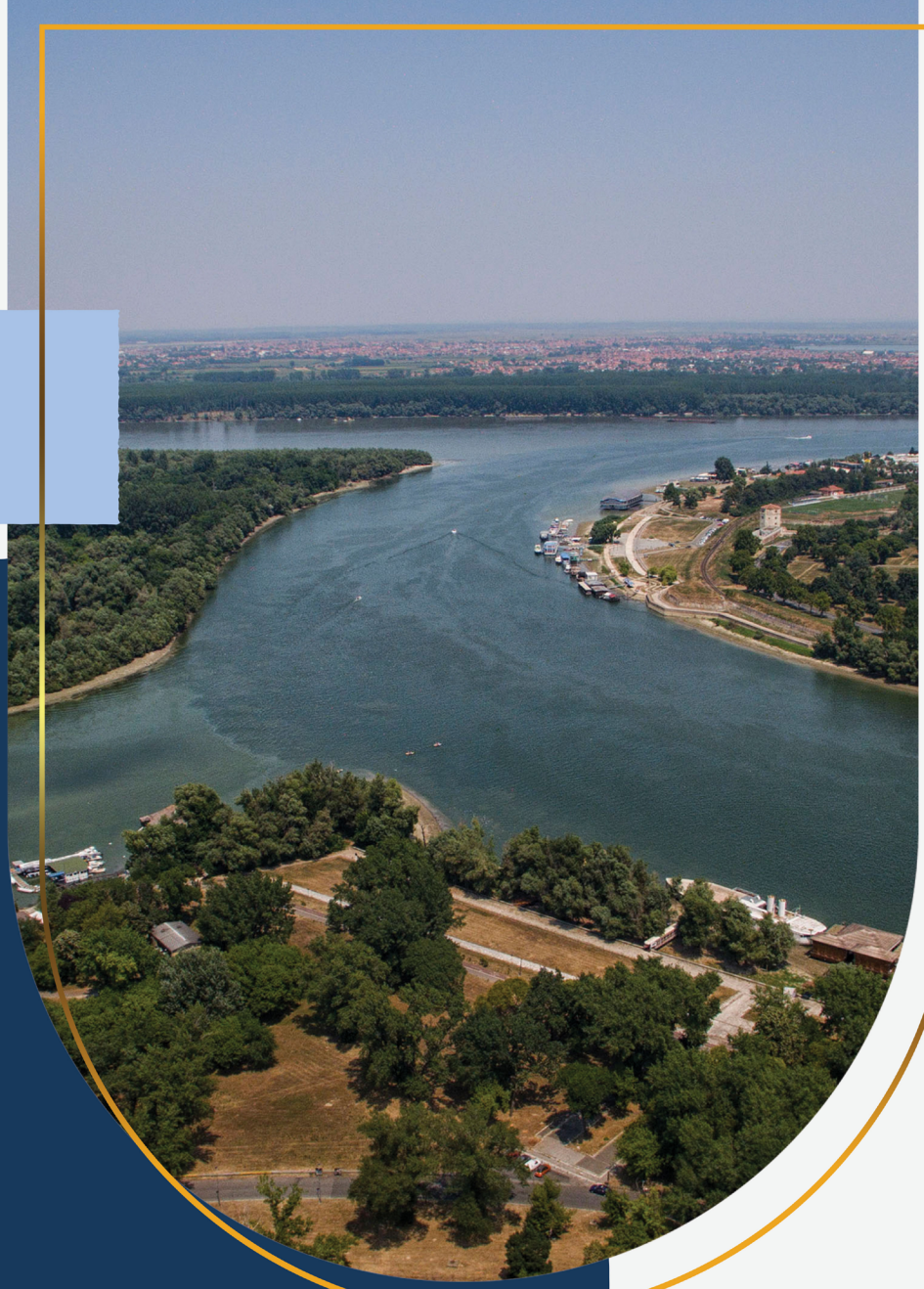

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NEW VERIA TECHNIQUE: TRANS-CANAL WALL COCHLEAR IMPLANTATION VERSATILE, SUITABLE FOR PUZLED CASES

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ABSTRACT

The original Veria Technique was invented in 1995, after the initiation of cochlear implantation procedures in Veria Hospital in 1993.

The main feature and advantage of the technique was the trans canal approach to the cochlea, which offered a wide visibility making it possible to identify the landmarks even in cases of anatomic variations. The second feature is the controlled drilling of a direct tunnel through the posterior bony wall to pass the electrode into the middle ear, using a special perforator. Therefore, mastoidectomy was unnecessary together with the posterior tympanotomy.

The technique was first published in 2000. One updated version was published in 2002, where a shallow well was added in the suprameatal area to accommodate the excess of the electrode. Both Versions were using the extended endaural incision, for both, the opening of the ear and placing the device.

We present the new version of the Veria Technique for cochlear implantation, emphasizing again the trans-canal approach, with a minimally invasive post-auricular incision, that avoids again mastoidectomy and posterior tympanotomy, while improving electrode handling and soft tissue protection.

The new version of the Veria Technique preserves the key advantages of the original methods, namely, direct access to cochlea, without mastoidectomy, while adapting to newer cochlear implant devices and current standards of atraumatic surgery. The technique facilitates also safe electrode insertion through the round window and improves isolation of the implant and electrode from the skin incision.

The main advantage of the technique, as we mentioned, is the wide visibility of the cochlea, making it possible to identify the landmarks even in cases of anatomic variations, and drilling at points inaccessible and angles impossible to obtain through the posterior tympanotomy. That makes it suitable for puzzled cases.

We present two examples of such puzzled cases: The first one was of an extremely rotated cochlea, with two previously failed efforts with misplacements of the electrode. The first insertion was in the vestibule and the second in the superior semicircular canal. The second one was of an incomplete partition III, with an insertion of the electrode into the internal auditory canal.

Both cases were easily handled perfectly with the Veria Technique.

Keywords: cochlear implantation, Veria Technique, trans-canal approach, minimally invasive surgery, round window insertion, atraumatic electrode insertion

AUDIOLOGICAL OUTCOME AFTER ULTRA EARLY ACTIVATION OF A COCHLEAR IMPLANT FOLLOWED BY EARLY REHABILITATION IN BILATERAL DEATNESS

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ABSTRACT

This prospective, single-center, open-label study investigated the audiological outcomes of ultra early cochlear implant (CI) activation combined with immediate postoperative rehabilitation in adults with bilateral sensorineural hearing loss, compared to the standard activation protocol, in which activation occurs 3–4 weeks post-surgery. Conducted at the University Clinic of St. Pölten the trial explored whether earlier activation improves hearing recovery, speech understanding, compliance, and quality of life, while also reducing the number of hospital visits. Sixty participants (thirty per group) were randomized to either the ultra early activation group (activation and therapy during the same hospital stay) or the regular activation group (standard timeline). The investigational devices include the MED-EL "Synchrony 2" and Cochlear "Nucleus" implants, both CE-marked and clinically established. Primary outcomes include improvements in hearing thresholds (via pure tone audiometry) and speech discrimination scores (via speech audiometry) at 3, 6, and 12 months post-implantation. Secondary outcomes involve patient compliance with rehabilitation, changes in quality of life (McGill and APHAB questionnaires), and reduced hospital attendance. Audiological and imaging tests such as CT, MRI, DVT imaging, and repeated audiometry are used pre- and post-operatively to monitor performance and electrode positioning. Early rehabilitation includes music therapy and auditory training starting within days after surgery. The study aimed to demonstrate that early CI activation can accelerate auditory rehabilitation, improve patient satisfaction, and streamline postoperative care without increasing risk.

Keywords: Cochlear Implant, Cochlear Implant Activation, Hearing Rehabilitation

THE EVOLVING VESTIBULAR SCHWANNOMA PATHWAY: CURRENT INNOVATIONS AND FUTURE DIRECTIONS

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ABSTRACT

Background. Vestibular schwannoma management is based on function-preserving care, in which most tumours are first observed and treatment is reserved for growth or large size. This lecture reviews United Kingdom (UK) practice, the Manchester pathway and future directions.
UK experience. Since 2012, the British Skull Base Society (BSBS) has run a prospective national vestibular schwannoma registry, now covering 25 skull base units. Between April 2019 and March 2025 it recorded 7,366 new patients and 1,368 operations. Initial management is driven by tumour size: 98% of Koos grade I and 88% of grade II tumours are observed, whereas 84% of grade IV tumours undergo surgery. Within three years of a surveillance decision, 27% of patients had been treated, 76% of them with radiotherapy. Surveillance follows the 2025 BSBS consensus, with scan intervals that lengthen as the residual risk of growth falls.
Manchester experience. The Manchester Skull Base Unit at Salford Royal Hospital performed 15% of all UK vestibular schwannoma operations in 2022–2025. Every patient is discussed at a regional multidisciplinary team meeting and seen in a skull base clinic; growing tumours suitable for radiosurgery are assessed in a joint surgeon–oncologist clinic. Most tumours, including 82% of Koos grade III tumours, start with an interval scan before treatment. Compared with national figures, subtotal resection was 2.7% versus 20.2% nationally, further treatment within two years 1.3% versus 15.3%, and median length of stay 4 versus 7 days. Iterative refinements include preoperative vestibular prehabilitation with intratympanic gentamicin, which reduced the median time to independent mobilisation from 6 to 2 days, and four-handed translabyrinthine surgery since 2025. In a contemporary series of 119 resections, gross or near-total removal was achieved in 94%. Cerebellopontine angle size also varies widely between adults, so linear tumour size alone may misjudge brainstem compression.
Future directions. The key unknown at diagnosis remains whether a tumour will grow. In a prospective cohort of 110 patients, permeability parameters from dynamic contrast-enhanced magnetic resonance imaging predicted growth with an area under the curve (AUC) of 0.85. A two-protein plasma enzyme-linked immunosorbent assay, derived from proteomics, distinguished growing from static tumours (AUC 0.83). If validated prospectively, imaging and blood biomarkers could allow personalised surveillance. The national STEREotactic Radiosurgery versus Observation for Vestibular Schwannoma (STEREO-VS) randomised trial will test whether upfront radiosurgery preserves hearing.
Keywords: Vestibular schwannoma; National registry; Active surveillance; Translabyrinthine surgery; Biomarkers

ANTERIOR SKULL BASE RECONSTRUCTION BY VASCULARISED AUTOLOGOUS LOCAL AND FREE FLAPS

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ABSTRACT

After tumor surgery or traumatic defects the anterior skull base needs sufficient closure in order to prevent rhinoliquorrhea, ascending infection and brain tissue prolaps. Particularly larger or recurrent defects or those after radiotherapy may profit from local or distal transfer of vascularized flaps.
The current series describes 73 patients with various complex anterior skull base defects which were approached by vascularised, autologous tissue transfer. Smaller defects (<2.5 cm in max. diameter) generally occurring after extended endoscopic skull base approaches (meningiomas, recurrent CSF fistulas, chordoma, chondroblastoma, metastasis, nasal fistula), were closed by a local, vascularized pedicled mucosal flap of the lower turbinate (n = 5) or septum (n = 49). Patients with major or recurrent defects or those after radiotherapy (e.g. malignoma, meningoencephalocele, aneurysmatic bone cyst and trauma) were reconstructed by a 'sandwich technique' containing a galea periost flap and a calvarian split transfer in 10 patients, or with a galea periost "mailbox approach" in one case, a temporalis muscle flap (n=4), while in 4 further patients free vascularised radial forearm flaps were used for revision after multiple unsuccessful operations elsewhere.
After a mean follow-up time > 24 months all cases were successfully repaired with respect to prevention and treatment of CSF leakage or brain tissue prolapse, with 10 cases needed minor surgical revision for recurrent fistula and one case for pneumatocephalus.
Integration of the entire repertoire of plastic-reconstructive surgery with local and distal vascularized tissue transfer allows for durable closure of complex skull base defects in an interdisciplinary setting.

Keywords: Skull Base, Reconstruction, Flaps, Tumor-Surgery

SALVAGE THERAPY FOR SUDDEN SENSORINEURAL HEARING LOSS

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ABSTRACT

Sudden sensorineural hearing loss (SSNHL) is an otologic emergency in which systemic corticosteroids remain the gold-standard first-line treatment, although 30–65% of patients do not achieve complete recovery with initial therapy. Salvage treatment is therefore an important component of management for patients with incomplete recovery. The principal salvage options are intratympanic steroid (ITS) therapy, hyperbaric oxygen therapy (HBOT), and their combination. Published salvage series of ITS demonstrate hearing improvement in approximately 37–48% of patients, with a mean gain of approximately 13.3 dB across frequencies and complete recovery in approximately 10%. Hyperbaric oxygen therapy provides hearing improvement in approximately 45% of patients and a mean gain of approximately 11 dB, with particularly favorable effects on low-frequency hearing recovery. Comparative meta-analyses suggest no significant difference in mean hearing gain between ITS and HBOT, although some studies report a small advantage for ITS. Intratympanic steroid therapy may also have a superior effect on tinnitus reduction. Combined ITS and HBOT may provide the highest functional gains in word recognition scores and pure-tone average improvement, with reported recovery rates of approximately 68%; however, the evidence remains limited because relatively few studies have evaluated combined treatment. Timing appears to be an important determinant of outcome. Salvage ITS is most effective when initiated within 2–6 weeks after onset, although benefit may persist up to 3 months, while HBOT is most effective when started within the first month. In the presented evidence, the best results for ITS were observed when treatment was initiated 14–21 days after onset. Prognostic factors associated with poorer recovery include vertigo, tinnitus, high-frequency hearing loss, and very low or high levels of chronic stress. Low-frequency hearing loss and a moderate level of chronic stress may be associated with better recovery. Overall, salvage therapy should be considered promptly in patients with incomplete recovery after initial treatment. The choice between ITS, HBOT, or combined therapy should take into account treatment timing, clinical characteristics, prognostic factors, and available evidence.

Keywords: sudden sensorineural hearing loss; salvage therapy; intratympanic steroid; hyperbaric oxygen therapy; hearing recovery

MASTOID OBLITERATION: CURRENT CONCEPTS AND CONTROVERSIES

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ABSTRACT

Mastoid obliteration is an established strategy for addressing the postoperative problems associated with the canal wall down (CWD) approach and may also be incorporated into canal wall reconstruction (CWR) procedures. The choice between canal wall down (CWD), canal wall up (CWU), and CWR surgery should be individualized according to disease prevalence and extent, patient preferences, the status of the contralateral ear, and whether surgery is primary or revision. CWD surgery provides good disease control and allows office resolution of the postoperative cavity but may be associated with the need to avoid water exposure, regular cavity cleaning, recurrent inflammation, and difficulties with cleaning in large cavities or when the facial ridge is high. Mastoid obliteration can be performed using local flaps, bone dust, or artificial materials. Local flap and bone dust techniques use readily accessible, living or homologous material, but limitations include flap atrophy, bone dust resorption, postoperative inflammation, and difficulty detecting recurrent disease. Artificial materials, provide additional options for obliteration. Recurrence is lower after CWD than CWU surgery, whereas in children there is no significant difference in recurrence between the two techniques, with better hearing reported after CWU. Recurrence appears to be influenced not only by cholesteatoma size but also by diseased mucosa and atelectasis. Quality-of-life outcomes favor CWU and CWR, particularly regarding water exposure and social interaction. Our institutional results from 2018–2026 include 120 mastoid obliterations with Bonalive granules and 32 local flap obliterations. Among 86 reoperations, the main indications were recurrence of cholesteatoma, inflammation or leakage, and combined cholesteatoma and chronic inflammation; ossiculoplasty with total or partial ossicular replacement prostheses was additionally performed in 52 cases. Early postoperative complications included three cases of inflammation, one cholesteatoma recurrence requiring reoperation after three years, and one brain abscess following surgery during an exacerbation of inflammation.CWD, CWU, and CWR can all provide good results when indications are appropriately selected. For patients requiring CWD surgery, mastoid obliteration, together with ossiculoplasty when indicated, may improve postoperative function and quality of life. The optimal surgical strategy remains an individual decision based on disease characteristics and patient factors.

Keywords: mastoid obliteration; cholesteatoma; canal wall down; canal wall up; canal wall reconstruction

CARCINOMA HYPOPHARYNGIS: ONCOLOGICAL RESULTS AFTER PRIMARY SURGERY

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ABSTRACT

Objective:
The main objective of this study was to analyze the oncological results and survival outcome in primarily surgically treated patients with hypopharyngeal cancer.
Methods:
A total of 95 patients, who underwent primary open surgery for squamous cell carcinoma of the hypopharynx, were retrospectively reviewed during the period of 5 years following surgery. Overall and disease-free 5-year survival rates were measured, and potential prognostic factors influencing survival outcome were analyzed.
Results:
Patients with hypopharyngeal carcinoma were usually diagnosed in advanced tumor-T stages: 73.7% as opposed to 26.3% in early T stages. Positive lymph node metastases (N+) were present in 80% of the patients. Overall 5-year survival rate was 44.2% and the 5-year disease-free survival was 41.7%. In the follow-up, a recurrence was observed in 36 (37.9%) patients, while 16 (16.8%) subjects developed a second primary tumor. The overall 5-year survival was significantly shortened in patients with N+ neck (39.5% opposed to 63.2% in N0; $P = .047$) and in those who developed a disease recurrence (25% opposed to 55.93% in those without recurrence; $P = .022$), especially those with locoregional neck lymph node and distant metastases (18.51% opposed to 54.41% in those without metastases; $P = .001$).
Conclusion:
Hypopharyngeal cancer is usually presented in advanced stages. Primary surgical approach of these carcinomas enables satisfactory oncological results. The initial N+ neck, as well as the presence of disease relapse, especially neck and distant metastases, represents a negative prognostic factor of 5-year survival rate in patients with primarily surgically treated hypopharyngeal carcinoma.

Keywords: 5-year survival, cancer, hypopharynx, recurrence, surgery

RECONSTRUCTION OF DEFECTS OF NECK AND HYPOPHARYNX

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ABSTRACT

Introduction. A tissue defect involving the pharynx, musculature, and skin of the anterior neck develops in patients following laryngectomy and radiotherapy for laryngeal and pharyngeal carcinoma. The causes include the loss of laryngeal tissue, the compromised nutritional status of neck tissues following radiotherapy, persistent soft-tissue inflammation, and prolonged healing.
Materials and methods. Various reconstructive methods were used. Deltopectoral skin flap (3x), sternocleidomastoid musculocutaneous flap 4x, pectoralis maior musculocutaneous flap (30x), latissimus dorsi musculocutaneous flap (1x), free jejunal flap (3x), free radial forearm flap (4x)
Results. Oncological outcomes are not subject of the study. We evaluate functional results. In the case of a circumferential pharyngeal defect, the level of food swallowing does not depend on the flap used. Active bolus propulsion is absent, and the passage of food is inadequate.
Summary. We most frequently address defects of the anterior neck wall and hypopharynx using a pectoralis maior musculocutaneous flap, as it is simple and adds the least amount of time to the operation.

Keywords.Defct of hypopharynx and anterior neck;pectoralis maior flap;functional results

DIAGNOSTIC DELAY, TUMOR STAGE, AND QUALITY OF LIFE IN PRIMARY LARYNGEAL CANCER PATIENTS

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ABSTRACT

Introduction
Delayed diagnosis of laryngeal squamous cell carcinoma (LSCC) may contribute to advanced tumor stage and reduced quality of life (QoL). We examined associations between diagnostic delay, tumor stage, and patient-reported QoL in a Serbian cohort of surgically treated primary LSCC.
Methods
This single-center observational study included 124 patients (≥18 years) with primary LSCC scheduled for surgery at the University Clinical Center of Serbia, Clinic for Otorhinolaryngology and Maxillofacial Surgery, between January 2024 and January 2026. All patients provided written informed consent. Diagnostic delay was defined as patient-reported time from first symptom onset to initial clinical presentation and analyzed dichotomously (<6 vs ≥6 months) and across four ordered categories (<3, 3–<6, 6–<12, ≥12 months). Tumor stage was classified as early (T1–T2) or advanced (T3–T4). QoL was assessed using the Functional Assessment of Cancer Therapy–Head & Neck (FACT-H&N); QoL burden was expressed as deviation from the maximum score, with clinically meaningful impairment defined as ≥10%. Nonparametric analyses were applied as appropriate.
Results
Among patients with available staging data (n=111), 57.7% presented with advanced disease, and diagnostic delay exceeded 6 months in 47.3%. Advanced disease was more frequent with longer delay (49.0% for <6 vs 65.3% for ≥6 months; χ^2=2.70, p=0.10; OR 1.96, 95% CI 0.88–4.38). Across ordered delay categories, advanced disease increased progressively, reaching 75% when delay exceeded 12 months (linear trend p=0.031).
Mean deviation from the maximum FACT-H&N score was 24.7%±12.5, and 91.1% had clinically meaningful QoL impairment. QoL burden was greater in advanced-stage than early-stage disease (Mann–Whitney U=1121.5, p=0.022) and did not differ across delay categories (Kruskal–Wallis p=0.398).

Conclusions
Longer diagnostic delay in primary LSCC was associated with higher tumor stage at presentation, while advanced disease was linked to greater quality-of-life impairment, highlighting the need for earlier recognition and referral.

Keywords: Laryngeal Cancer; Diagnostic Delay; Quality of Life; Patient Reported Outcomes

NEUROMONITORING IN SURGERY FOR THYROID MALIGNANT TUMORS

Prof dr Milan Stanković

ABSTRACT

The treatment of thyroid malignant tumors is still controversial. ENT are traditionally directed to obtain airway, more or less urgently, for such patients. Modern protocols for the treatment of laryngeal cancer include thyreoidectomy, and European ENT specialization and Congresses emphasize the role of ENT in the surgery of thyroid malignant tumors.
The recurrent laryngeal nerve can be intraoperatively identified visually, but in cases of thyroid malignancy neuromonitoring can be very valuable. Some metacentric studies have confirmed the contribution of neuromonitoring in reducing recurrent nerve palsy, as well as in radicality of surgical resection.
The surgical experience is presented with demonstration of technique for malignant tumors, both primary, recurrent, and salvage. Recurrent nerve monitoring is presented in details, with its contribution to surgical decision, planning, and execution.

Keywords: thyroid gland, malignant tumors, recurrent nerve, neuromonitoring

FACTORS AFFECTING RESULTS OF REATMENT OF HYPOPHARYNGEAL CARCINOMA

Prof dr Milan Stanković

ABSTRACT

Objective: A retrospective review of patients with malignant neoplasms of the hypopharynx treated with combined surgery and radiotherapy is presented to highlight the results of treatment and factors of success of this malignant disease.

Patients and Methods: Between 2014 and 2024 totally 89 patients with malignant neoplasms of hypopharynx (85 males, 4 females, and age ranging from 44 to 77 years) were treated. In the 89 patients (stage I, n = 4; stage II, n = 3; stage III, n = 34; stage IV, n = 48), the sites of origin were pyriform sinus (n = 75), postcrycoid (n = 8), posterior pharyngeal wall (n = 3) and superior hypopharynx (n = 3).

Results: Laryngeal preservation was achieved in 11.2% of patients and 88.8% had laryngectomy with partial or total pharyngectomy. The most common site of origin of hypopharyngeal carcinoma was the pyriform sinus in 84.3%. Totally 93% of patients either presented with or developed neck metastases. Tumors extended beyond the hypopharynx in 41.6% of patients at initial presentation. TNM stage was very significant parameter of outcome. Five year survival was 100% for stage I, 66.6% for stage II, 53.9% for stage III, and 33.3% for stage IV. Residual disease (5, 6%) and recurrent disease (2.2%) were low. Postoperative fistula developed in 16.8% of patients, only in stage III and IV of disease. In 60% it was closed successfully using local flaps, while in 40% pectoralis flap was used. Localization of disease was also important factor. Retrocrycoid carcinoma resulted in very poor survival rate (12.5%), high residual disease, and lymph node metastasis, and pharyngocuraneous fistula formation.

Conclusion: Localization and TNM stage are highly significant factor for clinical course, treatment, and outcome of hypo pharyngeal carcinoma.

Keywords**:** hypopharynx, squamous cell carcinoma, surgery, five year survival

NECK DISSECTION: STEP BY STEP

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ABSTRACT

Background: Neck dissection is among the most frequently performed procedures in head and neck surgery. Its extent depends on the underlying disease, with levels I–V commonly addressed and level VI and VII additionally relevant in thyroid malignancy.
Methods: An incision is made along a skin-tension line, followed by elevation of a skin–platysma flap. As the second step the anterior border of the sternocleidomastoid muscle is exposed, followed by the third to dissect the carotid sheath, with the common carotid artery and internal jugular vein. Dissect the accessory nerve until you reach the posterior belly of the digastric muscle. Dissect the whole digastric muscle.
For level I dissection, the mandibular notch and facial artery pulse are located, and the marginal mandibular branch is identified approximately 1.5 cm cranial to the inferior mandibular border. When only levels II–IV are treated, the inferior border of the submandibular gland provides the next landmark.
Further dissection proceeds by identifying the mastoid process and dissecting perpendicularly through the cervical tissue toward the levator scapulae and splenius capitis muscles in an L-shaped manner. The specimen is mobilized beneath the accessory nerve.
Next key step is to elevate the specimen along the cervical plexus plane from lateral to medial toward the vascular sheath and above the clavicle.
For levels VA and VB, the posterior sternocleidomastoid border is exposed. Identify the exit point of the accessory nerve within the middle of the muscle and follow the nerve caudolaterally to the trapezius muscle. The anterior trapezius border and clavicle define the posterior and caudal landmarks. Finally, the specimen is separated from the carotid artery, vagal nerve, and internal jugular vein and connected to the cranially prepared specimen for en-bloc removal.
For level VI dissection remove the pretracheal fibro-fatty tissue from the tracheal surface toward the suprasternal notch. Mobilize the paratracheal tissue under continuous visualization of the recurrent laryngeal nerve while preserving the parathyroid glands and their vascular supply. Below the suprasternal notch dissect level VII, preferably in continuity with the level VI, including mediastinal fibro-fatty lymphatic tissue from the trachea and great vessels under direct visualization. Finally, confirm hemostasis, recurrent laryngeal nerve integrity, and parathyroid viability. Document the side, extent, included nodal basins, and therapeutic or prophylactic intent.
Conclusion: This landmark-based sequence provides a reproducible framework for the neck dissection while emphasizing anatomical orientation, compartment-oriented removal, and preservation of key neck structures.
Keywords: Ste-by-step dissection, landmark surgery

RECURRENT GIANT INFLAMMATORY FIBROID POLYP OF THE ESOPHAGUS: TRANSORAL RESECTION USING RIGID ESOPHAGOSCOPY

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ABSTRACT

Introduction: Inflammatory fibroid polyps (IFPs) are a rare type of benign lesion of the gastrointestinal tract that occur rarely in the esophagus. Recurrent IFPs after surgical excision have been reported only in rare cases. We report a case of recurrent giant esophageal IFP successfully removed using the transoral approach with rigid esophagoscopy. Case Report: A 61-year-old woman presented with dysphagia caused by recurrence of the esophageal mass. The patient had suffered from esophageal IFP, which had been surgically excised in 2018 and had no complaints for many years. During upper gastrointestinal endoscopy, a mobile polypoid lesion originating from the upper part of the esophagus with the length of approximately 13 cm was found. On CT scan, intraluminal esophageal mass was confirmed. After CT scanning, the patient undergoes gastroscopy, but endoscopic removal of the polyp failed because of its broad base. Under general anesthesia, rigid esophagoscopy revealed a giant polyp covered by normal mucosa and connected to the upper third of the esophagus. The polyp was grasped with an esophagoscope and excised transorally at the pedicle. The specimen measured 9.6 × 3.5 × 2.3 cm. Microscopic and immunohistochemical analysis detected proliferative fibrocollagenous stroma with chronic inflammatory infiltration and CD34-positive cells of the stroma, which confirms the presence of inflammatory fibroid polyp. Postoperatively, there were no complications, and the patient resumed eating orally. Conclusion: Recurrent giant esophageal IFP is an extremely rare disease and can occur even many years after initial successful therapy. Rigid esophagoscopy is the effective transoral approach for selected cases of upper esophageal lesions.

Keywords: inflammatory fibroid polyp; esophagus; recurrence; rigid esophagoscopy; transoral surgery

TRAUMATIC FACIAL PALSY

Prof dr Milan Stanković

ABSTRACT

Facial nerve palsy can have different etiology, and different medical specializations are involved in its treatment. Recent and late facial palsy are surgically treated unequally, with differences in results.
Traumatic facial palsy can be caused by blant trauma, penetrant trauma, barotrauma, and other causes. Temporal bone fractures are one of the most important factors. Diagnostic and trerapeutic protocols are documented. Timing of surgery, neurosuture and grafts are discussed. Surgical experience is presented. The most frequent accompaning symptoms, were hearing loss, vertigo, otorrhagia, tympanic membrane perforation. Suprastapedial palsy dominated with 69%. Fracture lines, edema, bone fragments, and atrophy dominated intraoperatively. The recovery rate for nerve decompression, neurosuture, and nerve graft are presented.

Keywords; facial nerve, paralysis, surgery, nerve graft

SURGICAL MANAGEMENT OF HYPOPHARYNGEAL CARCINOMA: BALANCING ONCOLOGIC RADICALITY AND FUNCTIONAL PRESERVATION

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ABSTRACT

Hypopharyngeal carcinomas are aggressive malignancies of the upper aerodigestive tract that are frequently diagnosed at locally and regionally advanced stages due to nonspecific symptoms and their anatomical location. Despite advances in radiotherapy, systemic therapy, and various organ-preservation protocols, surgical treatment continues to play an important role in the management of carefully selected patients. The aim of this study was to present the characteristics and surgical treatment options for hypopharyngeal carcinoma in a tertiary referral center, with particular emphasis on the selection and extent of surgical procedures, management of regional lymph nodes, and immediate surgical and oncologic outcomes.

This retrospective descriptive study included 32 patients with histopathologically confirmed hypopharyngeal carcinoma who underwent primary surgical treatment. The choice of surgical procedure depended on the location and extent of the primary tumor, involvement of adjacent structures, and the feasibility of achieving an oncologically adequate resection while preserving function. Partial hypopharyngeal resections, as well as more radical surgical procedures, including total pharyngolaryngectomy, were performed, with appropriate management of regional lymph nodes by means of neck dissections. The extent of surgical resection, histopathological margin status, regional nodal status, perioperative complications, and indications for postoperative adjuvant treatment were analyzed.

Surgical treatment of hypopharyngeal carcinoma requires an individualized and multidisciplinary approach, with the extent of resection determined by balancing oncologic radicality against functional preservation. Appropriate patient selection, precise preoperative planning, and timely adjuvant treatment represent key elements of the contemporary surgical management of this complex malignancy.

Keywords:hypopharyngeal carcinoma; surgical treatment; pharyngolaryngectomy; neck dissection; oncologic radicality.

MEPOLIZUMAB AND THE MANAGEMENT OF SEVERE NASAL POLYPOSIS: REAL-WORLD DATA FROM HUNGARY

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ABSTRACT

Background: Chronic rhinosinusitis with nasal polyps (CRSwNP) is a common type 2 inflammatory disease associated with substantial nasal and sinonasal symptom burden and impaired quality of life. In recent years, a better understanding of the pathophysiology of CRSwNP has enabled the introduction of targeted biologic therapies for patients with severe disease inadequately controlled by conventional treatments. Biologic therapies currently available in Hungary for the treatment of CRSwNP are dupilumab, omalizumab, mepolizumab, and tezepelumab.
Materials and Methods: A retrospective analysis was conducted among patients treated with and followed on mepolizumab therapy since 2023 at the Department of Otorhinolaryngology and Head and Neck Surgery, University of Szeged. At baseline and follow-up visits, patients completed the Sino-Nasal Outcome Test-22 (SNOT-22) and Nasal Obstruction Symptom Evaluation (NOSE) questionnaires in accordance with national and international guidelines. Olfactory function was assessed using a 0–3 Loss of Smell Score (LSS), while nasal obstruction severity was evaluated on a 0–10 visual analogue scale (VAS). Nasal polyp size was determined by endoscopic examination using the Nasal Polyp Score (NPS). Adverse events and treatment effectiveness were also recorded based on patient-reported outcomes as well as physicians' subjective and objective assessments. Follow-up visits were performed at approximately six-month intervals.
Results: In our study period, mepolizumab therapy was initiated in 14 patients, of whom 13 had both baseline and follow-up data available for analysis. Data at baseline were the following (mean ± SD) NPS 4.85±1.46, SNOT-22 61.69±18.49, VAS 8.48±2.16, NOSE 17.00±4.45 and LSS 2.69±0.63. At the first follow-up visit, significant improvements were observed in NPS (3.62±1.39; p = 0.008), VAS (5.13±3.47; p=0.013), and NOSE score (9.38±6.80; p =0.009), whereas the improvement in SNOT-22 did not reach statistical significance (42.46±23.50; p=0.133). At the second follow-up visit, significant improvements remained evident in NPS (3.69±1.60; p= 0.008), VAS (5.22±2.81; p = 0.003), and

NOSE score (11.46±6.35; p = 0.009). Improvement in SNOT-22 was borderline significant (47.54±21.42; p = 0.048), while changes in LSS did not reach statistical significance at either follow-up time point. No serious adverse events (SAEs) were observed during the study period.
Conclusion: Our findings demonstrate that mepolizumab treatment was associated with clinically meaningful improvement in patients with severe CRSwNP. However, approximately one-third of patients required adjunctive surgical intervention or systemic corticosteroid therapy during follow-up. No significant improvement in olfactory function was observed. Long-term studies involving larger patient populations are needed to further evaluate treatment response and identify predictors of therapeutic success.

Keywords: biologic therapy; CRSwNP; mepolizumab; nasal polyps; real-world evidence; SNOT-22

SHIFTING THE PARADIGM IN SEVERE CRSWNP MANAGEMENT: REAL-WORLD EFFICACY OF UPSTREAM EPITHELIAL TSLP BLOCKADE AND THE CHALLENGE OF ENDOTYPIC HETEROGENEITY

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ABSTRACT

Background: Chronic rhinosinusitis with nasal polyps (CRSwNP) represents a complex immune-mediated disease driven by epithelial barrier dysfunction. Patients with aggressive, recalcitrant CRSwNP often face an exhaustive cycle of revision functional endoscopic sinus surgeries (FESS) and systemic corticosteroid overuse.
Objective: To evaluate the real-world clinical efficacy and safety of Tezepelumab (anti-TSLP) managed directly by a specialized ENT biological team, and to investigate the challenges of endotypic and biomarker heterogeneity.
Methods: A prospective real-world study was conducted at the Clinical Center of Vojvodina, evaluating adult patients with severe, uncontrolled CRSwNP and comorbid asthma. Patients received consecutive subcutaneous doses of Tezepelumab (210 mg every 4 weeks). Comprehensive baseline and longitudinal tracking included absolute blood eosinophil counts, total IgE, vitamin D levels, Nasal Polyp Score (NPS), total VAS scores, SNOT-22 quality-of-life questionnaires, and semi-objective olfactory testing. Results: Tezepelumab demonstrated a highly potent and rapid clinical effect across the cohort. At week 16 (post-4th dose), the mean NPS significantly decreased from a baseline of 6.7 to 2.0 (a 70% reduction), with one N-ERD patient achieving complete polyp clearance (NPS 0) by week 12. The mean SNOT-22 score dramatically improved from 66.3 to 12.0 (an 82% reduction), and the total VAS score dropped from 30.6 to 12.3. Semi-objective olfactory scores increased 5-fold (mean 1.0 to 5.0). However, significant endotypic heterogeneity was observed: one patient demonstrated excellent clinical remission but persistent complete anosmia (0/12) coupled with a paradoxical late rebound of peripheral blood eosinophils (3.1% to 5.1%). Furthermore, a highly atopic patient exhibited stable symptom relief but a discordant post-treatment increase in total IgE (360 to 507.1 UI/mL), suggesting alternative epithelial bypass activation via IL-33 or IL-25 pathways.
Conclusion: Direct management of biologics by an ENT specialist team ensures robust, targeted disease control and substantial steroid elimination. While upstream TSLP blockade

achieves profound tissue and clinical remission in aggressive N-ERD phenotypes, real-world biomarker discordance and alternative epithelial pathways highlight the necessity of meticulous longitudinal profiling to fully unlock precision medicine in diverse CRSwNP endotypes.

Keywords: Chronic rhinosinusitis with nasal polyps; Tezepelumab; Thymic stromal lymphopoietin; Endotypes; Real-world evidence

CHALLENGES IN LARYNGEAL AND HYPOPHARYNGEAL CANCER SURGERY AT THE TRANSITION TO THE SECOND QUARTER OF THE 21ST CENTURY

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ABSTRACT

The purpose of the study was to review current challenges in head and neck oncological surgery arising from evolving treatment paradigms for advanced laryngeal and hypopharyngeal cancers, and to assess their implications for surgical practice, healthcare systems, and future workforce demands.

The literature was narratively reviewed, with particular attention to evolving treatment strategies for advanced laryngeal and hypopharyngeal cancers, advances in reconstructive techniques, demographic shifts, and organizational factors affecting head and neck surgical practice.

The widespread adoption of organ-preserving chemoradiotherapy has reduced indications for primary laryngectomy, while increasing the need for technically demanding salvage surgeries. These procedures are associated with longer operative times, impaired wound healing, and higher complication rates, including pharyngocutaneous fistula. Advances in microvascular reconstruction have improved functional outcomes but require specialized expertise, prolonged operating times, and greater institutional resources. The growing proportion of elderly patients further increases complexity of decision making because of comorbidities and elevated perioperative risks. At the same time, the increasing use of multimodal treatment requires closer coordination between surgeons, radiation oncologists, medical oncologists, radiologists, pathologists, speech and swallowing specialists, and other members of the multidisciplinary team. In parallel, organizational challenges, including prolonged hospitalization, increased treatment costs, limited operating theatre availability, reduced inpatient capacity, and emergent perioperative immuno-therapy are placing additional pressure on healthcare systems. These developments may also affect surgical training, as declining numbers of partial laryngectomies may reduce opportunities for young surgeons to acquire and maintain proficiency in complex partial laryngeal surgery.

Head and neck surgeons are facing growing clinical and organizational challenges in the second quarter of the 21st century. Maintaining expertise in established surgical techniques while adopting emerging technologies, enhancing interdisciplinary collaboration, and ensuring continuous professional development and adequate infrastructure will be crucial for delivering high-quality patient care. Surgical services will need to adapt to increasingly complex

patients and procedures while ensuring adequate case volumes and training opportunities for future generations. These developments indicate that future head and neck surgeons are likely to face a higher workload, greater procedural complexity, and longer working hours.

Keywords: head and neck cancer; landmark studies; laryngectomy; chemoradiotherapy; complications

TEMPORAL VARIABILITY IN THE INCIDENCE AND RISK FACTORS FOR PHARYNGOCUTANEOUS FISTULA

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ABSTRACT

The pharyngocutaneous fistula (PCF) is the most common complication following a total laryngectomy (TLE) with a wide range of incidence and various potential risk factors. This study aimed to analyse the variability in the incidence of the PCF, the most common complication following a TLE, and to identify the underlying causes for fluctuations in incidence rates.
This retrospective study reviewed annual PCF incidence rates and comprehensive clinicopathological data from 540 patients who underwent TLE between January 2004 and December 2022. Distinct periods characterized by higher and lower PCF incidence were identified. Within these periods, patients were categorized into groups with PCF (study groups) and without it (control groups). These groups were statistically compared based on potential risk factors for PCF development. The high-incidence periods were further analysed for recurring risk factors, and the corresponding corrective measures were reviewed. Data from the additional years 2023 and 2024 including 52 patients were analysed separately and compared with those from the 2004–2022 period.
The analysis revealed four high-incidence periods with an overall PCF incidence of 37.61%, along with three low-incidence periods in between with an overall incidence of 19.38%. Surgical wound infection (SWI) and a history of head and neck cancer alongside their related treatments were repeatedly identified as independent risk factors during high-incidence periods, with SWI being the most consistent predictor of PCF development. Despite the implementation of several corrective measures, the PCF incidence remained high in the additional 2023–2024 cohort.
Continuous monitoring of PCF incidence is crucial, as it allows for the identification of emerging risk factors and the immediate implementation of corrective measures to mitigate these newly identified risk factors. The persistently high PCF incidence observed in the 2023–2024 cohort highlights the need for continued surveillance and further refinement of preventive strategies.

Keywords: total laryngectomy; fistula; incidence; fluctuation; timely management

SINGLE-SHOT CO_2 LASER STAPEDOTOMY IN PRIMARY AND REVISION SURGERY – SURGICAL TECHNIQUE, LONG-TERM EXPERIENCE AND CRITICAL ASPECTS AFTER MORE THAN 30 YEARS

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ABSTRACT

In otosclerosis surgery, carbon dioxide (CO_2) laser stapedotomy enables non-contact removal of the stapes suprastructure and controlled perforation of the footplate. The aim is to create a nearly circular, reproducible perforation approximately 0.5–0.6 mm in diameter while minimizing thermal and acoustic effects on middle and inner ear structures. In scanner-assisted single-shot (one-shot) CO_2 laser stapedotomy, delivery of a focused laser beam in a single application optimizes perforation while minimizing the total energy required.

Experimental studies established laser parameters for single-shot stapedotomy that were subsequently introduced into routine clinical practice. More than 30 years of clinical experience with the technique, involving over 3,000 patients, support its role in precise, controlled management of the stapes footplate. This presentation reviews the surgical technique and its application in primary and revision stapes surgery.

Particular attention is given to the differing requirements for laser application to the stapedius tendon, stapes crura and footplate. Critical aspects include control of the delivered energy and recognition of the limitations of the selected laser parameters. Risk minimization focuses on avoiding ossicular chain dislocation, footplate mobilization (floating footplate), and damage to adjacent middle and inner ear structures. The non-contact approach and controlled energy delivery are central to these considerations.

Scanner-assisted single-shot CO_2 laser stapedotomy offers precise footplate perforation and controlled handling of middle ear structures. Long-term experience highlights both its technical advantages and the importance of careful parameter selection in primary and revision surgery.

Keywords: CO_2 laser; single-shot (one-shot) stapedotomy; otosclerosis; primary stapes surgery; revision stapes surgery

MANAGEMENT OF FAR ADVANCED OTOSCLEROSIS

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ABSTRACT

INTRODUCTION: Advanced otosclerosis (AO) and far advanced otosclerosis (FAO) present significant challenges in otology due to progressive sensorineural hearing loss and potential intracochlear changes. The results of otosclerosis management depend strongly on the disease stage, cochlear reserve, and the chosen intervention, which historically includes stapes surgery, hearing aids, cochlear implantation (CI), or hybrid approaches.
MATERIAL AND METHOD: Recent meta-analysis data comparing CI and stapedectomy in FAO patients reveals crucial differences in surgical and audiological outcomes. While stapes surgery offers a less invasive and lower-cost first approach, it demonstrates a lower satisfaction rate (69.5%) and higher pure tone average (52.3 dB) compared to CI, which yields an 86.3% satisfaction rate and a mean postoperative pure tone average of 29.1 dB. However, CI in FAO patients carries a 21% prevalence of facial nerve stimulation (FNS) and increased intraoperative risks, such as cochlear ossification (present in 29.4% of cases) and difficult electrode bundle insertion.
CONCLUSION: Advanced otosclerosis is no longer a dead end, and satisfactory functional hearing rehabilitation is safely achievable through tailored multi-parametric management.

Keywords: advanced otosclerosis; cochlear implantation; stapes surgery; facial nerve stimulation; surgical planning

EMPTY NOSE SYNDROME : HOW TO AVOID IT

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ABSTRACT

Empty nose syndrome (ENS) is a rare controversial but relevant clinical entity. It was first described by Kern and Stenkvist in 1994 as a syndrome of paradoxical nasal obstruction. Patient complaint of persistent symptoms with an "empty nasal space" in those who had turbinate surgery. These patients has undergone surgery to relieve nasal obstructive symptoms but whose symptoms deteriorate, despite achieving the desired anatomic outcome. Patient complaints of "paradoxical obstruction" including crusting, dryness, diminished airflow, nose feeling too open and suffocation. ENS is not synonymous with atrophic rhinitis which has extensive mucosal crusts, cacosmia and Klebdiella oxaenae colonization. Turbinate tissue changes do not explain ENS, as patients do not develop ENS symptoms after tumor surgery, pituitary surgery with middle turbinate resection or radical sinus surgery with extensive nasal tissue removal. Although there have been reviews on the diagnostic methods of ENS, these tools have not advanced our understanding of ENS pathophysiology. The author highlighs his role as skull base surgeon to best avoiding ENS to relieve nasal obstructive symptoms.

ROLE OF CYTOKINES IN ALLERGIC RHINITIS: CLINICAL IMPLICATIONS, COMORBIDITIES, AND QUALITY OF LIFE IN ADOLESCENTS

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ABSTRACT

Allergic rhinitis (AR) is one of the most common chronic inflammatory disorders in the pediatric population, with a significant impact on quality of life and the development of comorbidities. Our study analyzes the role of proinflammatory cytokines in the pathogenesis of AR in adolescents, using quantitative assessment of cytokine levels in nasal secretions and identifying interleukin-1 beta (IL-1β), interleukin-6 (IL-6), interleukin-17A (IL-17A), and interleukin-18 (IL-18) as potential biomarkers of inflammation. Elevated levels of these cytokines are associated with more severe disease, the presence of comorbidities, and reduced quality of life, suggesting their potential role in the inflammatory mechanisms of AR, disease progression, and impairment of quality of life. Multivariate analysis indicates that IL-1β and IL-6 are independent predictors of poorer quality of life in adolescents with AR, suggesting their potential as immunological biomarkers for risk stratification and guiding therapeutic approaches. These findings contribute to the understanding of the immunological mechanisms underlying AR and open opportunities for the development of personalized treatment approaches and novel immunomodulatory strategies.

Keywords: Allergic rhinitis; cytokines; adolescents; comorbidities; quality of life

ORBITAL COMPLICATIONS OF ACUTE BACTERIAL RHINOSINUSITIS IN CHILDREN

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ABSTRACT

The most common complications of acute bacterial rhinosinusitis (ABRS) in children, are orbital. According to Chandler's classification orbital complications may progress in the following steps: preseptal cellulitis, orbital cellulitis, subperiosteal abscess, orbital abscess and cavernous sinus thrombosis. Preseptal cellulitis involves the tissue anterior to the orbital septum and it usually presents with eyelid oedema and erythema. Orbital cellulitis is a retroseptal inflammation, with typical signs: conjunctival oedema (chemosis), a protruding eyeball (proptosis), ocular pain and tenderness, as well as restricted and painful movement of the extraocular muscles and decreased visual acuity. Subperiosteal abscess is a collection of purulent fluid between the periosteum and the bony orbital wall. Orbital abscess is an intraorbital collection of purulent fluid. Cavernous sinus thrombosis is actually an endocranial, but still often classified under orbital complications.

Any child developing, or with suspicious orbital complication of ABRS should have a CT scan with i.v. contrast of the sinuses with orbital details to distinguish between orbital cellulitis and intraorbital or subperiosteal abscess. Children with preseptal cellulitis with good clinical outcome following conservative treatment, are the exeption to this rule.

The treatment of children with complications of ABRS means conservative and surgical measures. Intravenous antibiotics should be administered for 7-14 days, as well as intranasal decongestives, and corticosteroids (systemic and topical). Endoscopic approach is the preferred method of surgical drainage of sinuses as well as orbita.

Preseptal cellulitis is the most frequent orbital complication of ARS in children, followed by orbital cellulitis. The treatment of choice in cases of preseptal and orbital cellulitis is usually only conservative, while other orbital complications need to be treated both conservatively and surgically.

Keywords: preseptal cellulitis; orbital cellulitis; subperiosteal abscess; orbital abscess

REVISION RHINOPLASTY

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ABSTRACT

Introduction. Reoperation of the nose belongs to the most complicated procedures in rhinosurgery. They are usualy requested by dissatisfied patient after the first operation. Bad functional result is not incommon, but patient tolerates even better impaired nasal ventilation than a bad appearance. He asks to correct what is visible - nasal deviation, bulbous tip, retraction of nasal ala, domal irregularity, polybeak deformation or their combination. Impaired ventilation is caused by narrow nasal valve, nasal septal perforation, less frequent „forgotten“ basal septal crest or synechia between the septum and turbinates.
Methods. Revision septorhinoplasties create by estimation less than 10% of all corrective nasal operations in the big centres. They are indicated not only for esthetic In planning secondary rhinoplastiy it is most important to localise the deformity and to determine its cause correctly. Deformity of upper nasal third has to be corrected by thorough osteotomy, eventually with wedge resection. Middle third of nasal pyramid is corrected by speader graft and camouflage grafts supporting the nasal dorsum. The lower third deformities are corrected via open approach, by interdomal suture, augmentation of nasal cartilages by septal or auricular grafts. Some special cases as inverted „V“ nasal deformity or, cleft lip nose, need combination of mentioned techniques.
Results.Obtained good functional results can be hardly proved. Patients claim about better breathing is determining. Esthetic results are even more difficult to evaluate, because they depend on patients opinion and on surgeons constetendness as well. In our group of patients percentage of reoperations from esthetic reason does not go beyond 5 %, what is comparable with the data from literature. However, it can never contain whole group of operated patients, because dissatisfied patient will seek different workplace of esthetic surgery.
Summary. Revision rhinoplasty should be indicated after getting some experiences with primary nasal operations. Almost in each case there are necessary to use cartilagineous, in lesser extend bony grafts. They are harvested from septal crest. If there is not enough material for augmentation, auricular cartilage can be used.

Keywords: Reoperation of the nose; revision septorhinoplasty; polybeak deformity;inverted „V“ deformity; tip surgery

ROLE OF SKULL BASE SURGEON IN GRAFT SELECTION IN SEPTORHINOPLASTY

Balwant Singh Gendeh

ABSTRACT

Septorhinoplasty requires a thorough preoperative analysis of both and functional and aesthetic characteristics of the nose improving definition, rotation, and projection. The procedure may involve reduction of the nasal hump, narrowing the bridge of nose, correcting bulbous tip, reshaping nostrils, and correcting a previously broken nose. Current septorhinoplasty techniques routinely involve maneuvers that divide between the crura to approach the septum, rendering the tip with compromised support. Thus, securing the tip somehow to the most stable fixture of the nose, the septum has become not only commonplace but essential. Emphasis should also be paid to the internal and external nasal valves, nasal septum and turbinate before and during surgery to preserve and improve nasal function following cosmetic rhinoplasty. Careful evaluation of the patient's nasal airway with identification of areas of existing or potential obstruction is important to avoid potential pitfalls that may compromise nasal function following the procedure. These patients undergo surgery to the turbinate to relieve nasal obstructive symptoms but sometimes symptoms deteriorate resulting in paradoxical obstruction, despite achieving the desired anatomic outcome. Therefore, nose reshaping should be more correctly thought of as an operation that results in a natural looking nose with improved nasal airway function. **The author shares his experience by highlighting on nasal functionality and aesthetics in a multi-ethnic Malaysian profile.**

PIEZOELECTRIC KNIFE IN ENT: APPLICATIONS AND ADVANTAGES

Assen Assenov

ABSTRACT

Introduction:

Piezoelectric surgery is an increasingly utilized technique in otorhinolaryngology that enables selective cutting of mineralized tissues while minimizing injury to adjacent soft tissues. Its selective cutting mechanism may provide important advantages in surgical fields where precision and preservation of delicate anatomical structures are essential.

Objectives:

The primary objective was to assess the advantages and clinical applications of Piezolectric knife in ENT.

Methods:

The applications of the technique in different surgical fields were evaluated, with particular attention to surgical precision, preservation of surrounding soft tissues, intraoperative bleeding, surgical visibility and post operative recovery.

Piezoelectric knife uses ultrasonic vibrations that act selectively, only on bone. Particular attention was given to a more precise way of cutting with micrometric accuracy. Its is more safe since there is less heat generation, its is more quiet, smooth and delicate and it preserves the surrounding tissues.

On the other hand, traditional drill, uses mechanical rotation and friction, cutting everything in its path. This means that both bone and soft tissues are cut. Also, due to its greater vibration, there is less control while using it, so there is higher risk to cut vessels, nerves and membranes. Furthermore, traditional drill, causes more heat which has as a result risk of thermal injury, its more noisy, aggressive and in general it is associated with greater tissues trauma.

Results:

Its selective action on mineralized tissue allows controlled, highly precise osteotimies and bone remodeling while potentially reducing unintended injury to adjucent soft tissues. This

offers less post operative pain and discomfort while there is less recovery time. Further to this, it is causing less swelling and hematoma formation.

Conclusion:

To conclude, Piezo offers high precision, safety and preservation of soft tissues while maximizing the results. It can be used in rhinoplasties, FESS and otologic surgeries, offering a more precise result than traditional drill.

REIMAGING FACIAL TUMOR RESECTION BY INTRODUCING THE TAU INCISION IN HEAD AND NECK SURGERY

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ABSTRACT

Objective: Resection of advanced tumors involving the maxilla and paranasal sinuses frequently requires extensive surgical exposure. The conventional Weber–Ferguson incision provides reliable access but may cause conspicuous facial scarring, upper-lip dysfunction, and functional impairment. Based on our preliminary experience in two patients, we describe the "Tau incision," a limited modification intended to maintain adequate tumor exposure while reducing aesthetic and functional morbidity.

Methods: Two patients with advanced malignant maxillary tumors underwent resection using the Tau incision. This modified approach avoids splitting the upper lip, preserves the hard-palate mucosa, and provides access to the maxilla and paranasal sinus region. Preservation of these structures was intended to improve reconstructive stability, facilitate postoperative healing, and limit visible facial scarring. Surgical exposure, feasibility of tumor resection and reconstruction, postoperative healing, mastication, time to initiation of adjuvant radiotherapy, and patient-reported cosmetic and functional satisfaction were evaluated observationally.

Results: In both patients, the Tau incision provided sufficient access for tumor resection and subsequent reconstruction. Although its shorter incision length made exposure and resection technically more demanding than with a conventional Weber–Ferguson approach, accurate tumor removal was feasible. Avoidance of upper-lip splitting and preservation of the palatal mucosa appeared to support stable reconstruction and satisfactory healing. Both patients demonstrated favorable postoperative mastication and were satisfied with their cosmetic and functional outcomes. Limited scarring and timely initiation of postoperative radiotherapy were also observed. No definitive conclusions regarding superiority or oncological equivalence can be drawn from these two cases.

Discussion: The Tau incision represents a small but potentially relevant modification of the Weber–Ferguson approach. It addresses the central surgical challenge of obtaining sufficient access to complex maxillary and paranasal sinus tumors without unnecessary aesthetic mutilation or functional loss. Its principal potential advantages include preservation of lip continuity and palatal mucosa, improved reconstructive conditions, reduced scarring, and earlier postoperative recovery. These benefits must be balanced against the greater technical difficulty associated with the more limited exposure.

Conclusion: The Tau incision may provide an additional surgical option for carefully selected advanced facial and paranasal sinus tumors. The encouraging functional, aesthetic, and perioperative findings in these two patients remain preliminary. Larger prospective studies using standardized oncological, functional, cosmetic, and patient-reported outcome measures are required to establish safety, reproducibility, appropriate indications, and potential advantages over the conventional Weber–Ferguson incision.

FACIAL NERVE PARALYSIS AS A COMPLICATION OF CHOLESTEATOMA

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ABSTRACT

Facial nerve paresis or paralysis is among the most frequent intratemporal complications of cholesteatoma, with important consequences for prognosis and management. Its presence requires evaluation of disease extent, the severity of nerve dysfunction, and associated complications. Timely identification of the cause and surgical treatment are important for preserving and restoring facial nerve function.

This lecture reviews the diagnosis and management of cholesteatoma-related facial nerve palsy in adults, drawing on relevant literature. A hypothetical clinical scenario, an adult with chronic otorrhea and progressive facial weakness, provides a starting point for discussing diagnostic and treatment decisions. The lecture addresses the mechanisms of nerve injury, the significance of the onset and duration of facial weakness, the assessment of facial nerve function, and the role of imaging. The distinction between disease-related and iatrogenic facial weakness is also briefly addressed.

Particular attention is given to surgical removal of cholesteatoma and intraoperative assessment of the facial nerve. The indications for and extent of decompression are discussed, along with reconstructive options when nerve continuity is disrupted. Available studies suggest that a shorter duration of palsy and better preoperative facial nerve function are associated with more favorable recovery. However, the predominantly retrospective evidence limits firm recommendations on the timing and extent of intervention. The lecture concludes by revisiting the initial scenario to explain the choice of treatment and follow-up plan.

Treatment should be tailored to the extent of cholesteatoma, the condition of the facial nerve, and the duration of palsy. In addition to disease removal, care should include eye protection, assessment of rehabilitation needs, and long-term monitoring of facial nerve function and of residual or recurrent cholesteatoma.

Keywords: cholesteatoma; facial nerve palsy; surgical treatment; facial nerve recovery

MELKERSSON-ROSENTHAL SYNDROME: A RARE CAUSE OF FACIAL NERVE PALSY

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ABSTRACT

Melkersson-Rosenthal syndrome (MRS) is a rare, chronic, and relapsing neuro-mucocutaneous disorder characterized by a classic triad of symptoms: recurrent peripheral facial nerve palsy, orofacial edema, and fissured tongue. Due to the variability in symptom presentation and its overlap with more common conditions, MRS is frequently underdiagnosed or misdiagnosed, often leading to delayed or inappropriate treatment. Despite its rarity, MRS should be considered in the differential diagnosis of recurrent facial nerve palsy or orofacial swelling, especially when accompanied by a fissured tongue. The condition lacks specific laboratory or radiologic markers, making clinical suspicion critical. Histological examination is recommended in cases with monosymptomatic, incomplete, or atypical clinical presentations, as it can aid in identifying the hallmark feature of the disease–non-caseating perivascular granulomas. Importantly, oral mucosa biopsy is best performed during the acute stage of the disease. Early recognition and treatment are essential to avoid unnecessary investigations, reduce recurrence, and prevent permanent tissue changes such as fibrosis or facial asymmetry. Raising awareness of this rare differential diagnostic problem is important for otolaryngologists, neurologists and general practitioners. Timely and accurate diagnosis can facilitate effective treatment with systemic corticosteroids and may optimize long-term patient outcomes. Surgical intervention, such as lip reduction or facial nerve decompression, may be necessary in cases of persistent lip swelling or recurrent, medically refractory facial nerve palsy.

Keywords: Melkersson-Rosenthal syndrome; Facial nerve palsy; Orofacial edema; Fissured tongue; Diagnosis; Treatment

ARE WE DELAYING LARYNGECTOMY? THE LIMITS OF ORGAN PRESERVATION IN ADVANCED LARYNGEAL CANCER

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ABSTRACT

Organ preservation has become one of the major goals in the treatment of advanced laryngeal cancer. However, preservation of the anatomical organ should not be equated with preservation of a functional larynx, nor should attempts to avoid total laryngectomy compromise oncological safety. The key clinical challenge is therefore not simply whether the larynx can be preserved, but whether preservation is appropriate for the individual patient.

Treatment selection in advanced laryngeal cancer requires assessment beyond tumor stage alone. Tumor extent, cartilage invasion, nodal disease, pretreatment laryngeal function, airway and swallowing impairment, comorbidities, expected tolerance of treatment, and the probability of achieving a functional larynx should all be considered. Chemoradiotherapy and other organ-preservation strategies can provide effective disease control in carefully selected patients, but persistent or recurrent disease remains a major clinical problem.

When nonsurgical treatment fails, salvage total laryngectomy is frequently more demanding than primary surgery. Previous radiotherapy or chemoradiotherapy may impair tissue healing, increase the risk of pharyngocutaneous fistula, complicate reconstruction, and adversely affect postoperative function. More importantly, repeated attempts to preserve a severely impaired or biologically aggressive larynx may delay definitive treatment without providing meaningful functional benefit.

The optimal timing of total laryngectomy therefore depends on appropriate initial patient selection, early recognition of treatment failure, and realistic assessment of both oncological and functional outcomes. Future risk stratification may increasingly incorporate radiological, molecular, and biological information in addition to conventional clinical and pathological parameters, potentially allowing earlier identification of patients who are unlikely to benefit from organ-preservation strategies.

The objective should not be to perform more total laryngectomies, but to avoid performing them too late. Successful treatment of advanced laryngeal cancer requires the right treatment for the right patient at the right time, with cure and meaningful function taking precedence over organ preservation at any cost.

Keywords: laryngeal cancer; total laryngectomy; organ preservation; salvage surgery; treatment selection

INTRODUCTION – COMPLICATIONS AHEAD

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ABSTRACT

Head and neck surgery is associated with a variety of complications. Some of the most relevant are described.
Hematoma is a consequence of the bleeding. It can become infected or exert pressure on surrounding structures, potentially leading to respiratory distress or flap failure. Its incidence is 3.4%. Risk factors include male sex, black race, multiple comorbidities, coagulopathies, surgery for oral, pharyngeal, or laryngeal cancer, and microvascular reconstruction. Large hematomas require surgical evacuation, haemostasis, and wound irrigation.
Surgical wound infections develop within 30 days after surgery. Clinical signs include red and swollen wound with purulent discharge, a fever or low-grade fever. They are prevented through antibiotic prophylaxis. The incidence in clean-contaminated wounds ranges from 28% to 58%. Treatment involves antibiotics, regular wound care, and surgery, including the evacuation of pus and irrigation of the wound.
A keloid is a hyperproliferative scar extending beyond the boundaries of the original injury. It causes aesthetic concerns, itching and pain. It presents within certain families. Risk factors include individuals of black African descent, age 10–30 years, surgery of the auricles, periauricular area, hair-bearing regions of the face, neck region I, and scalp. Prevention includes placing incisions within skin creases, tension-free suturing (including subcutaneous sutures), good haemostasis and meticulous wound care. Treatment consists of excision combined with adjuvant methods.
To avoid dehiscence and necrosis, skin incisions without trifurcations are recommended. The cranial nerves most frequently injured during neck dissection are the great auricular nerve, the marginal branch of the facial nerve, and the accessory nerve. The injury of the thoracic duct results in a chyle fistula. The incidence ranges from 0.62% to 6.2. Treatment is conservative (optional using octreotide) or surgical.
The most serious complication of parotidectomy is facial nerve paralysis, occurring in up to 10% of cases. Depending on the nature of injury, a wait-and-see approach is adopted as spontaneous regeneration is expected, or surgical reconstruction using is required. First-bite and Frey's syndromes are associated with the transection of the nerves and aberrant reinnervation.
Phayrngocutaneous fistula being an important complication of total laryngectomy is extensively discussed in other abstracts.

Complications cannot be entirely prevented. However, efforts should be made to reduce their incidence. We believe it is essential to carefully monitor incidence rates within our own institutions, track the causes of complications, and take appropriate, timely action.

Keywords: Hematoma; Surgical wound infection; keloid; cranial nerve injury; chyle fistula

SURGICAL COMPLICATIONS OF HEAD AND NECK CANCER TREATMENT: PREVENTION AND MANAGEMENT

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ABSTRACT

Surgery for head and neck cancer often involves extensive resection in anatomically complex regions containing critical vascular, neural, respiratory, and digestive structures. Consequently, postoperative complications may be clinically significant, particularly after major ablative procedures, neck dissection, pharyngeal or laryngeal surgery, and reconstructive procedures with regional or free flaps.

Among the most relevant surgical complications are postoperative hemorrhage, airway compromise, wound infection and dehiscence, pharyngocutaneous fistula, salivary leakage, chyle leak, dysphagia and aspiration, cranial nerve injury, and partial or complete flap failure. Carotid exposure and carotid blowout syndrome represent rare but potentially fatal complications, particularly in previously irradiated patients or in the presence of wound breakdown and fistula.

Salvage surgery after radiotherapy or chemoradiotherapy carries an additional risk due to tissue fibrosis, impaired vascularity, delayed wound healing, and increased susceptibility to infection and fistula formation.

Prevention relies on appropriate patient selection, preoperative nutritional and medical optimization, careful evaluation of previously treated tissues, meticulous hemostasis, preservation of viable tissue planes, tension-free closure, and appropriate reconstructive strategy.

In high-risk patients, reinforcement with well-vascularized tissue may reduce the risk and severity of wound complications. Close postoperative monitoring is essential for early detection of airway obstruction, bleeding, fistula formation, vascular compromise, and flap failure. Management should be individualized according to the type and severity of the complication. While minor wound complications may be treated conservatively, persistent fistulas, major hemorrhage, vascular complications, or compromised reconstruction may require urgent surgical revision. Early recognition, timely intervention, and coordinated multidisciplinary management remain crucial for reducing morbidity, preserving function, and avoiding delays in subsequent oncological treatment.

Keywords: head and neck cancer; postoperative complications; wound complications; flap failure; carotid blowout syndrome; postoperative management.

PHARYNGOCUTANEOUS FISTULAE FOLLOWING TOTAL LARYNGECTOMY – INCIDENCE, RISK FACTORS, SURVIVAL

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ABSTRACT

The pharyngocutaneous fistula (PCF) is the most common complication following a total laryngectomy (TLE). The reported incidence is 9-25% and 14 to 57% after primary and salvage TLE, respectively. The aim of this study was to analyse the incidence and potential risk factors for PCF formation, and to determine the impact of PCF on local recurrence-free survival (LRFS).

In the retrospective study conducted at the Department of Otorhinolaryngology and Cervicofacial Surgery Ljubljana, 590 patients were treated for head and neck cancer by TLE between 2004 and 2024. Comprehensive clinicopathologic data for patients operated on between 2007 and 2020 were collected, including potential risk factors for the development of fistulae related to the patient, disease characteristics, surgical treatment, and postoperative course. Patients were categorized into a group that developed a PCF (study group) and a group without PCF (control group). The chi-square test, t-test, and Mann–Whitney U test were used for statistical comparison. To determine the independent predicting risk factors, binary logistic regression analysis was done. Data from the randomly selected patients operated on between July 2010 and December 2024 were analysed for local, regional, peristomal and distant recurrences. Kaplan-Meier and Cox regression analyses were performed.

The overall incidence of PCF was 27.3% (161/590). It was significantly higher following a salvage TLE than a primary TLE - 39.2% (62/158) vs. 23.0% (99/431), respectively ($p < 0.001$). The surgical wound infection (OR = 22,61, $p<0.001$), piriform sinus invasion (OR = 3,07, $p<0.001$), salvage TLE (OR =2,85, $p=0.001$), and total radiation dose (OR 1,18; $p=0,036$) were identified as independent risk factors for PCF formation.

The 3-, and 5-year LRFS rates were 92.2% and 90.4% in patients without PCF, compared with 77.8%, and 75.0% in patients with PCF, respectively, (log-rank $p = 0.001$). On Cox regression analysis, PCF was associated with a significantly increased hazard of local recurrence (HR = 2.702, $p = 0.016$).

These findings indicate that PCF development is influenced by a combination of patient-, disease-, treatment-, and postoperative factors. The PCF is associated with worse LRFS highlighting the importance of efforts to reduce the incidence of PCF. In particular, the reduction

of the surgical wound infection rate would contribute to a reduction of the PCF rate indicating the importance of aseptic work methods, appropriate antibiotic prophylaxis, meticulous postoperative wound management and early recognition and treatment of surgical wound infection.

Keywords: total laryngectomy; fistula; risk factors; local recurrence free survival

EARLY COMPLICATIONS OF RADIOTHERAPY IN HEAD AND NECK CANCER PATIENTS

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ABSTRACT

Radiotherapy is, with or without surgery and/or chemotherapy, a cornerstone of curative treatment for head and neck cancers, with a complete response rate reaching up to 70-73% in several studies. Irradiation can be planed in definitive or adjuvant setting. Due to the proximity of many healthy critical organs, it is inevitably associated with adverse events, both acute and late. Acute toxicities are of increasing importance in oncologic public due to their potential to compromise quality of life, nutrition, treatment adherence, completion of treatment, and therefore, its efficacy.

Early complications develop during the radiotherapy and up to three months afterwards. The most prevalent one is mucositis affecting approximately 94% of pts, while 37% develop severe grade (CTCAE grade 3 and 4). Associated with mucositis, other toxicities such as dysphagia, odinophagia, disgeusia, and consequential nutritional disturbance also occur and additionally complicate patients' treatment. Despite advancement of radiotherapy techniques (implementation of IMRT), radiodermatitis and xerostomia remain among the most frequent acute side effects. Concurrent systemic therapy (chemotherapy or biotherapy) can amplify the aforementioned side effects but also can cause a completely different spectrum of acute complications such as hematological toxicity, nausea, emesis, fatigue, radiobiodermatitis, and cardiovascular events.

Acute toxicities, often combined, demand inclusion of various medical specialists in patients' recovery, thus raising financial burden and causing extended hospitalizations. Due to their significant potential to induce severe morbidity and, in extreme cases, mortality, referring pts to reference centers with available and educated multidisciplinary teams ensures the best possible outcome in patients' recovery and treatment completion.

keywords. radiotherapy, acute side effects, mucositis, multidisciplinary treatment

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LATE TOXICITIES OF HEAD AND NECK RADIOTHERAPY: PATHOGENESIS, RISK FACTORS AND MANAGEMENT

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ABSTRACT

Radiation therapy is essential in managing head and neck cancers (HNC); however, it often results in debilitating, long-term sequelae that appear months or even years post-treatment, significantly compromising patients' quality of life.
The underlying pathogenesis is characterized by a cascade of chronic inflammation, oxidative stress, and progressive vascular endothelial damage. These processes culminate in tissue ischaemia, followed by sustained fibroblast activation, aberrant collagen deposition, and eventual fibrosis. A significant proportion of HNC survivors struggle with at least one such chronic side effect. Primary risk factors include elevated total radiation doses, higher dose per fraction, extensive target volumes, prior surgical interventions, concurrent chemotherapy, and pre-existing comorbidities. Common clinical presentations include xerostomia, dysphagia, fibrosis, hypothyroidism, dental caries, osteoradionecrosis, cataracts, retinopathy, myelitis, oesophageal stenosis, sensorineural hearing loss, and the emergence of secondary malignancies. Among these, the most frequent clinical challenges include:

- xerostomia (resulting from permanent injury to salivary gland acinar cells and the microvasculature, this leads to irreversible hyposalivation and significantly increases the risk of dental caries, oral infections, and persistent dysphagia);
- fibrosis (caused by myofibroblast proliferation and excessive extracellular matrix deposition, which often manifests clinically as trismus and neck stiffness);
- hypothyroidism (resulting from radiation-induced damage to thyroid follicular cells and their associated vasculature, this condition often begins as subclinical hypothyroidism and progresses to overt primary hypothyroidism).

Treatment strategies highlight a multidisciplinary approach, combining symptom-directed pharmacotherapy, specialized physical rehabilitation, and surgical intervention for severe structural complications. Future strategies are shifting toward advanced radiotherapy planning aimed at preserving healthy tissue and the exploration of molecular therapies designed to modulate the fibrotic response. Ultimately, early identification and proactive surveillance remain critical in alleviating the impact of these treatment sequelae.

Keywords: late; toxicities; radiotherapy; management

SIALENDOSCOPY AND BEYOND, A PARADIGM SHIFT IN THE TREATMENT OF OBSTRUCTIVE SALIVARY GLAND DISEASE AND SOME NON-NEOPLASTIC / NON-OBSTRUCTIVE SALIVARY GLAND DISORDERS

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ABSTRACT

Sialendoscopy is a minimally invasive surgical technique that crucially changed treatment of obstructive salivary gland disease. Recently, new guiding assistance and surgical systems have been added to improve the effectiveness of the method.
In early nineties Konigsberger and Gundlach made the first attempts to introduce sialendoscopy and even lithotripsy, but it passed almost a decade more before a really efficient method was established by Francis Marchal from Geneva. By the use of miniature endoscopes with essential addition of a rinsing system it became possible to visualize the interior of salivary ducts and the method became a true diagnostic and interventional tool in the treatment of obstructive salivary gland disease.
In the following years laser and pneumatic lithotripsy was introduced and appropriate guidelines for the fragmentation of salivary stones based on accumulated clinical experience were created. In some centers extracorporeal shock wave lithotripsy (ESWL) became additional method complementary to sialendoscopy.
On the other hand, the so called "sialendoscopy assisted combined approach" was developed with its many transoral and transcutaneous options for the treatment of sialolithiasis, and computed tomography navigation and also robotic method was added too.
Salivary duct strictures are the second reason for salivary obstruction after sialolithiasis, often in combination with the last. With the benefit of sialendoscopic dilatation and stenting and combined approach methods it became possible to augment the duct lumen and avoid the consequences of a chronic salivary gland obstruction due to strictures.
The treatment of some non-neoplastic / non-obstructive salivary gland disorders had also been revolutionized by the use of sialendoscopy: juvenile relapsing parotitis, Sjögren syndrome, radioiodine induced and even immunological sialadenitis.
The consistent use of sialendoscopy and associated methods significantly reduces the need for salivary gland resection due to obstructive salivary gland disease and importantly alleviates the clinical picture of several non-neoplastic / non-obstructive salivary gland disorders.

NEW INSIGHTS INTO BALANCE DISORDERS IN CHILDREN

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ABSTRACT

Background and Objective: Vertigo, dizziness, and imbalance in children represent a heterogeneous group of conditions in which establishing a definitive diagnosis at the initial evaluation may be challenging. This study aimed to assess how long-term follow-up influences the etiological classification of pediatric vertigo and dizziness.
Methods: A retrospective cohort of 257 consecutive children aged 1-17 years (mean age 10.9 ± 4.3 years; 42% male and 58% female), evaluated at a tertiary otorhinolaryngology center between 2015 and 2020, was reviewed. We compared the initial etiological classification with a data revision performed in 2025 after 5-10 years of clinical follow-up. We analyzed changes in the distribution of peripheral vestibular, central, hemodynamic, psychogenic, other, and unclassified causes.
Results: Long-term follow-up substantially changed the etiological distribution. The proportion of unclassified cases decreased from 43% at the initial evaluation to 10% after revision. Identified central causes increased from 19% to 35%, peripheral vestibular causes from 12% to 18%, hemodynamic causes from 11% to 16%, and psychogenic causes from 6% to 10%. Among central etiologies, migraine-related vertigo showed the most pronounced increase, from 1.6% to 15.6%. Within the peripheral vestibular group, vestibular neuritis increased from 8% to 10%, while benign paroxysmal positional vertigo increased from 2% to 6%.
Conclusion: Pediatric vertigo and dizziness are frequently evolving conditions in which etiological clarification may require prolonged observation. Anticipate diagnostic uncertainty at initial presentation; it does not imply the absence of an underlying disorder. Longitudinal, multidisciplinary follow-up can substantially improve diagnostic accuracy, reduce the proportion of unclassified cases, and support more appropriate clinical management.

Keywords: pediatric vertigo; dizziness; longitudinal follow-up; etiological classification; vestibular disorders

CURRENT TREATMENT OF VERTIGO

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ABSTRACT

Vertigo represents a complex symptom rather than a single disease entity, and contemporary management increasingly relies on syndrome-based diagnosis, etiological clarification, and individualized treatment. The therapeutic approach should be guided by the temporal pattern, provoking factors, associated auditory or neurological symptoms, and the distinction between peripheral and central vestibular disorders. In acute vestibular syndromes, exclusion of posterior circulation stroke and other central causes remains a major clinical priority, especially in patients with neurological warning signs or vascular risk factors. Symptomatic vestibular suppressants and antiemetic therapy may be useful during the initial severe phase. Early mobilization and structured vestibular rehabilitation are fundamental components of recovery in acute unilateral vestibulopathy and other forms of peripheral vestibular hypofunction.

Benign paroxysmal positional vertigo is primarily treated with canalith-repositioning procedures. The Epley maneuver remains the most widely used approach for posterior-canal disease. Routine pharmacological vestibular suppression is generally not indicated. Ménière's disease requires a staged, hearing-preserving strategy that may include lifestyle measures, maintenance pharmacotherapy, intratympanic corticosteroids. Vestibular migraine management usually combines trigger avoidance, regular sleep and nutrition, physical activity, stress reduction, individualized migraine prophylaxis, and vestibular rehabilitation in patients with persistent motion sensitivity or imbalance.

Persistent postural-perceptual dizziness and bilateral vestibulopathy demonstrate the growing importance of multimodal long-term management, including vestibular rehabilitation, patient education, behavioral interventions, fall-risk reduction, and treatment of relevant comorbidities. In children and adolescents, the diagnostic and therapeutic approach requires particular attention to age-specific presentation, because migraine-associated vertigo accounts for a substantial proportion of pediatric cases. Infectious, serous, and post-traumatic vestibular disorders are relatively more frequent than in adults. Modern treatment of vertigo is moving away from nonspecific symptom suppression toward an individualized, diagnosis-driven, multidisciplinary strategy aimed at functional recovery, prevention of recurrence, and preservation of quality of life.

Keywords: vertigo; vestibular disorders; vestibular rehabilitation; benign paroxysmal positional vertigo; vestibular migraine

VESTIBULAR EVOKED MYOGENIC POTENTIALS (VEMPS)

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ABSTRACT

Vestibular evoked myogenic potentials (VEMPs) is a relatively new method of recording function (and dysfunction) from the vestibular nervous system, but is quickly gaining wide acceptance on a global scale. Air-conducted sound can be used to stimulate the otolith organs of the inner ear. Use of this short duration and reproducible stimulus allows one to record high amplitude responses from either the sternocleidomastoid muscle (cervical VEMPs or cVEMPs) or from the inferior oblique muscle (ocular VEMPs or oVEMPs). The former is related predominantly to saccular and inferior vestibular nerve function and its pathway, whilst the latter relates predominantlty to utricle and superior vestibular nerve. Bone conducted vibration can also be used to stimulate the otolith organs, and this method has also been found to be highly reproducible. Clinical applications are not restricted to the confirmation of Superior Semicircular Canal Dehisence Syndrome, but also has been found to useful for other conditions such as differentiating Vestibular Migraine from Meniere's Disease, and also indicating the presence of conditions that specifically involve either the superior and/or inferior vestibular nerve in the presence of normal caloric responses. Neurological applications include ruling out anterior column cervical spinal dysfunction.

MANAGEMENT OF CHOANAL ATRESIA

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ABSTRACT

Choanal atresia is a rare malformation that presents a unique challenge. While bilateral choanal atresia requires surgical opening within a few days of birth, intervention for unilateral choanal atresia can be scheduled for a later date. Interdisciplinary assessment is necessary for treatment planning and to rule out syndromic conditions. Surgical treatment options focus on transnasal endoscopic techniques. Resection of the portions of the vomer involved in the atresia appears crucial for success. Mucosal flaps are increasingly recognized as a key factor for optimal wound healing, whereas the use of postoperative stenting remains a subject of controversy. For post-operative care, we favour the application of corticosteroid nasal sprays and saline nasal rinses over a period of several weeks. A German clinical guideline is currently being developed to provide medical colleagues with a management protocol for this rare condition.

Keywords: endoscopic surgery; endonasal surgery; mucosal flaps; stenting; interdisciplinary cooperation,

CONGENITAL ANOSMIA

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ABSTRACT

Congenital olfactory disorders mean the absence of any olfactory perception since birth or childhood. It may be classed as: syndromic (genetic and complete) and nonsyndromic (isolated and incomplete).
Complete and genetic olfactory dysfunction is a part of the general deficiency in the morphotype - Kallmann, Klinefelter, or CHARGE syndrome are well described. Kallmann syndrome is a hypogonadothophic hypogonadism associated with severe olfactory dysfunction. It is an autosomal dominant condition with incomplete expressivity and with a morphotype including cryptorchidism, midline craniofacial abnormalities, tooth agenesis, deafness, and renal abnormalities. Isolated congenital anosmia is seen in patients with an absence of any olfactory structure on MRI with no other endocrine, sensory or renal disorders. It is more frequent than Kallmann syndrome. Time of diagnosis in children is often around 8-14 years. Diagnosis of suspected congenital olfactory dysfunction means history, ORL examination, nasal endoscopy, psychophysical testing with validated olfactory tests, imaging - MRI of the olfactory system and electrophysiological methods. To confirm the diagnosis of congenital anosmia it is necessary to do the MRI of the olfactory system. Decreased olfactory sulcus (OS) depth, calculated in the PPTE plane, is an important feature that confirms the diagnosis of congenital absence of the OB.
There is no treatment, medical or surgical, that improves olfactory function in congenitally affected patients. Counseling and discussion of coping strategies seem to be the best way to help these patients.

Keywords: congenital anosmia; congenital olfactory dysfunction, Kallmann syndrome

THE ROLE OF CHRONIC INFLAMMATION IN THE PATHOGENESIS OF NASAL CAVITY RESPIRATORY HAMARTOMA

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ABSTRACT

Aims: There are two forms of respiratory hamartomas of the nasal cavity and nasopharynx: respiratory epithelial adenomatoid hamartoma (REAH) and seromucinous hamartoma (SH). In the pathogenesis of both forms, chronic inflammation has an important role. This study examined the frequency of comorbidities in patients with respiratory epithelial adenomatoid hamartoma (REAH) and determined whether comorbidity affects the clinical characteristics of REAH.
Methods: A retrospective cohort study included patients with REAH who had been treated and followed up over 15 years. Clinical parameters included the side of the nasal cavity, localization and size of the lesion, duration of symptoms, and associated chronic inflammation.
Results: Twenty (n = 20) patients with REAH were included. We found an association of REAH with chronic sinonasal inflammatory disorders in 70% of cases: in 30% with perennial allergic rhinitis (PAR), in 25% with chronic rhinosinusitis with nasal polyps (CRSwNP), and in 15% of cases with aspirin-exacerbated respiratory disease (AERD). In 87.5% of cases of bilateral REAH, the lesion was associated with inflammatory nasal polyps, in 80% of patients with CRSwNP as a comorbidity, and in 100% of patients when it was AERD. Symptoms were longer in REAH patients with associated sinonasal inflammation ($P < 0.038$). We had a far greater average volume of REAH in patients with AERD than in cases with PAR, and CRSwNP ($P < 0.001$; $P < 0.001$, respectively). A positive correlation was found between the duration of symptoms and the lesion volume ($R = 0.700$; $P = 0.001$).
Conclusion: A high degree of association between REAH and chronic sinonasal inflammation was found. The results also suggest that inflammation in AERD is the strongest provoking factor for the growth of REAH. A direct correlation was observed between the duration of nasal symptoms and the lesion size.

POSSIBILITY OF ONE-STAGE RECONSTRUCTION OF THE TYMPANIC MEMBRANE IN CHOLESTEATOMA SURGERY

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ABSTRACT

A challenge for modern cholesteatoma surgery is single-stage surgery. A condition for the success of this surgery is the safe removal of the cholesteatoma matrix, followed by reconstruction of the tympanic membrane with or without reconstruction of the external auditory canal. Mastoid obliteration and ossicular chain reconstruction are considered additional advantages if necessary. Single-stage surgery for cholesteatoma of the middle ear is possible and recommended with a low rate of disease recurrence. The long-term successful follow-up of patients with DW-MRT reduces the need for Second Look Surgery.

Keywords: tympanic membrane, tympanoplasty, one-stage reconstruction, cholesteatoma surgery, cartilage tympanoplasty

DOES THE TONSILLAR PROBLEM STILL EXIST?

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ABSTRACT

The operation of tonsillectomy still generate so much discussion in the scientific publications and medical literature for so long. Also, it has almost gained unique status by the number of times it is mentioned in the media. The tonsillar problem is originally a set of questions that we ask ourselves when correctly deciding on the indication for tonsillectomy but all there are also other extremely important issues, since tonsillectomy is globally the most frequently performed surgical procedure. Tonsillectomy is commonly associated with significant postoperative challenges such as pain management, complication monitoring, postoperative bleeding and patient recovery. Today, it is important but do not often and adequately address wheter applying AI-assisted care offers significant advantages than traditional care methods. Focused on enhancing efficiency and resource optimization, the tonsillectomy surgery devices market is being reshaped by trends such as the adoption of minimally invasive techniques, advancements in laser technology, and increased patient awareness regarding surgical options. Tonsillectomy techniques have evolved significantly and nowdays there are so different techniques for conducting tonsillectomy, but is there a superior technique or is it the way of management that is the result of using the experiences of all procedures? Clinicians should determine posttonsillectomy bleeding rate of primary and secondary posttonsillectomy bleeding at least annually and studying all relevant parameters that could significantly contribute to reducing its frequency. It is unfortunately the tonsillectomy also associated with an increased risk of morbidity and mortality due to both patient population and surgical complications. Anesthetic technique can significantly affect outcomes, make most favorable procedure-specific postoperative pain management recommendation, but there is still ongoing debate regarding many aspects of anesthetic management for these cases.

THE FUTURE OF TONSILLECTOMY: WILL ARTIFICIAL INTELLIGENCE TOOLS BECOME PART OF THE SURGICAL TEAM?

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ABSTRACT

Artificial Intelligence (AI) is transforming otolaryngology by driving clinical practice toward precision medicine, particularly within common procedures like tonsillectomy. Functioning as a Clinical Decision Support System (CDSS), machine learning models analyze structured and unstructured data from electronic health records to optimize care across distinct perioperative phases. Preoperatively, AI processes patient demographics, comorbidities- such as obesity and craniofacial anomalies- and polysomnography parameters to identify high-risk populations, including children with obstructive sleep apnea or cerebral palsy. These data-driven insights determine whether a patient can safely undergo same-day outpatient surgery or requires extended inpatient surveillance, significantly reducing hospital readmissions and improving bed allocation. Intraoperatively and during early recovery, algorithms evaluate variables such as dissection techniques alongside indicators like poor oral intake to generate a personalized risk score for post-tonsillectomy hemorrhage. This shifts clinical intervention from reactive crisis management to proactive prevention, allowing surgeons to implement intensive monitoring protocols for high-risk individuals. Furthermore, AI-driven postoperative tools, including mobile applications and wearables, enhance at-home recovery through interactive tracking and automated push notifications. Clinical data demonstrate that these reminders optimize pain management and fluid intake, thereby reducing postoperative dehydration rates. Ultimately, the integration of AI tools delivers a comprehensive, data-driven approach from patient selection to safe discharge. However, because AI is legally classified as a CDSS, it serves to empower rather than replace the surgical team; the final clinical judgment and legal responsibility remain firmly with the attending surgeon.

Keywords: Tonsillectomy; Artificial Intelligence; Clinical Decision Support System; Postoperative Hemorrhage; Precision Medicine.

WHEN IS TONSILLECTOMY A RATIONAL DECISION?

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ABSTRACT

Tonsillectomy is one of the most frequently performed surgical procedures in otorhinolaryngology. However, defining an optimal indication remains a clinical challenge, particularly in adult patients. Tonsillectomy indications are relatively well established in the pediatric population, particularly for recurrent tonsillitis and obstructive sleep-disordered breathing, while health-related quality of life has increasingly been incorporated into the assessment of disease burden and treatment outcomes.

For recurrent acute tonsillitis, the Paradise criteria introduced a structured episode-based approach based on the number of documented episodes. Derived from randomized controlled studies in children, these criteria have provided a framework for patient selection and have been incorporated into many national guidelines. However, their applicability to adults remains uncertain, as adult tonsillar disease may differ in clinical presentation, disease burden, and treatment expectations.

Other clinical scenarios require a different risk-benefit assessment. In contemporary literature, chronic tonsillitis is a less clearly defined concept and a less firmly established indication for tonsillectomy than recurrent acute tonsillitis based on documented episode frequency. Obstructive tonsillar hypertrophy and selected cases of tonsillar asymmetry represent additional situations in which the indication cannot be based on infection count alone, while peritonsillar abscess remains another area in which decision-making should be individualized.

The concept of patient-reported outcomes has become increasingly important in evaluating the clinical relevance of tonsillar disease. Disease-specific instruments such as the Tonsillectomy Outcome Inventory-14 (TOI-14) allow quantification of the impact of chronic and recurrent tonsillar disease on different domains of quality of life and may provide additional support in clinical decision-making, particularly in patients who do not completely fulfill traditional episode-based criteria.

Recent studies from adult populations indicate that tonsillectomy can provide significant clinical benefits in appropriately selected patients, although these benefits must be carefully balanced against postoperative morbidity.

Indications should not be based only on the number of acute tonsillitis episodes, but rather should integrate objective clinical criteria, disease severity, complications, patient expectations, and the impact of disease on quality of life.

Keywords: tonsillectomy; recurrent acute tonsillitis; chronic tonsillitis; quality of life; adult patients

IS THERE A SUPERIOR SURGICAL TECHNIQUE FOR TONSILLECTOMY?

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ABSTRACT

Tonsillectomy is one of the most commonly performed procedures in otorhinolaryngology, yet the choice of the optimal surgical technique remains a matter of debate. Cold steel dissection, monopolar and bipolar electrosurgery, coblation, ultrasonic devices, and other modern techniques differ in their methods of dissection and haemostasis, degree of thermal tissue injury, and procedural costs. This presentation aims to critically review the available evidence regarding the advantages and limitations of different tonsillectomy techniques. Outcomes are assessed in terms of intraoperative blood loss and operating time, postoperative pain, return to a normal diet and daily activities, and the incidence of primary and secondary postoperative haemorrhage. Differences between paediatric and adult patients, as well as between extracapsular and intracapsular procedures, also require careful consideration. Current evidence does not demonstrate the clear superiority of a single technique across all clinically relevant outcomes. Techniques that provide faster dissection and effective intraoperative haemostasis may cause greater thermal tissue injury and more severe postoperative pain. Methods associated with less thermal damage may improve postoperative recovery, but their advantages regarding postoperative haemorrhage have not been consistently demonstrated. Surgical outcomes are also influenced by the surgeon's experience, appropriate use of the device, patient characteristics, indication for surgery, and standards of perioperative care. Therefore, the choice of technique should not be based solely on the surgical instrument. The most appropriate approach is an individualised selection of a well-mastered technique, combined with minimal unnecessary tissue injury and consistent measures to prevent postoperative complications.

Keywords: tonsillectomy; surgical technique; postoperative pain; postoperative haemorrhage; cold steel dissection

WHAT DO WE KNOW TODAY ABOUT POST-TONSILLECTOMY HEMORRHAGE?

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ABSTRACT

Post-tonsillectomy hemorrhage (PTH) remains the most important postoperative complication of tonsillectomy. Its reported incidence varies considerably across studies, ranging from 0.1% to 5.8% for primary hemorrhage occurring within 24 hours of surgery and from 0.2% to 7.5% for secondary hemorrhage occurring more than 24 hours after surgery.

We reviewed recent literature on PTH in pediatric and adult populations, with particular emphasis on patient- and disease-related risk factors, surgical techniques, and postoperative management. Recent studies have reported an increased risk of secondary hemorrhage among adults, while older age, male sex, and chronic tonsillitis as an indication for tonsillectomy are among the most consistently reported risk factors.

Surgical and hemostatic techniques have also been associated with postoperative bleeding, with particular attention given to the potential influence of bipolar diathermy.

More recently, research has focused on improving preoperative risk assessment through readily available laboratory parameters. Inflammatory indices derived from routine blood counts, particularly the neutrophil-to-lymphocyte ratio (NLR) and platelet-to-lymphocyte ratio (PLR), have been investigated as potential markers of postoperative hemorrhage. However, available evidence remains limited and their predictive value has not yet been clearly established.

To complement current evidence, we retrospectively analyzed pediatric and adult patients undergoing tonsillectomy at our institution, evaluating demographic and clinical characteristics, surgical technique, timing and characteristics of postoperative hemorrhage, management, and available preoperative inflammatory parameters.

Our institutional findings are considered in the context of recently published evidence, with particular attention to differences between pediatric and adult populations and to factors potentially associated with postoperative bleeding.

Despite increasing knowledge of factors associated with PTH, individual bleeding risk remains difficult to predict. Combining established clinical and procedure-related factors with emerging laboratory markers may provide a more comprehensive approach to

PTH risk assessment, while further studies are required to determine their clinical utility.

Keywords: tonsillectomy, post-tonsillectomy hemorrhage, risk factors, surgical technique, inflammatory biomarkers

HYPERSENSITIVE LARYNGEAL NEUROPATHY

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ABSTRACT

Hypersensitive laryngeal neuropathy (HsLN) may produce a variety of symptoms, including chronic cough, globus sensation, odynophonia, uncontrollable hiccups and/or odynophagia. Etiologies are often iatrogenic, viral, or idiopathic, although the diagnosis is generally one of exclusion. Although precise pathogenesis may be elusive, acquired sensory neuropathies are generally believed to result from nerve degeneration caused mainly by metabolic damage, mechanical trauma, or viral infection. Symptoms of sensory neuropathies range from paresthesia to numbness, often including pain within the region supplied by the damaged nerve.

TREATMENT OF CHRONIC RHINOSINUSITIS WITH NASAL POLYPS IN THE ERA OF BIOLOGIC THERAPY: REDEFINING THE ROLE OF SURGERY

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ABSTRACT

Chronic rhinosinusitis with nasal polyps (CRSwNP) is a chronic inflammatory disease of the upper airways that significantly affects patients' quality of life and is often characterized by a tendency to recur. Traditionally, the therapeutic approach has been based on topical and systemic corticosteroids, with functional endoscopic sinus surgery (FESS) indicated in patients with an inadequate response to conservative treatment. However, the development of biologic therapies targeting key mediators of type 2 inflammation has significantly changed the treatment algorithm for patients with severe and uncontrolled disease.

The introduction of monoclonal antibodies has enabled targeted modulation of the underlying pathophysiological mechanisms, resulting in a reduction in nasal polyp size, improvement in nasal airflow and sense of smell, decreased need for systemic corticosteroids and surgical interventions, and improved quality of life. At the same time, these therapeutic advances have raised important questions regarding the optimal role and timing of surgery in the contemporary management of CRSwNP.

Nevertheless, surgery continues to play an important role. In addition to removing polypoid tissue and restoring ventilation and drainage of the paranasal sinuses, adequately performed endoscopic sinus surgery facilitates more effective delivery of topical therapy and may represent an important component of long-term disease control. The contemporary concept is therefore moving away from a simple division between medical and surgical treatment toward an individualized, multimodal approach based on disease phenotype and endotype, symptom severity, comorbidities, previous surgical procedures, and response to therapy.

In the era of biologic therapy, the key challenge lies in appropriate patient selection and in determining the optimal sequence and combination of therapeutic modalities. Rather than asking "biologic therapy or surgery?", the contemporary approach aims to define the role of both modalities within a long-term disease control strategy. Redefining the role of surgery therefore does not imply its replacement, but rather its more precise positioning within the personalized management of patients with CRSwNP.

PREDICTORS OF MEDIASTINITIS IN DEEP NECK SPACE INFECTIONS – TEN-YEAR EXPERIENCE FROM TERTIARY REFERRAL CENTER

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ABSTRACT

Objective: The study aimed to identify causes of deep neck space infections and factors leading to severe complications and delayed healing. We also evaluated the LRINEC, NLR, and LRINEC × NLR indicators for predicting mediastinitis. To our knowledge, this is the first study to use LRINEC and LRINEC × NLR scores for mediastinitis prediction.
Methods: This retrospective study included 118 patients treated at our institution from January 1, 2014, to December 31, 2023, with phlegmon and infections of the deep neck spaces.
Results: Patients with mediastinitis exhibited significantly elevated LRINEC, NLR, and LRINEC × NLR scores. Fatal outcomes were associated with higher levels of LRINEC × NLR, CRP, and creatinine. ROC analysis determined cutoff values for these markers: LRINEC × NLR (AUC: 0.923, cutoff: 113.01, sensitivity: 86%, specificity: 85%), NLR (AUC: 0.872, cutoff: 19.0, sensitivity: 81%, specificity: 77%), and LRINEC (AUC: 0.832, cutoff: 5.5, sensitivity: 81%, specificity: 69%).
Conclusion: Mediastinitis, as a complication of deep neck space infections, is not rare in these patients and significantly impacts prognosis. Based on our results, we believe that the LRINEC, NLR, and LRINEC × NLR scores can serve as predictive markers for the early assessment of these patients' conditions and the potential development of mediastinitis.

Keywords: Deep neck infection · LRINEC score · Phlegmon · Mediastinitis

LONG-TERM TRENDS IN LARYNGEAL CANCER INCIDENCE AND MORTALITY IN CENTRAL SERBIA (1999–2023): A JOINPOINT REGRESSION ANALYSIS

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ABSTRACT

Background/Objectives: Laryngeal cancer (LC) accounts for approximately 1–3% of all malignant neoplasms. This study aimed to analyze long-term temporal trends in LC incidence and mortality in Central Serbia over a 25-year period (1999–2023).
Methods: Data on newly diagnosed LC cases and LC-related deaths, stratified by sex and age group, were obtained from the Serbian Cancer Registry. Crude, age-specific, and age-standardized incidence and mortality rates were calculated. Joinpoint regression analysis was performed to identify temporal trends, estimate average annual percent changes (AAPCs), and assess their statistical significance.
Results: The average annual age-standardized incidence rate (ASR-W) was 11.1 per 100,000 in men and 1.4 per 100,000 in women, while the corresponding mortality rates were 5.4 and 0.5 per 100,000, respectively. The highest incidence rates were observed in the 60–69-year age group in both sexes (61.1 per 100,000 in men and 7.4 per 100,000 in women), whereas the highest mortality rates were recorded among individuals aged ≥70 years (35.7 per 100,000 in men and 3.8 per 100,000 in women). Among men, statistically significant annual declines were observed in both incidence (ASR-W: −0.7%) and mortality (ASR-W: −2.0%). In contrast, trends among women were not statistically significant, indicating overall stability over the study period.
Conclusions: Despite limitations of the Serbian Cancer Registry, primarily related to data quality, it remains an essential resource for monitoring LC trends, informing public health policies, and guiding resource allocation. Given the substantially higher burden of LC among men, strengthening tobacco and alcohol control measures, improving occupational safety, and promoting early detection and timely treatment are essential for further reducing the burden of the disease.
Keywords: laryngeal cancer; incidence; mortality; epidemiology; temporal trends; Joinpoint regression; Central Serbia

NOS KOJI JE NAMIRISAO PRE NAS

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ABSTRACT

Uvod: Paraneoplastični akralni vaskularni sindrom (PAVS) je redak sindrom koji se najčešće vezuje za adenokarcinome i može prethoditi dijagnozi maligniteta. Nekroza vrha nosa u okviru ovog sindroma retko je opisana. Prikazujemo slučaj u kome je sindrom počeo na nosu i prstima stopala, uz dijagnostički put ka suspektnom malignitetu.
Prikaz slučaja: Pacijentkinja stara 70 godina javila se u otorinolaringološku (ORL) dežurnu ambulantu zbog tamne prebojenosti vrha nosa, koja se pojavila tri dana ranije, uz istovremene promene na prstima stopala. Endonazalno je nađena krusta na septumu, a ispod nje krvareća sluznica sa fibrinskim naslagama. Ordinirani su antibiotik i lokalna terapija. Na kontroli su se pojavile i promene na prstima šaka, pa je upućena hematologu. Laboratorijski nalazi su pokazali povišen fibrinogen i D-dimer, hipoalbuminemiju i prolazno povišen kreatinin, uz uredan EKG, RTG srca i pluća i nalaz urina. Dopunskom anamnezom utvrđena je dvonedeljna dijareja. CA-125 je bio povišen, a ultrazvučno je opisana cistična promena jajnika od 7 cm. CT je pokazao difuzno infiltrativno izmenjen zid želuca, prvenstveno limfoproliferativnog tipa, sa zahvatanjem transverzalnog kolona i uvećanim limfnim čvorovima, kao i nodularnu promenu pluća suspektnu na sekundarni depozit. Uvedeni su aspirin i niskomolekularni heparin, a pacijentkinja je upućena onkologu. Zbog pogoršanja dijareje indikovana je hitna gastroskopija, na koju se nije javila. Smrtni ishod nastupio je oko osam nedelja nakon prvog pregleda.
Zaključak: Diferencijalno su razmatrani vaskulitis, embolije, krioglobulinemija, kalcifilaksija, toksični uzroci i mukormikoza, ali imunološka obrada nije bila potpuna, a dijagnoza nije patohistološki potvrđena. Neobjašnjiva nekroza nosa ili prstiju bez traume i jasnog vaskularnog uzroka treba da pobudi sumnju na okultni malignitet. Ovaj slučaj podseća da ORL specijalista može biti prvi koji prepoznaje takav znak, te da sumnjive pacijente treba hitno uputiti na multidisciplinarnu obradu i aktivno pratiti.

Ključne reči: paraneoplastični akralni vaskularni sindrom, nekroza nosa, okultni malignitet, hiperkoagulabilnost