424	935	0.864
	Mean	0.63	0.64	0.64	
	Std	0.842	0.861	0.850	
	Median	0.00	0.00	0.00	
	IQR	(0.00; 1.00)	(0.00; 1.00)	(0.00; 1.00)	
	Range	(0.00; 3.00)	(0.00; 3.00)	(0.00; 3.00)	

Variables presented with percentages are analysed using a Fishers Exact test. Variables summarized by means, medians,... are analysed using a Mann-Whitney U test. All reported p-values are two-sided

Table 4.2: Complications by HS

4.2. By HS

Variable	Statistic	Without harmonic scalpel	With harmonic scalpel	Total	P-value
MP024733_RLN_BIN					
No	n/N (%)	465/509 (91.36%)	384/422 (91.00%)	849/931 (91.19%)	0.908
Yes	n/N (%)	44/509 (8.64%)	38/422 (9.00%)	82/931 (8.81%)	
MP024733_EBSLN_BIN					
No	n/N (%)	509/511 (99.61%)	422/424 (99.53%)	931/935 (99.57%)	1.000
Yes	n/N (%)	2/511 (0.39%)	2/424 (0.47%)	4/935 (0.43%)	
MP024733_HYPOCALCEMIA_BIN					
No	n/N (%)	206/506 (40.71%)	204/421 (48.46%)	410/927 (44.23%)	0.020
Yes	n/N (%)	300/506 (59.29%)	217/421 (51.54%)	517/927 (55.77%)	
MP024733_HYPOPARATHYROIDISM_BIN					
No	n/N (%)	311/502 (61.95%)	302/423 (71.39%)	613/925 (66.27%)	0.003
Yes	n/N (%)	191/502 (38.05%)	121/423 (28.61%)	312/925 (33.73%)	
MP024733_HEMATOMA_BIN					
No	n/N (%)	501/511 (98.04%)	415/423 (98.11%)	916/934 (98.07%)	1.000
Yes	n/N (%)	10/511 (1.96%)	8/423 (1.89%)	18/934 (1.93%)	
MP024733_SEROMA_BIN					
No	n/N (%)	506/509 (99.41%)	419/423 (99.05%)	925/932 (99.25%)	0.708
Yes	n/N (%)	3/509 (0.59%)	4/423 (0.95%)	7/932 (0.75%)	
MP024733_SCAR_BIN					
No	n/N (%)	505/510 (99.02%)	417/424 (98.35%)	922/934 (98.72%)	0.396
Yes	n/N (%)	5/510 (0.98%)	7/424 (1.65%)	12/934 (1.28%)	
MP024733_INFECTION_BIN					
No	n/N (%)	496/511 (97.06%)	413/424 (97.41%)	909/935 (97.22%)	0.843
Yes	n/N (%)	15/511 (2.94%)	11/424 (2.59%)	26/935 (2.78%)	

Variables presented with percentages are analysed using a Fishers Exact test. Variables summarized by means, medians,... are analysed using a Independent t-test. All reported p-values are two-sided

Table 4.3: Complications by surgical technique

4.3. By surgical technique

Variable	Statistic	Old technique	New technique	P-value
MP024733_RLN_BIN				
No	n/N (%)	641/710 (90.28%)	208/221 (94.12%)	0.102
Yes	n/N (%)	69/710 (9.72%)	13/221 (5.88%)	
MP024733_EBSLN_BIN				
No	n/N (%)	708/712 (99.44%)	223/223 (100.00%)	0.578
Yes	n/N (%)	4/712 (0.56%)	0/223 (0.00%)	
MP024733_HYPOCALCEMIA_BIN				
No	n/N (%)	280/705 (39.72%)	130/222 (58.56%)	<.001
Yes	n/N (%)	425/705 (60.28%)	92/222 (41.44%)	
MP024733_HYPOPARATHYROIDISM_BIN				
No	n/N (%)	435/705 (61.70%)	178/220 (80.91%)	<.001
Yes	n/N (%)	270/705 (38.30%)	42/220 (19.09%)	
MP024733_HEMATOMA_BIN				
No	n/N (%)	696/711 (97.89%)	220/223 (98.65%)	0.586
Yes	n/N (%)	15/711 (2.11%)	3/223 (1.35%)	
MP024733_SEROMA_BIN				
No	n/N (%)	705/709 (99.44%)	220/223 (98.65%)	0.367
Yes	n/N (%)	4/709 (0.56%)	3/223 (1.35%)	
MP024733_SCAR_BIN				
No	n/N (%)	701/711 (98.59%)	221/223 (99.10%)	0.741
Yes	n/N (%)	10/711 (1.41%)	2/223 (0.90%)	
MP024733_INFECTION_BIN				
No	n/N (%)	691/712 (97.05%)	218/223 (97.76%)	0.815
Yes	n/N (%)	21/712 (2.95%)	5/223 (2.24%)	

Variables presented with percentages are analysed using a Fishers Exact test. Variables summarized by means, medians,... are analysed using a Independent t-test. All reported p-values are two-sided

Title:
Effect of hypoglossal nerve stimulation therapy on upper airway collapsibility parameters

E. Tukanov[1,2], D. Van Loo[1,2], M. Dieltjens[1,2], J. Verbraecken[1,3,4], S. Op de Beeck[1,2], O.M. Vanderveken[1,2,3]

1: Faculty of Medicine and Health Sciences, University of Antwerp, Belgium; 2: Department of ENT, Head and Neck Surgery, Antwerp University Hospital, Belgium; 3: Multidisciplinary Sleep Disorders Centre, Antwerp University Hospital, Belgium; 4: Department of Pulmonary Medicine, Antwerp University Hospital, Belgium

Introduction and aim: Hypoglossal nerve stimulation (HGNS) is an innovative treatment for obstructive sleep apnea (OSA), with well-documented clinical efficacy in selected patients. However, the underlying mechanisms regarding upper airway collapsibility, a key determinant of OSA treatment response, remain less understood. This study aims to evaluate the effect of HGNS on upper airway collapsibility.

Material and methods: Twenty-nine patients with OSA (Table 1) underwent polysomnography at baseline and one year after HGNS-implantation. Upper airway collapsibility was calculated non-invasively according to Vena et al. (2022). Five parameters were derived: flow at eupneic ventilatory drive (Vpassive, inversely correlated to collapsibility), flow at nadir drive (Vmin, inversely correlated to collapsibility), apnea index, fraction of hypopneas (Fhypopneas), and event depth. Treatment response was defined by Sher15 criteria (AHI <15/h and ≥50% decrease).

Results (Table 1): In the total cohort, HGNS significantly reduced pharyngeal collapsibility corresponding with an increased Vpassive (p=0.001) and decreased the apnea index (p=0.013). When stratified by clinical response, the responder group (n=21) demonstrated significant improvements across nearly all physiological metrics (Vpassive p=0.002; Vmin p=0.048; apnea index p=0.002; event depth p=0.004), except for Fhypopneas (p=0.983). In contrast, the non-responder group (n=8) showed no significant changes in any of the collapsibility parameters from baseline to follow-up. Baseline patient characteristics and collapsibility parameters did not significantly differ between both groups.

Conclusion: Overall, HGNS improves upper airway collapsibility by increasing ventilation and reducing the apnea index. However, these improvements are predominantly confined to clinical responders, while non-responders show no change despite having similar baseline characteristics. Further research is needed for improved identification of patient groups in whom HGNS does effectively improve collapsibility.

	Baseline	**One-year follow-up**	**P-value**
Age (years)	59.2 ± 9.2	N/A	N/A
Gender (men/total)	19/29	N/A	N/A
BMI (kg/m^2)	27.7 ± 2.6	27.6 ± 3.3	0.830
Vpassive (%eupnea)	91.7 [82.4; 95.0]	95.6 [93.0; 98.0]	0.001*
Vmin (%eupnea)	52.8 [37.6; 68.24]	59.4 [51.3; 70.9]	0.072
Fhypopneas	0.9 [0.8; 1.0]	0.9 [0.8; 1.0]	0.869
Apnea index (/h)	2.4 [0.2; 7.4]	0.4 [0.0; 3.7]	0.013*
Event depth (%eupnea)	42.2 ± 11.1	38.6 ± 10.9	0.093
Apnea-hypopnea index (/h)	26.9 [20.2; 37.9]	9.6 [4.8; 14.3]	<0.001*
Reduction in AHI (%)	N/A	62.5 [50.0; 83.6]	N/A
TST (min)	397.0 [367.0; 435.0]	366.0 [355.0; 402.0]	0.057

Table 1: Patients characteristics of the total group (n = 29) at baseline and one-year follow-up. Values are displayed as either mean ± SD or median [Q1; Q3], based on normality of data.

Epitheloïd hemangio-endothelioma in the head and neck region: treatment guidelines supported by a case report

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Introduction and aim

Epithelioid hemangioendothelioma (EHE) is an exceedingly rare vascular neoplasm that most commonly arises in the liver, lungs, bone, and soft tissues. It occupies an intermediate position within the spectrum of endothelial tumors, between benign hemangioma and high-grade angiosarcoma.[1]. Therefore, it is often regarded as a low-grade malignancy. Owing to its extremely low incidence (<1 per 1,000,000) [2] robust randomized data regarding optimal management are lacking, and no standardized treatment guidelines have been established. We aim to contribute to the existing body of knowledge and propose a potential management approach by presenting a recent case treated at our center.

Case report

An 18-year-old male was referred to the Head and Neck outpatient clinic for persistent cervical lymphadenopathy following a recent viral upper respiratory tract infection. His only accompanying symptoms were fatigue and malaise. Serological investigations were unremarkable. Ultrasonography and contrast-enhanced computed tomography of the neck demonstrated multiple enlarged lymph nodes (LN) in the upper cervical region. Initial selective LN biopsy was non-diagnostic. Subsequently, positron emission tomography–computed tomography (PET-CT) revealed multiple bilaterally enlarged cervical LNs with mild fluorodeoxyglucose uptake. An excisional LN biopsy was then performed for definitive histopathological and microbiological evaluation. Histopathological examination established the diagnosis of EHE involving the head and neck region. The case was discussed at a multidisciplinary tumor board, and a strategy of active surveillance was recommended. Follow-up PET-CT 3 months after diagnosis did not show any oncological evolution.

Conclusions

EHE represents a rare and diagnostically challenging vascular tumor for which
evidence guiding management is lacking. Treatment strategies must therefore be individualized and discussed within a multidisciplinary setting. By presenting this case of an 18-year-old male patient, we highlight the diagnostic pathway and propose consideration of primary surgical management versus careful surveillance as potential treatment strategies.

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Upper airway stimulation (UAS) for obstructive sleep apnea, preliminary results: sleepiness, sleep position, and orofacial function

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Abstract:
Introduction and aim: Obstructive sleep apnea (OSA) is associated with significant cardiovascular, neurocognitive and quality of life (QoL) consequences. Continuous positive airway pressure (CPAP) and mandibular advancement device (MAD) are first-line treatment modalities, but intolerance and insufficient treatment outcomes limit its effectiveness in a substantial subset of patients. Upper airway stimulation (UAS) has emerged as an alternative, delivering synchronized electrical stimulation to the hypoglossal nerve prior to inspiration, resulting in tongue protrusion and upper airway stabilization. This study evaluated preliminary clinical and polysomnographic outcomes of UAS, focusing on sleep position.

Material and methods: Prospective clinical trial at Ghent University Hospital. Six patients (median age 56.5 years [IQR 51.5-57.8], median BMI 28.4 kg/m² [IQR 26.8-29.7], female-to-male ratio 2:4) with moderate-to-severe OSA and CPAP/MAD-intolerance were treated with UAS (Inspire IV®). The ratio of supine to non-supine sleep position at home is 1:5, and 5 patients had supine-dependent OSA at baseline. ΔAHI was defined as baseline AHI minus post-UAS AHI. Preoperative assessment included polysomnography, QoL questionnaires, and orofacial myofunctional evaluation. Follow-up assessments were performed ≥3 months after activation.

Results: Following UAS sleepiness decreased or stabilized (ESS median 7 [IQR 5-7]). Post-implantation, all patients exhibited supine-dependent OSA. Median non-supine sleep time was 64% of total sleep [IQR 53–72]. Median total, supine, and non-supine AHI after UAS were 19.9 [IQR 15.8–29.4], 41.7 [29.9–94.8], and 4.8 events/h [1.8–11.0], respectively. Median ΔAHI among responders was 9.2/h for total AHI (4/6 patients), 26.9/h for supine AHI (3/6), 13.7/h for non-supine AHI (3/6). Myofunctional measurements showed no significant changes in anterior (p=0.141) or posterior (p=0.279) tongue strength and articulatory speed (p=0.684) after 8 months of stimulation.

Conclusions: These preliminary findings suggest that UAS improves both subjective and objective sleep outcomes in selected CPAP/MAD-intolerant OSA patients, without significantly affecting orofacial functions. The influence of sleep position must be considered and treatment to avoid supine position should be addressed.

"Anatomy of the intra-laryngeal end of the inferior laryngeal nerve and new possible surgical approach"

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Introduction :

Ultra-selective reinnervation of the larynx is more and more described in two pathologies: adductors spasmodic dysphonia and laryngeal paresis. The ultra selective reinnervation is also useful for musculo-nervous flaps. Moreover, thyroplasty has shown better results with reinnervation. The aim is to determine the anatomical position of the terminal adductor branch of the inferior laryngeal nerve in order to create a new surgical approach for unilateral vocal cord paralysis and spasmodic dysphonia disorders.

Materials et methods :

39 larynx were harvested from bodies of donators (according to the Belgian law). From the 39 larynges, 1 side was impossible to analyse. Therefore, 77 laryngeal nerves have been studied on fresh frozen cadavers. The terminal adductor branch of the inferior laryngeal nerve has been exposed by two different approaches: dissection of inferior laryngeal nerve until the paraglottic space and visualisation of this paraglottic space after realisation of a thyroplasty window as described in the Montgomery technique. The anatomic position of the adductor branch of the inferior laryngeal nerve has been specifically studied. As well as its different possible surgical approaches when associated with Montgomery implant surgery.

Results :

The adductor branch of the inferior laryngeal nerve is located at the postero-inferior part of the thyroplasty window. We found an anatomic variability of the nerve. In the postero-superior part of the window, this adductor branch was oblique in 53 specimens (68,83 %) and vertical in 24 specimens (31,16%). A combined surgical approach has also been found.

Conclusion :

Active vocal cord adduction with ultra selective reinnervation associated with passive vocal cord adduction with Montgomery implant is possible. It constitutes a new therapeutic option for reinnervation of neuro-laryngeal pathologies.

ROOM 2

RBS Lecturer Award in Rhinology

Epistaxis as a rare manifestation of Moyamoya disease: a case report

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Introduction and aim

Epistaxis is a common emergency in the field of otorhinolaryngology (ENT). Even though treatment focusses on localization and control of the hemorrhage, underlying pathology should be taken into account. We present a case of epistaxis with a rare neurovascular disorder, Moyamoya disease, as underlying cause.

Case report

A 50-year old woman reported to the emergency department because of recurrent right sided epistaxis. A rapidrhino™ nasal packing was placed and she was discharged with an appointment at the ENT department. However, she was hospitalized 2 days later because of intolerance of the packing. Her medical history was unremarkable except for meningitis in her childhood years, and idiopathic thrombocytopenic purpura (ITP). Laboratory findings showed a low platelet count but not low enough to explain the bleeding. During her hospitalization, she was treated with antibiotics (Amoxicillin-clavulanic acid), tranexamic acid and paracetamol. All attempts to remove the nasal packing were in vain. An exploration under general anesthesia was indicated. A preoperative CT-scan showed no sinonasal pathology. During the exploration, a right sided FESS procedure was performed. A diffuse bleeding of the base of the skull was visualized with an atypical appearance of multiple collateral vessels . Bipolar coagulation of these vessels along with both the anterior and posterior ethmoid artery was performed. Surgicel™ was applied and a temporary packing was placed. Packing was removed 1 day after surgery without major bleeding. The definitive protocol of the CT-scan showed suspicion of a right sided occlusion of the middle cerebral artery, suggestive for unilateral Moyamoya disease. The patient was discharged 3 days after surgery, with follow-up appointments at both the ENT and the neurology department. The patient had no recurrence of epistaxis after 2 months follow-up.

Conclusion

Further angiography confirmed the diagnosis of right sided Moyamoya disease, a rare, progressive cerebrovascular disorder characterized by stenosis of the distal internal carotid arteries, resulting in reduced cerebral perfusion and increased risk of ischemic events. Compensatory fragile collateral vessels develop, producing the characteristic “puff-of-smoke” appearance on angiographic imaging. To our knowledge , this is only the second reported case of epistaxis with underlying Moyamoya disease.

Comparison of bony foundation versus surface techniques in hybrid septal-T preservation rhinoplasty: retrospective propensity score matched cohort study

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Introduction and aim: To compare aesthetic and functional outcomes between foundation and surface pyramid techniques for contouring in hybrid septal-T dorsal preservation rhinoplasty, using validated patient-reported outcome measures (PROMs).

Methods: This retrospective propensity score–matched cohort study included 132 consecutive patients (66 per group) who underwent hybrid dorsal preservation rhinoplasty between 2020 and 2025. Patients were categorized based on use of foundation (impaction osteotomies) or surface (DAL osteotomies) techniques. Outcomes were assessed using the NOSE, FACE-Q, SCHNOS, Utrecht Questionnaire (UQ), and VAS at preoperative, 3-month, and 6-month intervals. Linear mixed-effects models were employed on multiply imputed datasets, with sensitivity analyses across multiple statistical frameworks including complete-case and MNAR scenarios.

Results: Both foundation and surface techniques were associated with significant improvements in aesthetic (FACE-Q, SCHNOS-C, VAS), functional (NOSE, SCHNOS-O), and psychological (UQ) domains. No statistically significant differences in aesthetic outcomes were observed between groups. Functional outcomes were broadly comparable, although a statistically significant reduction in SCHNOS-O at 6 months favoured the foundation group ($\beta = -16.6$; 95% CI: −25.5 to −7.7). Across all PROMs, minimal detectable differences were contextualized against published minimal clinically important differences to assess clinical relevance.

Conclusion: Foundation and surface bony techniques within hybrid septal-T preservation rhinoplasty yield comparable patient satisfaction across aesthetic and functional domains. These findings support the use of both techniques within an anatomy-driven, preservation-based framework.

- **Tittle : Demystifyng Dorsal Preservation Rhinoplasty: What is the Evidence ? How to Start ?**

- **Author: L Delvaux**
- **Institution: CHU de Liège, Liège, Belgium**

- **Abstract:**

Introduction and aim:
Dorsal preservation rhinoplasty has gained increasing interest among rhinoplasty surgeons over the past decade. As its name suggests, this approach is based on the concept that preserving the keystone area may be superior to its resection and subsequent reconstruction. However, the growing number of described techniques has contributed to conceptual confusion. The aim of this presentation is to clarify the fundamental principles of dorsal preservation rhinoplasty, provide practical guidance for surgeons wishing to adopt this approach, classify the existing techniques, and discuss strategies to prevent its main drawback, namely dorsal hump recurrence.
Materials and methods:
This presentation is based on a narrative review of the current literature, analyzing the available evidence supporting dorsal preservation concepts, existing classifications of techniques, and how to prevent hump recurrence.
Results:
Dorsal preservation rhinoplasty has been associated with more favorable aesthetic outcomes at 6 months postoperatively and a lower incidence of dorsal irregularities. However, a higher rate of dorsal hump recurrence has been reported compared with structural techniques. Appropriate patient selection and careful choice of the preservation technique appear to be key factors in reducing this recurrence rate and achieving consistent results.
Conclusion:
Dorsal preservation rhinoplasty is a reliable technique that can provide excellent aesthetic outcomes when appropriately indicated. Careful patient selection, a thorough understanding of the underlying concepts, and correct technique selection are essential to minimize complications, particularly dorsal hump recurrence.

New CRS control tests: development and validation

Running title: New control CRS test

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ABSTRACT

Introduction and aim: Measuring control in Chronic Rhinosinusitis (CRS) was introduced by the European Position Paper on Chronic Rhinosinusitis and Nasal Polyps (EPOS) in 2012 and adapted in EPOS 2020. Recently, there is a short patient-reported outcome measure (PROM) capturing patient-perceived disease control in daily practice. We developed and validated 2 new tools for the evaluation of control in CRS, CRS Control Test (CCT) and Patient Control Test (PCT), and evaluated their correlations with existing tools.

Material and methods: An international survey was conducted in 1,102 CRS patients in 19 centres in 7 countries using a questionnaire including the newly developed CCT and PCT, VAS scores for CRS severity and control, the EPOS control test (EPOSCT) assessed by patient and HCP, the Sino-Nasal Outcome Test 22 (SNOT-22) and the Patient Global Assessment Tool (PGAT). We evaluated convergent and discriminative validity, internal consistency and cross-cultural validity. Sub-analyses were performed for CRS patients with and without nasal polyps.

Results: Both the tests demonstrated a large correlation with SNOT-22 and the PGAT. Moderate correlations were observed for all other comparisons like with patient and physician control (VAS), severity (VAS) and EPOSCT by physician. PCT also correlated largely with the severity VAS and the EPOSCT by patient. Both tests showed good internal consistency, discriminative validity and cross-cultural validity.

Conclusions: The brief CCT and the longer PCT are new CRS control tools that show good correlations with existing tools, with the CCT being appealing for recommendation and use in clinical practice.

Antibiotic prophylaxis for patients undergoing rhinologic surgeries: a survey of Belgian otorhinolaryngologists

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Introduction and aim: As antibiotic prophylaxis prescribing practices in rhinologic surgeries are heterogeneous, given the paucity of evidence, we aimed at mapping the current practice in our country and identify trends in prescribing patterns.

Material and methods: A 10-item anonymized survey asking about surgeon's characteristics as well as his/her prescription habits was electronically sent out to 838 members of the Belgian ENT Society. Prescribing patterns were analyzed and associations with the different variables were calculated.

Results: Among 126 responders, our analysis revealed a tendency towards overprescription of prophylactic antibiotics compared to the available recommendations. Practice environment was an important determinant for antibiotic prophylaxis prescription since academic ENTs prescribed significantly fewer prophylactic antibiotics for septoplasty ($p=0.04$ intra- and $p=0.002$ post-operatively), closed rhinoplasty ($p=0.027$) and open rhinoplasty ($p=0.016$) compared to private practice ENTs. Also, geographic region of practice was a significant determinant with French-speaking surgeons being more likely to prescribe antibiotic for septoplasty ($p=0.01$) and functional endoscopic sinus surgery (FESS) ($p=0.008$) compared to Dutch-speaking surgeons. The use of packing was significantly associated with antibiotic prophylaxis for FESS ($p=0.031$ intra- and $p=0.038$ post-operatively), but not for septoplasty nor rhinoplasty. 70.6% justified prescription by the fear of post-operative infection. 39.7% of the respondents mentioned being aware of current recommendations, while we found that only 6.3% adhered to all of them.

Conclusion: This study demonstrates the inconsistency of prophylactic antibiotic prescribing among rhinologic surgeons, with a tendency to overprescribing compared to peri-operative prophylactic recommendations. These issues should be explored further to build evidence-based guidelines for optimizing antibiotic prophylaxis.

The value of the 70° endoscope in functional endoscopic sinus surgery.

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Introduction and aim:
Functional endoscopic sinus surgery is the gold standard in sinus surgery due to its minimally invasive nature and excellent visualization of sinonasal anatomy. Still, a wide variety of surgical approaches exist, depending on the underlying pathology, the surgeon's preference and experience. We believe an underutilised technique is the use of the 70° endoscope, which offers great visual control and an improved working angle, specifically for the frontal sinus.

In this presentation, visual comparisons between the 30° endoscope and the less frequently used 70° endoscope for the frontal, maxillary and sphenoid sinuses will be demonstrated, in order to highlight the significant added value of this well-known yet underexploited instrument in our surgical arsenal.

Materials and methods:
To this end, a series of endoscopic sinus surgeries performed at GHDC over a two-year period have been recorded. The most illustrative cases were selected to best demonstrate the differences in visualization and surgical access. Literature research on PubMed was also conducted to identify studies addressing similar topics or supporting our findings. A particularly relevant radiological study evaluating the frontonasal angle and relating anatomical measurements to surgical implications is used in this presentation to provide a scientific framework for the presented images.

Conclusions:
In conclusion, we hope to demonstrate the substantial benefits that can be achieved once you acquire the skill to handle the 70° endoscope.

Platelet-rich plasma treatment for persistent olfactory dysfunction: a prospective cohort study with matched controls

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Introduction and aim: Persistent olfactory dysfunction (OD) remains difficult to treat once spontaneous recovery and standard therapies have failed. Platelet-rich plasma (PRP) has been proposed as a regenerative therapy, but clinical evidence remains limited. This study aimed to evaluate the effect of PRP on olfactory function compared to matched controls receiving standard therapy only.

Material and methods: Patients with therapy-resistent post-viral or idiopathic OD received PRP treatment at the University Hospitals of Leuven. Olfactory function was assessed using Sniffin' Sticks scores at baseline, after standard therapy, and 3 months after PRP treatment. A matched control group was identified based on age, sex, etiology, and baseline TDI score, with assessments at baseline and 3-month follow-up after standard therapy. Changes in TDI scores were analyzed using paired t-tests and mixed-effects models to account for repeated measures and missing baseline values. Subjective improvement was self-reported by patients.

Results: Twenty-seven PRP-treated patients were included and matched to 27 controls. Mean duration of OD was longer in the PRP group than in controls (4.0 vs 1.5 years). Mean TDI scores did not improve after standard therapy (−0.3 ± 4.2; $p = 0.74$), but increased significantly following PRP treatment (+2.3 ± 5.0; $p = 0.0041$). A mixed-effects model confirmed a significant overall effect of time on TDI scores ($p = 0.0226$), attributable to improvement after PRP treatment rather than during standard therapy. Improvement in TDI scores was numerically greater in PRP-treated patients than in matched controls, although without statistical significance. Clinically meaningful improvement (TDI increase ≥ 5.5 points) occurred in 5/27 (18.5%) PRP-treated patients versus 2/27 (7.4%) controls. In addition, 13/27 PRP-treated patients (47%) reported subjective improvement.

Conclusions: PRP treatment was associated with significant improvement in olfactory function in patients with therapy-resistent OD, although clinical relevance remains to be confirmed in larger cohorts.

Sinonasal adenoid cystic carcinoma : A 20 years monocentric retrospective study.

Authors:

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Abstract

Introduction:
Adenoid cystic carcinoma (ACC) is a rare malignancy accounting for 1–5% of head and neck tumors and arising from major and minor salivary glands. [1] Sinonasal ACC (SNACC) represents approximately 6% of malignant sinonasal tumors, most commonly involving the maxillary sinus (64%), nasal cavity (20%), and nasopharynx (17%). [5] ACC is characterized by slow, indolent growth and a marked tendency for perineural and perivascular invasion, leading to frequent presentation at locally advanced or metastatic stages. [2,4,8] Diagnostic delay is particularly common in SNACC due to nonspecific symptoms often attributed to benign sinonasal conditions. The mean age at diagnosis is 50–60 years, with a slight female predominance. [6,7] Surgery is the preferred treatment when feasible and is usually followed by radiotherapy. [1,2,3] Long-term follow-up is essential because of the high risk of late recurrence and distant metastases. [2,4] This study aims to evaluate overall survival (OS) and event-free survival in patients with SNACC treated at Jules Bordet Institute and to compare our results with the literature.

Methods:
This retrospective, non-interventional, single-center study included all adult patients (≥18 years) with histologically confirmed SNACC treated between January 2003 and December 2023. Collected data included demographic and clinical characteristics, tumor features, and treatment modalities. Quantitative variables will be described using mean ± standard deviation or median and interquartile range, depending on distribution, and qualitative variables as counts and percentages. Overall survical, progression-free survival, local recurrence-free survival, distant metastasis-free survival, and prognostic factors will be analyzed.

Results:
Twenty-five patients were included in the study. We report here the results regarding demographic characteristics, treatment modalities, overall survival, recurrence-free survival, and the impact of different variables on survival outcomes.

Conclusion:
SNACC is a rare, slow-growing tumor with frequent perineural spread and late recurrence. The clinical course of the disease is generally slow but relentless. Complete surgical resection with negative margins remains the standard treatment. Radiotherapy plays a key role in the management of these tumors, and the choice of modality—proton therapy or carbon ion therapy—is based on strict selection criteria. Despite multimodal treatment, patients frequently develop local recurrence or distant metastases, sometimes many years after the initial diagnosis.

Multicenter studies are needed to obtain larger and more representative cohorts.

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The safety bar: a modification of the extracorporeal septoplasty using a PDS-foil

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Introduction and aim: Extracorporeal septoplasty is an established technique for the correction of complex septal deviations, particularly those involving the keystone area. Reconstruction of the bony–cartilaginous junction remains technically demanding. In this article, we propose a modification of the extracorporeal septoplasty aimed at improving reconstruction of the keystone area.

Material and methods: A narrow cranial strip of cartilaginous septum extending from the keystone area is preserved during en bloc septal resection. This remnant, termed the *safety bar*, serves as a guiding reference for reimplantation and fixation of the reconstructed septum, which is aligned extracorporeally using a resorbable polydioxanone (PDS) foil. The technique is illustrated and its surgical steps are described in detail.

Results: All patients reported improved nasal breathing postoperatively. No immediate or delayed complications, including infection, hematoma, tissue necrosis or dorsal aesthetic deformities, were observed during follow-up.

Conclusion: Preservation of a cranial septal cartilage strip during extracorporeal septoplasty provides a stable reference at the keystone area and facilitates accurate septal reimplantation. The safety bar technique is feasible, reproducible and may reduce the risk of dorsal irregularities in complex septal reconstruction.

ROOM 2

Free Posters

B-ORL Spring meeting 2026 – ABSTRACT

Acute otitis media complicated by an epidural abscess and a transverse sinus thrombosis without signs of mastoiditis

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Introduction and aim:
While an epidural abscess and a transverse sinus thrombosis are usually detected on a CT scan of a child with acute mastoiditis, it is not common for a child with acute otitis media to undergo imaging. We report a case of a child presenting with ataxia and AOM who suffered from those complications and highlight the role of CT scan in cases of complicated AOM.

Case report:
A 2-year-old boy was presented to the ER with acute ataxia, broad-based gait, truncal instability even when sitting and dysmetria. His parents reported bilateral acute otitis media treated with amoxicillin for a week followed by a partial recovery and one episode of fever in the following week. On admission he was apyretic and the ENT exam revealed an AOM without protrusion of the auricle or any retroauricular sign. CRP was 142 mg/L; CSF analysis and blood cultures were negative. Contrast-enhanced temporal bone and brain CT demonstrated a left posterior fossa epidural abscess and bilateral AOM, with adjacent bony erosion (out apparent bony changes).
Ventilation tube insertion and cortical mastoidectomy were performed the day after the admission. Pus was collected through the myringotomy but wasn't found within the mastoid cavity. After drilling the bone above the sigmoid sinus, pus was collected from its epidural location. Intraoperative cultures were negative.
A neurological deterioration 3 days after the surgery prompted urgent brain MRI, which demonstrated left transverse sinus thrombosis extending to the jugular bulb, without residual epidural empyema. Enoxaparin was started, alongside ceftriaxone and metronidazole for 8 weeks. The clinical course was favorable, with no neurological sequelae at discharge.

Conclusions:
Otogenic intracranial complications can occur without classical clinical signs of mastoiditis. In children with AOM and neurological symptoms, an early CT scan with contrast and/or an MRI should be performed to guide intervention. Cortical mastoïdectomy and drainage of the epidural abscess, trans tympanic ventilation tube insertion along with proper antibiotic therapy should lead to a full recovery.

Title

Solitary fibrous tumor of the nasal cavity: case report and review of the literature

Authors

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Institution

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Abstract body

Introduction and aim:

Solitary fibrous tumors (SFTs) are rare mesenchymal neoplasms, initially described in the pleura, with exceptional involvement of the sinonasal tract, accounting for less than 0.1% of sinonasal tumors [1,2]. Fewer than 100 cases of nasal cavity SFTs have been reported in the literature [3]. Due to their rarity and nonspecific clinical and radiological presentation, diagnosis remains challenging. We report a case of nasal cavity SFT and review the current literature focusing on diagnosis, management, and prognosis.

Case report:

A 51-year-old man presented with long-standing left-sided nasal obstruction. Nasal endoscopy revealed a non-necrotic polypoid mass occupying the left nasal cavity. Computed tomography demonstrated a well-circumscribed 42-mm soft-tissue mass confined to the left nasal cavity, without sinus invasion or bone destruction. No cervical lymphadenopathy was identified.

The patient underwent endoscopic endonasal surgery under general anesthesia with complete tumor resection. Histopathological examination revealed a well-demarcated spindle-cell proliferation arranged in intersecting fascicles, with staghorn-type vascularization and collagenous stroma. No necrosis or significant cytologic atypia was observed. Immunohistochemistry indicated diffuse nuclear STAT6 positivity and CD34 expression, while S-100, cytokeratins, desmin, and SOX10 were negative, confirming the diagnosis of solitary fibrous tumor [4–5].

Risk stratification using the Demicco model showed a low metastatic risk (score = 1) [6]. Surgical margins were close, suggesting enucleation-type resection.

Conclusions:

Sinonasal SFTs are rare entities with generally indolent behavior but potential for local recurrence and, rarely, malignant transformation [3,7]. STAT6 immunohistochemistry is a key diagnostic marker allowing reliable distinction from other spindle-cell lesions [5]. Complete surgical excision with long-term follow-up is recommended, even in low-risk tumors, due to the possibility of late recurrence [7,8].

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Tapia Syndrome Following Disc Surgery: A Rare Complication Not to Be Overlooked

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Introduction

Tapia syndrome is a rare iatrogenic complication of general anesthesia, characterized by concomitant unilateral paralysis of the hypoglossal nerve and the recurrent laryngeal nerve. This extracranial injury results from nerve compression or stretching during airway manipulation or intraoperative cervical positioning.
Although classically described after cervical or cardiothoracic surgery, it may complicate any procedure performed under general anesthesia. Early diagnosis is crucial, as it allows prompt initiation of intensive speech and language therapy, a key factor in optimizing functional recovery.
We report a case of Tapia syndrome diagnosed early after lumbar disc surgery, highlighting the importance of clinical vigilance and multidisciplinary collaboration.

Case Report

A 68-year-old patient underwent surgery for lumbar disc herniation under general anesthesia with orotracheal intubation. No intraoperative complications were reported.Upon emergence from anesthesia, the patient developed dysphonia, which alerted the operating neurosurgeon. An immediate otolaryngological evaluation was performed, revealing unilateral lingual hypomobility with ipsilateral tongue deviation. Flexible laryngoscopic examination demonstrated ipsilateral vocal fold paresis.A diagnosis of Tapia syndrome was established, and multidisciplinary management was initiated promptly, combining systemic corticosteroid therapy and early intensive speech and language rehabilitation.

Conclusion

This case underscores the critical importance of early recognition of Tapia syndrome. Prompt diagnosis facilitates timely supportive care and helps avoid unnecessary investigations and invasive procedures.

Title: scalp necrotizing fasciitis: a case report

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Introduction and aim: necrotizing fasciitis (nf) is a life-threatening soft tissue infection characterized by rapidly progressive necrosis. Scalp involvement is exceptionally rare due to its rich vascular supply. Delayed diagnosis significantly increases mortality rates. The aim is to report a rare case of scalp nf and highlight the importance of prompt surgical intervention and specialized wound care.

Case report: a 56-year-old male re-presented five days after a scalp laceration with high fever, severe pain disproportionate to findings, and rapid swelling. Biochemical analysis showed severe inflammation and a LRINEC score of 6. Imaging confirmed extensive subgaleal fluid. Urgent surgical exploration revealed necrotic fascia. Cultures grew *streptococcus pyogenes* and *staphylococcus aureus*. Management required eleven debridements, intensive care, intravenous antibiotics, and negative pressure wound therapy (npwt) with irrigation to manage the complex wound environment. The patient underwent a prolonged hospital stay of 39 days, requiring multiple procedures to achieve a stable wound bed, demonstrating the intensity of treatment needed for this condition.

Conclusions: Scalp necrotizing fasciitis requires immediate recognition and prompt surgical debridement. However, radical excision is not always necessary; skin-sparing approaches can be possible when combined with adjuvant therapies such as negative-pressure wound therapy. Finally, close interdisciplinary collaboration between involved specialties is essential in managing these complex cases and contributes significantly to improved patient outcomes.

Lingual Thyroid Resection with the DaVinci Single Port™ (SP) Transoral Robotic Surgery (TORS): The First Reported Case

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Abstract

Introduction and aim:

A lingual thyroid is a rare congenital anomaly resulting from incomplete migration of the thyroid gland during embryogenesis. It represents approximately 90% of all ectopic thyroid cases, with an absolute prevalence of 1 in 20,000 individuals. While most patients remain asymptomatic, progressive glandular enlargement may result in dysphagia, dysphonia or airway obstruction. Diagnosis is based on clinical examination, thyroid function assessment and imaging modalities such as computed tomography (CT), and magnetic resonance imaging (MRI). This article presents the first reported case of lingual thyroid causing dysphagia successfully removed with TransOral Robotic Surgery (TORS) with Da Vinci Single Port.

Case report:

A 36-year-old woman presented with a one-year history of intermittent dysphagia for solid foods. Her medical history included presumed congenital thyroid aplasia treated with levothyroxine. Physical examination was unremarkable. Flexible laryngoscopy revealed a hypertrophic lesion at the tongue base. FEES showed impaired swallowing of solid consistencies without aspiration. CT and MRI imaging demonstrated a well-defined, contrast-enhancing mass at the posterior tongue base consistent with a lingual thyroid, with absence of orthotopic thyroid tissue. Laboratory tests showed elevated TSH with elevated free T4. The lingual thyroid was successfully excised using TORS with Single-Port. Histopathology confirmed ectopic thyroid tissue with clear margins and no malignancy. The patient reported complete resolution of dysphagia at follow-up.

Conclusions:

TORS with Single-Port offers a minimally invasive alternative for symptomatic patients to traditional external approaches, providing lower morbidity, shorter hospitalization, fewer complications and improved functional outcomes.

Bilateral nasolabial cysts: a case report

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Abstract

Introduction and aim: A nasolabial cyst is a rare congenital nonodontogenic structure. This soft tissue cyst accounts for 0,7% of all maxillofacial cysts. Its origin lies in epithelial remnants, although the origin of the epithelial cells remains subject for discussion. The most agreed theory nowadays states that its origin lies in remnants of the nasolacrimal duct. The cyst generally presents itself in the 4th to 5th decade of life, more frequently in women. The general presentation is a unilateral cyst, as such our case with bilateral presentation seemed to be of added value.

Case report: a 54-year-old woman presented with a mass in the right nasal cavity. 1,5 years ago, she noticed the mass in combination with a cellulite of the skin overlying the right maxillary region. The collection was drained and biopsies were taken. This showed an inflammatory squamous cyst. Today she presented with a remaining swollen nasal floor and the impression of a pressure on the teeth. Endoscopically we visualized a swelling of the floor of the nasal cavity, on both sides. An MRI demonstrated a soft tissue cyst on both sides. Also bone erosions were visualized. We performed a bilateral sublabial enucleation. During enucleation, the nasal mucosa was accidentally perforated on both sides. Histological analysis of both cysts revealed a pseudostratified ciliated columnar epithelium to squamous metaplastic epithelium with goblet cells, which confirmed our diagnosis of bilateral nasolabial cysts.

Conclusion: This case presents a good example of a nasolabial cyst discovered by infection. The difference in presentation on both sides accurately represents the possible clinical characteristics of the cyst. This case also illustrates that drainage of the cysts does not prevent it from recurring. Furthermore, it always remains important to choose the right treatment modality for the individual patient as treatment options constantly evolve.

The respiratory microbiome as a modulating factor between respiratory health and exposure to green spaces at school

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Introduction and aim: The respiratory microbiome (RM) of children plays a gatekeeping role for respiratory health, but environmental factors shaping the RM are not yet well-studied. In this study, we aim to understand how the RM of schoolchildren is associated with their respiratory function (RF) and the biodiversity of their school environment.

Material and methods: Samples and data from the REACH project are used. Over 300 throat swabs from children aged 9-12 years old attending eight different Belgian schools have been collected. 16S rRNA amplicon sequencing has been performed for all samples and data analysis is ongoing. Preliminary microbiome comparisons were performed for a subset of 26 samples from children attending a non-green school with a concrete playground and a green school. Children's respiratory health data includes RF metrics alongside volatile organic compound (VOC) patterns in exhaled breath. Biodiversity analysis of the schoolyard has been performed and other environmental data, such as air quality measurements, are available.

Results: *Figure 1* shows the composition of schoolchildren's RMs. Differential abundance analysis demonstrated that *Gemella* spp. and *Streptococcus* spp. were more abundant in the RM of children attending a green and a non-green school, respectively. Maximal expiratory flow rates at 75% and 50% of vital capacity were significantly, positively associated with indoor particulate matter concentrations ($PM_{2.5i}$). Interstingly, best RFs were observed in children attending a green, outdoor school despite exposure to highest $PM_{2.5i}$ levels. Furthermore, principal component analysis indicated distinct VOC profiles among children attending the three greenest schools.

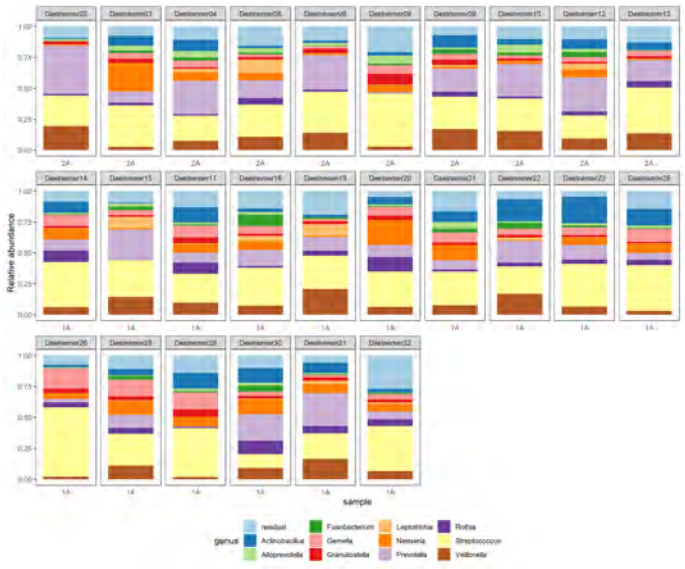

Figure 1. Microbiome composition of throat swabs from children attending a green (1A) and a non-green (2A) school determined by 16S rRNA amplicon sequencing

Conclusions: Based on these preliminary results, we hypothesize that contact with the microbiome of green spaces is a mitigating factor for respiratory health in schoolchildren. This is likely mediated through modulation of the RM, as highlighted by the differential abundances of specific genera in the RM of children from green and non-green schools.

“Bilobed Zenker’s Diverticulum in Young Patients: A Rare Anatomical Variant with Therapeutic Challenges”

L. Fanchini, P. Levie

Hopital Ste-Anne St-Remi, CHIREC

Abstract

Introduction and Aim:

Zenker’s diverticulum (ZD) is a rare acquired pulsion diverticulum arising from the posterior hypopharyngeal wall through Killian’s triangle, typically affecting elderly patients. Bilobed ZD, in which the diverticular pouch is divided into two lobes by a septum, is an unusual anatomical variant. Occurrence in young patients is exceptionally rare and may complicate diagnosis and management. The aim of this study is to present three cases of ZD in young patients—including two bilobed forms—and review the literature to highlight clinical features, diagnostic strategies, and therapeutic considerations.

Material and Methods / Case Report:
A narrative literature review was conducted using PubMed and Google Scholar with the keywords “Zenker’s diverticulum”, “bilobed Zenker”, “double pouch”, and “young patient”. Relevant case reports, case series, and review articles addressing bilobed morphology, clinical presentation, and management were included. Three clinical cases treated at our institution were retrospectively analyzed: two young patients with bilobed ZD and one young patient with recurrent non-bilobed ZD. Data included clinical presentation, imaging, treatment modality, and outcomes.

Results:
All three patients presented with dysphagia and regurgitation. Videofluoroscopy and barium swallow confirmed the bilobed anatomy in two patients and recurrence in the non-bilobed patient. Management differed according to anatomy and prior history: one bilobed patient underwent rigid endoscopy with laser-assisted septotomy, the second bilobed patient was treated with flexible endoscopic, and the recurrent non-bilobed patient underwent tailored endoscopic revision. All patients achieved symptomatic improvement with no immediate complications. Literature review highlights the rarity of bilobed ZD in young populations and supports individualized management.

Conclusions:
Bilobed Zenker's diverticulum and recurrent ZD in young patients are extremely rare. Careful diagnostic assessment and individualized therapeutic strategies—including rigid or flexible endoscopic techniques—are essential. Reporting such cases contributes to understanding clinical variability and guiding optimal management in this unique population.

ROOM 2

RBS Poster Award

Rhabdomyoma of the parapharyngeal space - a diagnostic challenge.

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Abstract body:
Introduction and aim:
Rhabdomyomas are rare benign mesenchymal tumors, when found at an adult age most frequently found in the head and neck region. The rarity of the disease and nonspecific radiologic presentation complicates diagnosis.
Case report:
We present the case of a 46-year-old woman, referred to us for obstructive sleep apnea (OAHI 20/hour), who was found to have a large parapharyngeal mass. MRI and CT with contrast, as well as angiography were performed, showing a heterogenous mass in the parapharyngeal space with fast wash-in and wash-out curves. Biopsy confirmed an adult-type rhabdomyoma with characteristic eosinophilic cells and positive desmin staining. The tumor was completely excised transcervically after superficial parotidectomy. MRI 6 months postoperatively showed no evidence of residual tumor and polysomnography showed reduction of OAHI to 6 evens per hour, confirming surgical success.
Conclusion:
This case extensively illustrates radiological findings of rhabdomyoma and adds to the growing evidence of its association with BHD syndrome. Recognition of this link may aid early diagnosis and inform management strategies.

P1 latency and N1 emergence in speech evoked cortical auditory potentials : cortical maturation benchmarks from infancy to adolescence.

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Introduction and aim:
Speech evoked cortical Auditory Potentials (CAEPs) provide objective evidence of central auditory system maturation and cortical audibility. P1 wave latency is a robust biomarker of cortical development, while the evolution of waveform morphology, particularly the emergence of the N1 component, reflects structural and functional reorganization of the auditory cortex. This study aimed to establish age-specific normative values for P1 latency and to determine the age of appearance of the N1 wave in normal-hearing children.

Material and methods:
We prospectively collected data from 52 normal-hearing children aged 3 months to 17 years. CAEPs were recorded using the HearLab® system with four speech phonemes (/m/, /g/, /t/, /s/) presented at 55, 65 and 75 dB SPL. Statistical analysis included linear regression for P1 latency and logistic regression to model the probability of N1 emergence; ANOVA was used to assess stimulus-related effects.

Results:
A strong negative correlation was observed between age and P1 latency (Pearson $r = -0.82$, $p < 0.001$). The decrease in latency was maximal during the first years of life, dropping from 198.9 ms (±18.0) in infants aged 3–6 months to 103.8 ms (±10.7) in preschool children aged 4–6 years, before stabilizing around 75 ms in adolescence. Stimulus intensity did not significantly affect latency, whereas the /s/ phoneme elicited significantly shorter responses . Logistic regression indicated that N1 component emerges at a mean age of 5.1 years. N1 was absent before age 3 and consistently observed (100%) after age 7.

Conclusions:
This study establishes local normative data confirming P1 latency as a sensitive marker of auditory cortical plasticity, particularly during the critical early childhood period. N1 emergence at age 5 represents a key milestone in cortical maturation. These results provide a valuable clinical reference for monitoring auditory outcomes in children fitted with conventional hearing aids or cochlear implants.

Point-of-care ultraviolet-C LED disinfection of flexible rhinolaryngoscopes: microbiological efficacy, workflow efficiency, cost savings and implementation implications

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Introduction and aim

High-level disinfection of semi-critical endoscopes is essential for preventing healthcare-associated infections. Manual chemical wipe systems are widely used at the point of care but remain susceptible to variability in technique, workflow pressure and occupational exposure. Ultraviolet-C (UV-C) light-emitting diode (LED) chambers provide a standardized, chemical-free alternative. The aim of this study was to evaluate the microbiological efficacy, workflow efficiency, personnel costs and environmental impact of point-of-care UV-C LED disinfection compared to conventional chemical wipe methods for flexible rhinolaryngoscopes.

Material and methods

In a prospective observational study, bacterial contamination of 27 flexible rhinolaryngoscopes was assessed immediately after clinical use and following reprocessing with manual pre-cleaning and a 4-minute UV-C LED disinfection cycle (Zaparay, Belgium). Paired swab samples from the distal shaft were cultured on chocolate agar with Vitox and incubated at 35–37°C for 48 hours. Colony-forming units (CFUs) were enumerated per 100 µL. Hands-on reprocessing time was measured and personnel costs were calculated assuming €40/hour. Per-cycle cost and greenhouse gas emissions were estimated and compared with a chlorine-dioxide wipe–based high-level disinfection method.

Results

The median (IQR; range) pre-reprocessing bacterial load was 98 (29–>200; 2–>200) CFU/100 µL, decreasing to 0 (0–0; 0–0) CFU/100 µL after UV-C LED disinfection ($p < 0.001$). Mean (SD) hands-on time was 32.6 (2.7) seconds for UV-C LED disinfection versus 115 (14) seconds for chemical wipes, corresponding to personnel costs of €0.26 and €1.28 per procedure, respectively. Amortized device and electricity costs were <€1.00 per cycle. For 3,700 annual procedures, UV-C LED disinfection reduced greenhouse gas emissions by 94% (25.4 vs 428 kg CO_2e) and was associated with substantial cost savings.

Conclusions

Point-of-care UV-C LED disinfection achieved complete bacterial clearance on flexible rhinolaryngoscopes while offering a reliable, time-efficient, cost-saving and environmentally superior alternative to chemical-based high-level disinfection in high-volume ENT outpatient settings.

Otomastoiditis complicated by meningoencephalitis: a case of rapid neurological deterioration.

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Introduction and Aim: This case report describes the clinical course of a 39-year-old male with acute otomastoiditis that progressed to meningoencephalitis and brain death within 24 hours of emergency department presentation. The aim is to highlight the risk of rapid deterioration, discuss the challenges in managing acute neurological decline and review existing literature associated with complicated otomastoiditis.

Case Report: The patient initially contacted the emergency department with worsening otalgia, headache, and dizziness. Upon hospital arrival, his condition deteriorated rapidly, showing agitation and decreased level of consciousness. Lab results revealed leukocytosis and elevated CRP. Due to rapid neurological decline, including severe hypertension (systolic blood pressure 200–220 mmHg) and anisocoria, the patient was intubated and empirical ceftriaxone was administered to cover suspected meningoencephalitis. Contrast-enhanced CT scan of the brain revealed right-sided otomastoiditis with intracranial extension, visualized by the presence of air in the dural space anterior to the mastoid and cerebral edema causing effacement of the basal cisterns and narrowing of the third and fourth ventricles. Neurosurgery placed an external ventricular drain. Subsequently, the ENT team inserted a ventilation tube and prepared for a mastoidectomy. However, due to a critical rise in intracranial pressure to 97 mmHg, neurosurgeons decided to perform an emergency decompressive craniectomy, which revealed immediate cerebral herniation with diffuse purulent lesions and absent cortical pulsations. Postoperatively, the patient remained sedated and intubated, with persistently elevated intracranial pressure. The following day, a neurological evaluation and CT angiography demonstrated absence of brainstem reflexes and cerebral perfusion, fulfilling criteria for death by neurological determination.

Conclusions: This case illustrates the potential for acute otitis media to rapidly progress to fulminant otogenic meningoencephalitis with malignant cerebral edema and irreversible neurological injury. It underscores the importance of early recognition and multidisciplinary management, while highlighting the limited therapeutic options once refractory intracranial hypertension has developed.

Sinonasal metastasis of Merkel cell carcinoma : about two cases

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Abstract

We report two patients with sinusal metastases of Merkel cell carcinoma. The first one is a 68-year-old woman presenting with a left axillary lymphadenopathy, whose immunohistochemical features were consistent with a metastasis of Merkel cell carcinoma. No primary tumor was identified on staging investigations. The patient was treated with radiotherapy alone. One year later, a second metastatic localization was incidentally detected in the left maxillary sinus. Treatment by radiotherapy was initiated.

The second one is a 75-year-old man who had previously been diagnosed with a Merkel cell carcinoma of the left gluteal region, treated with surgery followed by adjuvant radiotherapy. Five years later, a metastatic lesion of the two sinonasal cavities and the maxillary sinus was identified, and the patient was treated with concomitant immunotherapy and radiotherapy.

Introduction

Merkel cell carcinoma (MCC) is a rare and aggressive neuroendocrine skin tumor that mainly affects older men[1]. It has a high potential for recurrence and distant metastasis[2] with a regional lymph node involvement and distant metastases found in respectively 26% and 8% of patients at the diagnosis[3]. The main metastatic sites are distant lymph nodes, the liver, the lungs, the skin and subcutaneous tissues, and bones[4]. Metastatic involvement of the sinonasal cavities is extremely rare.

Case report

In 2023, a 68-year-old woman presented with a rapidly enlarging left axillary mass, which was subsequently diagnosed as a metastatic neuroendocrine carcinoma, immunohistochemically suggestive of Merkel cell carcinoma. No primary lesion was identified on staging investigations. Excision of a single lymph node was performed and adjuvant radiotherapy was delivered.

In October 2024, during hospitalization for a stroke, cranial imaging incidentally revealed a destructive left maxillary sinus mass with extension into the nasal cavity and nasopharynx. The patient subsequently reported nasal obstruction and intermittent epistaxis. Endoscopic examination demonstrated a sinonasal mass and biopsies at the left Eustachian tube orifice confirmed a metastasis of MCC. Cervico-thoracic MRI and

PET-CT showed bifocal sinonasal involvement without axillary recurrence. Given the recent stroke and patient preference, exclusive radiotherapy was chosen and completed in February 2025. Patient is currently under observation and shows no signs of recurrence.

Figure 1. Patient one : T2-weighted MRI

In 2020, a 75-year-ol-men is diagnosed with a Merkel cell carcinoma on the left gluteal region and treated with wide local excision and left femoral lymph node dissection, followed by adjuvant radiotherapy. Histopathological review confirmed clear surgical margins. The patient was subsequently followed without evidence of recurrence. In October 2025, the patient is referred to our outpatient clinic for recurrent epistaxis and a left-sided nasal mass. Biopsies in both nasal cavities reveal an immunohistochemically pattern suggestive of a second location of the known MCC.

Cervicofacial MRI and PET-CT showed locoregional invasion involving the left nasal cavity, the left maxillary sinus and the nasopharynx, without distant metastasis lesions. Treatment consists in immunotherapy, followed by adjuvant radiotherapy ; surgergy being considered unfeasible given the invasion of the Eustachian tube.

Figure 2. Patient two : T1-weighted MRI

Discussion

Sinusal metastases of MCC is an extremely rare diagnosis. Indeed, only a few isolated cases of MCC in sinusal cavities is reported[5,6,7], and those are sites of primary tumors, not metastatic lesions like in our cases.

The two cases presented here - one with axillary nodal MCC metastasis followed by a metachronous maxillary sinus metastasis, and one with late sinonasal metastases following primary gluteal MCC - illustrate several critical features of MCC metastasis. First, the sinonasal region may be involved even years after initial treatment of the primary lesion, and without other distant disease at the time of the initial diagnosis. This highlights the need for ongoing vigilance in follow-up imaging and clinical evaluation, particularly in patients presenting with new nasal symptoms such as epistaxis or nasal obstruction. Second, management of MCC with sinonasal involvement remains non-standardized due to its rarity, and typically involves a multidisciplinary approach tailored to patient comorbidities and extent of disease. Surgical resection with clear margins is generally preferred for localized disease, with adjuvant radiotherapy shown to improve local control in retrospective series[3]. In advanced or unresectable cases, immunotherapy with PD-1/PD-L1 inhibitors in combination with radiotherapy has emerged as a mainstay, given MCC's sensitivity to both modalities and the lack of high-level randomized evidence for alternatives[4]. Third, given the limited number of reported sinonasal MCC metastases, these cases underscore that sinonasal metastasis - though rare - should be part of the differential diagnosis in patients with a history of MCC presenting with new sinonasal symptoms. Early biopsy and histopathological confirmation are crucial, and multidisciplinary decisionmaking ensures that treatment strategies balance disease control with quality of life.

Conclusions

Although sinonasal metastases of MCC are extremely rare, their diagnosis should be considered in patients with a history of Merkel neoplasia and non specific ENT symptoms. An ENT examination and head and neck imaging (CT and/or MRI) should be performed whenever clinically suspected and may even be included in the initial assessment of MCC. Due to the lack of evidence for the treatment of this disease, a multidisciplinary meeting should be held in order to obtain a precise diagnosis and the most appropriate treatment for the lesion with the aim of improving patient's prognosis.

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Title: AI-driven detection and classification of voice disorders using acoustic recordings

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Abstract body:

Introduction and aim: Laryngologists have the expertise and equipment for accurate diagnosis of voice disorders. However, many patients experience referral delays. An artificial intelligence (AI)-driven approach using only acoustic recordings could detect potential voice disorders earlier, supporting faster referrals. The aim of this study is to develop and evaluate AI models for detecting and classifying voice disorders from acoustic recordings.

Material and methods: This multicenter predictive modeling study combined data from two Belgian hospitals, including patients with voice disorders between 2014 and 2025. Seven standardized speech tasks were recorded, along with demographic, clinical, perceptual, and patient-reported data. Data were split into fixed training (85%) and test (15%) sets. Two modeling strategies were explored: (1) extraction of HuBERT features followed by classification with support vector machine; and (2) fine-tuning an Audio Spectrogram Transformer (AST) pre-trained on AudioSet. Binary classification models were trained for six diagnostic distinctions: (1) healthy vs. pathological, (2) non-neurological vs. neurological, (3) non-benign lesion vs. benign lesion, (4) non-functional vs. functional, (5) non-inflammatory vs. inflammatory, and (6) non-tumor vs. tumor. Performance was assessed using 10-fold cross-validation and test set results, with area under the receiver operating characteristic (AUROC) and F1-score as primary metrics.

Results: The dataset consisted of 1,952 patients. The AST achieved the best results, with AUROC 0.984 (95% CI, 0.978–0.990) and F1-score 0.949 (95% CI, 0.932–0.966) for healthy vs. pathological voices, indicating near-perfect classification. Performance was lower for non-neurological vs. neurological disorders (AUROC: 0.744 [95% CI, 0.689–0.799]; F1-score: 0.697 [95% CI, 0.639–0.756]). Other binary models using HuBERT features performed more modestly with AUROCs of 0.669–0.764 and F1-scores of 0.447–0.680.

Conclusions: AI-based acoustic analysis shows strong potential for detecting voice disorders, although further research is required to improve diagnostic classification. These findings support the potential role of AI in facilitating earlier identification and referral of patients with voice disorders.

Title: Tip fold-over and scalar translocation in slim modiolar electrodes

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Abstract

Introduction and aim: Electrode positioning in cochlear implantation is critical for optimal outcomes. Perimodiolar electrodes, such as the Slim Modiolar, are designed to hug the modiolus, but complications like scalar translocation (ST) and tip fold-over (TFO) can occur. Both complications are associated with poorer auditory outcomes. The aim was to investigate whether preoperative anatomical markers on CBCT could predict the risk of ST or TFO in patients receiving Slim Modiolar electrodes.

Material and methods: We analyzed six patients with postoperative complications (four TFO, two ST) and a control group of 10 patients without complications. CBCT scans were evaluated with a 3D software programme to measure insertion angle relative to the basal turn and facial nerve, estimated electrode contact point, round window size and orientation, distance between the facial nerve and posterior canal wall, cochlear size and basal turn diameters at 0° and 45°. Statistical comparisons were performed between groups.

Results: Insertion angles tended to be larger and less favorable in the TFO and ST groups, but this was not statistically significant. The ST group had significantly smaller axial-plane round window angles, indicating a less orthogonal and less favorable orientation relative to the basal turn. The TFO group had a significantly smaller cochlear diameter A, whereas other cochlear dimensions and basal turn diameters showed no significant differences.

Conclusions: In this small Slim Modiolar cohort, scalar translocation was associated with less favorable round window orientation, and tip fold-over occurred more frequently in smaller cochleae. These findings suggest that both anatomical factors and insertion technique influence complication risk.

Susac syndrome presenting with vestibulo-auditory symptoms: a case report

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Introduction and aim:
Susac syndrome is a rare autoimmune microangiopathy affecting precapillary arterioles of the brain, retina and inner ear. It is classically characterized by encephalopathy, branch retinal artery occlusion and sensorineural hearing loss. Neuro-otological symptoms including hearing loss, tinnitus, vertigo and imbalance often precede classical manifestations, delaying diagnosis. We report an unusual case of Susac syndrome initially presenting with vestibulo-auditory symptoms.

Case report:
A 64-year-old woman presented with intense rotatory vertigo and gait instability for 10 days, followed by bilateral hypoacusis and left-sided non-pulsatile tinnitus for 2 days. Initial oral methylprednisolone (16 mg/day), self-initiated for one day, produced partial improvement in right-sided hearing. Examination showed spontaneous left horizontal nystagmus, present in all positions, accentuated in left gaze, not suppressed by visual fixation, with saccadic smooth pursuit. Pure tone audiometry revealed asymmetric moderate left and mild right sensorineural hearing loss, with decreased speech discrimination on the left. Video head impulse testing showed vestibulo-ocular reflex loss in posterior and lateral semicircular canals, marked in the left posterior and right lateral canals. Steroid escalation (32 mg/day for 1 week) did not prevent further bilateral hearing deterioration. Brain MRI demonstrated multiple supra- and infratentorial punctate and linear FLAIR hyperintensities with subcortical predominance and contrast enhancement. Cerebrospinal fluid analysis indicated inflammation, without infectious etiology. Diagnosis of Susac syndrome was then established based on clinical and radiological findings. High-dose intravenous methylprednisolone (1 g/day for 3 days), followed by oral methylprednisolone 32 mg twice daily, led to progressive improvement of vertigo and hearing, with lesion regression on follow-up MRI. Immunosuppressive therapy was initiated.

Conclusions:
Susac syndrome may initially present with vestibulo-auditory symptoms presenting as peripheral inner ear disorders. Early interdisciplinary evaluation supported by complementary tests such as MRI and audiovestibular testing is crucial for timely diagnosis. Prompt immunosuppressive therapy may prevent irreversible cochleovestibular and neurological sequelae.

- **Title:** Inverted papilloma of the sphenoid sinus: a case report

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- **Abstract body:**

Introduction
Inverted papilloma (IP) of the sphenoid sinus is a rare benign sinonasal tumor, accounting for 1–3% of all inverted papillomas. Its diagnosis and management are challenging because of its deep location and close relationship with critical neurovascular structures such as the internal carotid artery and optic nerve. Clinical presentation is often insidious and nonspecific, most commonly headache and visual disturbances, which may delay diagnosis. Complete surgical excision is essential due to the risks of recurrence and malignant transformation.

Case report
A 52-year-old male presented with nocturnal breathing disturbance. Endoscopic examination revealed a polypoid mass originating from the left sphenoethmoidal recess. Imaging showed a well-defined lesion confined to the left sphenoid sinus, near the vidian canal and internal carotid artery, without invasion. Histopathology confirmed IP without dysplasia. The patient underwent endoscopic type IV sphenoidectomy. Complete tumor excision was achieved, followed by drilling of the attachment site. No intraoperative or postoperative complications occurred, and recovery was uneventful.

Discussion
Sphenoid sinus IP differs from typical presentations by lacking nasal obstruction or epistaxis and often presenting with nonspecific symptoms. Preoperative CT and MRI are essential to assess tumor extent and its relationship to adjacent critical structures. Endoscopic endonasal surgery is the treatment of choice, with extended approaches indicated for laterally based tumors. Identification and treatment of the tumor's attachment site, including bone drilling, significantly reduce recurrence rates. Long-term follow-up is mandatory due to the risk of late recurrence and malignant transformation.

Conclusion
Sphenoid sinus IP is a rare entity requiring a high index of suspicion and meticulous surgical planning. Type IV sphenoidectomy approaches allow safe and complete resection of laterally based lesions. Adequate imaging, aggressive management of

the attachment site, and long-term surveillance are crucial to achieving optimal outcomes.

Tapia syndrome following total thyroidectomy : challenges in diagnosis and management

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Introduction and aim:

Tapia syndrome is a rare neurological condition characterized by concomitant unilateral paralysis of the hypoglossal nerve (XII) and the recurrent laryngeal branch of the vagus nerve (X). Fewer than 100 cases have been reported in the literature. Clinically, the syndrome typically presents with dysphonia, dysphagia, and tongue deviation toward the affected side. It is most often iatrogenic, resulting from orotracheal intubation or intraoperative cervical positioning. This case report aims to describe a rare case of Tapia syndrome following total thyroidectomy and to highlight the associated diagnostic, therapeutic, and preventive considerations.

Case report :

A 31-year-old woman underwent total thyroidectomy with intraoperative neuromonitoring for Graves' disease, resistant to medical therapy. On the first postoperative day, she developed dysphagia accompanied by moderate dysphonia. Fibroscopic evaluation revealed a paramedian vocal fold paralysis and hypomobility of the left vocal fold. Neurological examination demonstrated paresis of the left glossopharyngeal (IX), vagus (X) and hypoglossal (XII) nerves. Imaging studies excluded a central etiology. The patient was treated with corticosteroid therapy, vitamin B complex supplementation and early speech therapy. Complete neurological and functional recovery was achieved within two months.

Conclusion:

This case highlights the rarity of Tapia syndrome following total thyroidectomy. Early and targeted speech therapy may have contributed to faster functional recovery, emphasizing the value of a multidisciplinary approach. Increased awareness of this complication is essential to optimize both prevention and patient outcomes.

Early cochlear implantation in single-sided deafness: impact of duration of deafness on binaural hearing outcomes and tinnitus

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Introduction and aim:

Single-sided deafness (SSD) gives a loss of binaural hearing and therefore causes a loss of speech recognition, localisation of sound, quality of life and frequently tinnitus. The timing of cochlear implantation (CI) remains debatable, mostly regarding prolonged auditory deprivation. The aim is to evaluate outcomes between early (<2 years) and late cochlear implantation concerning speech perception in noise, localisation of sound and tinnitus.

Material and methods:

This retrospective cohort includes 26 adults with SSD due to sudden sensorineural hearing loss or labyrinthitis. Fourteen of these patients underwent cochlear implantation within 2 years after onset (early group). In the other group implantation happened up to 13 years after hearing loss. Sound localization, tinnitus severity (scored using a visual analog scale (VAS)) was done preoperatively and at 3 and 6 moths postoperatively. Speech perception in noise was performed with CI on and off where we used binaural interaction measures including binaural summation effect (S_0N_0), binaural squelch effect (S_0N_{SSD}) and head shadow effect ($S_{SSD}N_{NH}$).

Results:

Tinnitus severity preoperatively was comparable in both groups with postoperatively a substantial reduction. Sound localisation shows more improvement when implantation happened earlier (25,55 at 3 months; -1,56 at 6 months vs 38,08 at 3 months; 28,25 at 6 months). Speech perception in noise showed stronger binaural hearing in earlier implantaton, specifically squelch (-2,19 dB SNR (signal-to-noise ratio) vs -0,61 dB SNR) and summation effect (-0,95 dB SNR vs 0,17 dB SNR).

Conclusions:

Adult patients with unilateral hearing loss who receive CI within 2 years after onset experience greater improvements in usage, subjective benefit, localization and binaural effects at 3 and 6 months compared to those with longer deprivation, but in later implantation there is still substantial benefit observed. These findings support early implantation in patients with SSD.

Tympanic blood patch in perilymphatic fistula : an alternative treatment

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Introduction and aim

Perilymphatic fistula (PLF) is a rare condition known to generate valsalva-induced vertigo, hearing loss and tinnitus. It consists of an abnormal communication between the perilymph-filled inner ear and the middle ear cavity.
Amongst the main causes, post- traumatic, surgery-induced or idiopathic are the most prevalent..

PLF diagnosis is challenging because surgical exploration is the only test that provides certainty at the cost of an invasive procedure.

Hereby, we are discussing the management of a case of chronic PLF using tympanic blood patch (TBP).

Case report :

A 40 y.o man with bilateral otosclerosis underwent right stapedotomy 1 year prior in another institution.

He came for Valsalva-induced vertigo since surgery, persistent right-sided hearing loss and worsening non-pulsatile tinnitus. Right tragus pressure induced brief vertigo without nystagmus.
Otomicroscopy and impedancemetry were normal.
Pure tone audiometry revealed a bilateral mild conductive hearing loss.
CT scan of the petrous bone showed a properly positioned prothesis.
Air-conducted cervical and ocular vestibular evoked myogenic potentials were bilaterally absent.

PLF was suspected and a TBP procedure was performed successfully under local anesthesia (0.5 cc).
The patient’s symptoms improved after the procedure and the right ear pure tone audiometry was normalized.

Conclusion :

TBP appears to be a minimally invasive and effective therapeutic option for PLF although few cases have been reported so far.
It can provide both symptomatic relief and diagnostic support while avoiding the risks associated with exploratory surgery.
This procedure can be repeated or can represent a first step towards surgery.
Larger patient series are required to evaluate this procedure.

Early unilateral labyrinthitis ossificans complicating acute otitis media: A rare pediatric case

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Introduction and aim: Labyrinthitis ossificans (LO) is a rare complication of acute otitis media (AOM) in children. Unlike post-meningitic labyrinthitis ossificans (79% of pediatric cases) typically bilateral due to cerebrospinal fluid spread, post-otitic forms are rare and generally unilateral. While facial nerve palsy and labyrinthitis are recognized complications of AOM, they are considerably less common than acute mastoiditis. We report a severe pediatric case illustrating this aggressive complication.

Case report: A previously healthy 5-year-old boy developed acute vestibular syndrome, rapidly progressive unilateral sensorineural hearing loss (SNHL), and peripheral facial palsy following febrile AOM. High-resolution temporal bone CT and MRI demonstrated extensive labyrinthitis with early ossification, destructive perimastoid osteitis, meningeal enhancement, and probable mastoiditis. The semicircular canals showed the most severe involvement, consistent with typical LO patterns. No pathogen was identified despite comprehensive evaluation. The patient received four weeks of intravenous broad-spectrum antibiotics. Despite clinical improvement with partial facial recovery and progressive vestibular compensation, profound unilateral hearing loss persisted. In view of the persistent profound hearing loss, the early ossification and risk of progressive cochlear obliteration, cochlear implantation was performed in emergency.

Conclusion: This case represents an exceptionally rare presentation of early unilateral LO complicating AOM in a pediatric patient, distinguished by the rapid development of ossification, concurrent facial nerve involvement, and destructive temporal bone changes. The triad of acute vestibular syndrome, profound SNHL, and facial palsy following AOM should prompt urgent imaging evaluation. Early identification of LO is essential for timely cochlear implantation before progressive ossification limits surgical options and functional outcomes.This case underscores the importance of heightened clinical suspicion for inner ear complications in children with severe or complicated AOM.

An unusual case of fungal sphenoid sinusitis presenting with visual impairment

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Abstract

Introduction and aims:

Isolated fungal sphenoid sinusitis is a rare, often underdiagnosed condition. It is often caused by Aspergillus species, and is characterized by non-specific, chronic symptoms, that can lead to serious orbital and intracranial complications.

Case report:

A 82-year-old female patient was referred by the ophthalmologist to our ENT clinic with a history of atypical headache and double vision caused by a nervus abduces paresis. She did not have any immunosuppressed history or diabetic disease. MRI showed a fungal sphenoidal sinusitis in the right sphenoid with aspergillus osteomyelitis. Endoscopic evaluation showed no signs of discharges in the nasal cavity. A CT of the paranasal sinus and skull described an image most likely to be an aspergilloma of the sphenoid sinus, showing bone erosion and a thinning and cortical defect of the clivus. In prior CT images of 2023, revealed fungus ball with intralesional hyperdensity in the sphenoid sinus, but in lesser extent and without bony dehiscence.

Following the diagnosis of isolated sphenoid fungal sinusitis, the patient had Functional Endoscopic Sinus Surgery (FESS) with a sphenoidotomy approach for open drainage and ventilation of the right sphenoid sinus. During the operative procedure, the sphenoid sinus ostium was dilated with mushroom punch forceps to facilitate sinus evaluation with removal of the rostium. All fungal debris was removed by suction and curretage. The perioperative and postoperative phase were without any complications. Postoperatively, voriconazole was started for 12 weeks.

Postoperatively the headache where slightly reduced. Two months after performing the surgery, the double vision was no longer present. The isovuconazole could be stopped after three months of treatment. No long-term complications were present.

Conclusions:

Patients with fungal sphenoid sinusitis usually present non-specific/atypical headache symptoms. Invasive fungal sphenoid sinusitis can lead to serious complications. This case emphasizes the importance of recognizing an abducens palsy and attempting its cause.

More Information

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