

# *SIMON KHECHINASHVILI ASSOCIATION OF GEORGIAN OTORHINOLARYNGOLOGISTS*

## *I SCIENTIFIC-PRACTICAL CONFERENCE*

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### *A B S T R A C T S*

*NINO SHARASHENIDZE*

#### **HISTORICAL OVERVIEW OF THE DEVELOPMENT OF OTORHINOLARYNGOLOGY IN GEORGIA: FROM ITS ORIGINS TO THE PRESENT**

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The history of otorhinolaryngology in Georgia reflects the gradual transformation of the specialty from a limited clinical field into an independent and highly developed medical discipline closely connected with European scientific progress. The foundations of modern otorhinolaryngology were established in Europe during the nineteenth century through the development of endoscopic examination methods, head mirror technology, and the integration of otology, rhinology, and laryngology into a unified specialty. These innovations significantly influenced the formation of the field in Georgia. The establishment of Georgian otorhinolaryngology is closely associated with the work of Nikolay Aspisov, who introduced surgical treatment of ear, nose, and throat diseases in Georgia in the early twentieth century and pioneered bronchoscopy and esophagoscopy in the country. His scientific, clinical, and pedagogical activities laid the foundation for the first academic school of otorhinolaryngology in Georgia. The opening of Ivane Javakhishvili Tbilisi State University in 1918 and later the establishment of the Tbilisi State Medical Institute played a decisive role in the institutional development of the specialty.

The subsequent advancement of Georgian otorhinolaryngology was driven by several distinguished physicians and scientists, including Archil Chargeishvili, Tamaz Tokhadze, and especially Simon Khechinashvili. Under Khechinashvili's leadership, major innovations were introduced, including surgical treatment of otosclerosis, auditory evoked potential registration, vestibular system research, and the implementation of modern microsurgical and laser technologies. The establishment of scientific research

laboratories and specialized clinical centers significantly strengthened both clinical practice and medical education. The historical development of otorhinolaryngology in Georgia demonstrates the important contribution of Georgian physicians and scientists to regional and international medical progress and highlights the continuity of academic traditions, scientific innovation, and clinical excellence from the early twentieth century to the present day.



*NATO NAKUDASHVILI<sup>1</sup>, MARYAM KEVANISHVILI<sup>2</sup>, ZURAB KEVANISHVILI<sup>3</sup>*

### **FEATURES OF HEARING REHABILITATION OF GEORGIAN-SPEAKING PATIENTS**

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<sup>2</sup>National Center of Otorhinolaryngology; <sup>3</sup>National Center of Audiology; Georgia

Hearing loss is one of the most common pathologies in the world. It has been established that although more than 400 million people in the world need hearing aids, unfortunately, only 17% (68 million) of them use them.

In the era of the development of hearing aids, it is possible to rehabilitate hearing loss using them, although it should be noted once again that the provided scheme for assessing hearing function and recommendations related to the selection and fitting of hearing aids are based on the results of spectral analysis of words in Indo-European languages.

Currently, the issue of fitting and adjusting hearing aids in Georgian-speaking patients is a problem, due to the linguistic features characteristic of the Georgian language. Since during the fitting and adjusting of the hearing aid, a problem arose with the resolution of Georgian words, due to the peculiarities of the languages, the recommendations developed for Indo-Europeans may be less applicable to non-Indo-Europeans, for example, Georgian, and, accordingly, may require certain corrections. Despite the theoretical and medical-practical importance of the problem, no attempt has been made to study the issue so far.



*ZURAB GAMGEBELI<sup>1</sup>, SHOTA JAPARIDZE<sup>2,3</sup>*

### **COCHLEAR IMPLANTATION IN GEORGIA: CURRENT STATUS AND FUTURE PERSPECTIVES**

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It is well established that cochlear implantation (CI) represents the only effective method of rehabilitation for patients with severe hearing loss or profound deafness. Preparatory work for the introduction of the CI method in Georgia began in 1994. The principal stages of the CI technique were initially studied using cadaveric specimens. On November 11, 1999, the first cochlear implantation procedure was performed with the assistance of German and Austrian colleagues.

All subsequent operations were carried out by Academician Shota Japaridze and his team. The first 10 operations were performed free of charge. Since 2003, a state-funded cochlear implantation program has been implemented in Georgia. To date, more than 700 cochlear implantation procedures have been performed.

*Candidate Selection.* All candidates for cochlear implantation undergo comprehensive audiological evaluation. Screening is performed using otoacoustic emission (OAE) registration methods: Pure-tone audiometry; Tympanometry; Computerized objective audiometry.

Evaluation of cochlear structure and auditory nerve status is performed using CT and MRI studies.

*Surgical Aspects.* Small S-type incision; Limited anterior mastoidectomy; Wide posterior tympanotomy; Cochleostomy or round window niche approach; Fixation of the implant body; Electrode insertion into the cochlea; Intraoperative measurements; Closure of the incision.

*Postoperative Programming and Rehabilitation.* Postoperative speech processor fitting/programming and auditory-verbal rehabilitation are conducted by experienced specialists. Excellent outcomes are achieved particularly in young children and in children with high cognitive potential.

*Institutional Collaboration and Future Perspectives.* In 2018, a memorandum of cooperation was signed between our clinic and the Ministries of Health and Education. In 2025, a meeting was held at the Ministry of Health with otologic surgeons regarding bilateral cochlear implantation, and agreement was reached to initiate bilateral implantation procedures.

MED-EL has developed the fully implantable TICI system, which is currently undergoing clinical evaluation in Munich and Liège clinics. Professors Joachim Müller and Philippe Lefebvre are performing pilot surgeries using the TICI system and have reported encouraging preliminary outcomes.



*NAILE JIKHASHVILI*

## **PRESBYPHAGIA: AGE-RELATED CHANGES IN SWALLOWING AND THEIR CLINICAL SIGNIFICANCE**

Clinic „Kani“; BAU – University; Georgia

Presbyphagia refers to age-related anatomical and physiological changes in swallowing that occur in otherwise healthy older adults. With the progressive aging of the global population, recognition of presbyphagia has become increasingly important in modern laryngology and geriatric medicine. Unlike dysphagia, presbyphagia is not considered a pathological condition; however, it reflects a reduction in the functional reserve of the swallowing mechanism and increases vulnerability to clinically significant swallowing disorders.

Age-related changes affect multiple components of the swallowing system, including the oral cavity, tongue, pharynx, larynx, upper esophageal sphincter, respiratory muscles, and neural control pathways. These alterations include sarcopenia, reduced muscle strength and coordination, delayed swallowing reflexes, decreased laryngeal sensitivity, impaired cough effectiveness, xerostomia, and reduced oral health. Consequently, swallowing becomes slower and less efficient, while the risks of penetration, aspiration, malnutrition, dehydration, and aspiration pneumonia increase.

A critical clinical challenge is distinguishing physiological presbyphagia from pathological dysphagia. Age-related changes in swallowing, such as mild laryngeal penetration or prolonged swallowing transit time, may represent physiological aging rather than pathology. Misinterpretation of these changes may lead to overdiagnosis, unnecessary dietary restrictions, and reduced quality of life in older adults.

Management focuses on maintaining safe and effective swallowing through compensatory strategies, swallowing therapy, muscle-strengthening exercises, sensory stimulation, and optimization of oral health and nutrition. Early recognition of age-related swallowing changes and timely identification of dysphagia

are essential to preventing complications and preserving functional independence and quality of life in the elderly population.



*LEVAN LORTKIPANIDZE*<sup>1,2</sup>, *MARINE TSABADZE*<sup>2</sup>, *IRINA KEKELIDZE*<sup>2</sup>, *NIKOLOZ JANASHIA*<sup>1</sup>,  
*MALKHAZ TSIKLAURI*<sup>1</sup>

### **TRANSNASAL SPHENOIDOTOMY**

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Transnasal sphenoidotomy is a surgical procedure in which the sphenoid sinus is accessed and opened through the nasal cavity to facilitate drainage, ventilation, or direct treatment of pathological lesions. The main indications for this procedure include chronic sphenoid sinusitis (particularly isolated sphenoid disease), fungal infections such as fungal ball, sphenoid sinus mucocele, benign and malignant tumors of the sphenoid sinus, lesions extending to the skull base, surgical access to the pituitary gland (e.g., transsphenoidal hypophysectomy), repair of cerebrospinal fluid (CSF) leaks in the sphenoid region, and orbital or intracranial complications associated with sphenoid sinus pathology.

Compared with transethmoidal and transeptal sphenoidotomy, the endonasal transnasal approach is less invasive, provides a more favorable and simplified postoperative rehabilitation process, preserves the normal anatomy of the nasal cavity, and can be performed simultaneously with other endoscopic sinus procedures.

This report presents a series of patients who underwent sphenoid sinus surgery via the transnasal approach and compares this technique with transeptal and transethmoidal approaches in order to highlight the minimally invasive nature of transnasal sphenoidotomy. In all cases, preoperative computed tomography of the paranasal sinuses was carefully evaluated and analyzed in detail. Such assessment is essential for successful surgical intervention, given the considerable anatomical variability of the sphenoid sinus. The surgical approach was selected according to the radiological findings and the individual anatomical characteristics of each patient.

All patients achieved complete recovery without evidence of recurrence. Furthermore, postoperative rehabilitation was notably faster and better tolerated compared with other surgical approaches to the sphenoid sinus. Our cases demonstrate the effectiveness and safety of transnasal sphenoidotomy in the management of isolated chronic fungal sphenoiditis, sphenoid mucocele, sphenoid sinus cysts, and spontaneous nasal CSF leakage.



*MARIAM LOMAIA*<sup>1,2</sup>, *SHORENA TSIKLAURI*<sup>3</sup>

### **RARE SYNDROMES IN OTORHINOLARYNGOLOGY**

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Rare systemic and genetic syndromes frequently present with otorhinolaryngological manifestations, underscoring the importance of their early recognition and multidisciplinary management. The present

study aims to demonstrate the clinical significance of otorhinolaryngological manifestations in Wegener's granulomatosis and Alport syndrome through the analysis of two distinct clinical cases.

The first clinical case describes a 45-year-old male patient presenting with chronic nasal obstruction, recurrent epistaxis, and progressive hearing loss. Otorhinolaryngological examination revealed granulomatous changes of the nasal mucosa, a large nasal septal perforation, and sensorineural hearing impairment. Laboratory investigations demonstrated c-ANCA positivity, while histopathological examination confirmed necrotizing granulomatous vasculitis. Timely diagnosis of the underlying disease, prompt referral to a rheumatology specialist, and early initiation of immunosuppressive therapy enabled achievement of disease remission and stabilization of clinical symptoms.

The second clinical case concerns a 9-year-old patient with a family history of Alport syndrome. Annual audiological monitoring with audiometric evaluation revealed high-frequency sensorineural hearing loss. Medical history was notable for hematuria and a significant familial history of renal disease. Subsequent genetic testing confirmed the diagnosis of Alport syndrome. Early nephrological therapeutic intervention significantly reduced both the rate and severity of disease progression. The patient is currently undergoing continuous nephrological and otorhinolaryngological follow-up.

The presented cases demonstrate that otorhinolaryngological manifestations may serve as important markers for the early diagnosis of rare systemic diseases. Timely diagnosis and a multidisciplinary approach substantially improve patient prognosis and quality of life.



*GAGA KULLASHVILI*

#### **THE MAXILLARY SINUS: A PASSIVE AIR-FILLED CAVITY OR AN ACTIVE AEROCRINE ORGAN?**

Chachava Clinic, Tbilisi, Georgia

The maxillary sinus was historically regarded merely as a passive anatomical structure responsible for reducing the weight of the skull and contributing to vocal resonance. However, modern physiological studies have radically shifted this perspective. Today, the maxillary sinus is viewed as an active „aerocrine organ"; that plays a vital role in the homeostasis of the entire respiratory system.

The maxillary sinus serves as a major site for the synthesis of nitric oxide (NO) and acts as its primary reservoir. NO possesses significant antibacterial and antiviral properties. Furthermore, when NO travels from the sinus down into the lower respiratory tract, it enhances alveolar gas exchange and arterial oxygenation. A healthy mucosal lining in the maxillary sinus and functional mucociliary clearance are essential prerequisites for NO synthesis. Any inflammatory process developing within the sinus suppresses this process, potentially transforming the sinus into a focal point for infection.

In cases where conservative therapy proves ineffective, Functional Endoscopic Sinus Surgery (FESS) is considered the gold standard for restoring the normal physiology of the sinus. The primary goal of this procedure is to reestablish the physiological norm of the sinus and, consequently, normalize the synthesis of nitric oxide.



*TEIMURAZ MCHEDLISHVILI, ZURA GIORGADZE, ELISABED TOPURIA, GRIGOL TOPURIA*  
**ENDONASAL ENDOSCOPIC SURGICAL MANAGEMENT OF FRONTAL SINUS OSTEOMAS**

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Frontal sinus osteomas are benign bony tumors that are most often asymptomatic. However, with increasing size, they may cause chronic rhinosinusitis, frontal headache, as well as orbital and intracranial complications. In recent years, the endonasal endoscopic surgical approach has become widely adopted in the management of frontal sinus osteomas as a minimally invasive and effective treatment modality. A series of patients with frontal sinus osteomas who underwent endonasal endoscopic surgical intervention is presented. Preoperative assessment included computed tomography to evaluate the size and location of the osteoma, the anatomy of the frontal recess, and its relationship to adjacent structures. The surgical approach was individualized based on each patient's anatomical characteristics. Surgical outcomes, postoperative complications, and the clinical course of symptoms were analyzed. Endonasal endoscopic surgical treatment achieved complete resection of the osteoma in all cases while preserving adequate frontal sinus drainage. Patients demonstrated significant improvement in clinical symptoms. No major intraoperative or postoperative complications were observed. Endonasal endoscopic management of frontal sinus osteomas is a safe and effective technique that allows favorable functional and clinical outcomes with minimal invasiveness, reducing the need for open surgical approaches.



*GIORGI KIRTADZE*

**AUTOLOGOUS BONE OSSICULOPLASTY IN MIDDLE EAR SURGERY**

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National Center of Otolaryngology, Japaridze-Kevanishvili Clinic; Georgia

ENT surgeon with focused expertise in otologic and mastoid surgery, with particular emphasis on autologous prosthesis reconstruction of the middle ear. Experienced in the surgical management of chronic otitis media, cholesteatoma, ossicular chain defects, and mastoid pathology, employing both canal wall up and canal wall down techniques.

Skilled in ossiculoplasty using autologous materials (incus interposition, malleus head, cartilage grafts), prioritizing biocompatibility, long-term stability, and optimal hearing outcomes. Proficient in tympanoplasty (Types I–IV), mastoidectomy, and combined tympano-mastoid reconstruction, with careful preservation of middle ear mechanics and aeration pathways.

Strong background in preoperative audiologic assessment, microscopic and endoscopic ear surgery, and postoperative hearing rehabilitation, integrating evidence-based surgical decision-making with individualized patient care. Actively involved in academic teaching and continuous surgical skill.



*SOPHO JAVAKHADZE, LEVAN LORTKIPANIDZE*

## **A CLINICAL CASE OF UNILATERAL POLYPOSIS OF THE NOSE AND PARANASAL SINUSES**

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Polyposis is a polypous degeneration of the nasal mucosa and paranasal sinuses. It is mainly bilateral, although it can also be unilateral. Unilateral polyposis is clinically important, as it often requires differentiation from neoplastic, infectious and/or fungal processes.

The main symptoms are nasal congestion, difficulty breathing, decreased sense of smell and unilateral or bilateral mixed type of discharge.

Diagnosis is based on endoscopic examination, computer and magnetic resonance imaging. Treatment includes medical and surgical methods with mandatory histological evaluation.

The report presents two medical cases (a 69-year-old woman and a 17-year-old boy) both with surgical treatment methods and different post-op and pre-op morphologies.



*EKATERINE KHARKHELI*

## **TYPES OF BENIGN PAROXYSMAL POSITIONAL VERTIGO**

National Centre of Audiology, Georgia

Benign paroxysmal positional vertigo (BPPV) is the most common cause of episodic vertigo. BPPV is considered a biomechanical disorder resulting from degeneration of the otolithic membrane within the utricle and displacement of otoconia into the semicircular canals. Pathological stimulation and the characteristic positional nystagmus are most commonly triggered by lying down, turning in bed, or changing head position.

Patients typically perceive vertigo as a spinning sensation or the illusion of environmental rotation. However, some elderly patients may primarily complain of imbalance or postural instability. The nystagmus observed in BPPV is usually transient and paroxysmal, characterized by excitatory and inhibitory phases, lasting less than one minute, and frequently accompanied by nausea and/or vomiting. Three principal pathophysiological forms of BPPV are recognized: canalolithiasis, cupulolithiasis, and canalith jam. Canalolithiasis is the most common form and is characterized by paroxysmal positional nystagmus with direction-changing characteristics depending on head position. In cupulolithiasis, otoconial particles adhere to the cupula, rendering it gravity-sensitive. Consequently, the induced nystagmus is typically persistent and changes direction according to head position.

Canalith jam refers to canal obstruction caused by the accumulation of freely mobile particles within the semicircular canal, resulting in impaired endolymphatic flow or restricted cupular movement. In this condition, persistent nystagmus with a fixed direction is observed regardless of positional changes.

Although BPPV is generally considered an idiopathic disorder, it is frequently encountered in patients with vestibular migraine. In our observations, both classical BPPV and BPPV-like positional nystagmus were identified in patients with vestibular migraine. The positional nystagmus observed in these patients mimicked both geotropic and apogeotropic variants of horizontal canal BPPV. In addition, cases of vertical downbeat positional nystagmus were also observed in patients with vestibular migraine. Therefore, patients with vestibular migraine may require repeated positional assessment and monitoring for recurrent or coexisting BPPV during follow-up consultations. Accurate identification of otoconial localization and

appropriate selection of repositioning maneuvers are essential for effective diagnosis and treatment of BPPV.



*ARCHIL TSULADZE, SOPHO JAPIASHVILI, KHATIA KHACHIDZE*

## **PASSIVE IMPLANTS IN OTORHINOLARYNGOLOGY**

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Passive implants in modern otorhinolaryngology are used for the correction of various anatomical and functional defects. Their main purpose is to provide mechanical support to damaged structures and restore function without the use of active electronic systems. These implants are widely used in middle ear reconstruction, improvement of nasal breathing function, and management of lagophthalmos caused by facial nerve paresis.

Among middle ear implants, PORP (Partial Ossicular Replacement Prosthesis) and TORP (Total Ossicular Replacement Prosthesis) prostheses are of particular importance. PORP is used in cases where the stapes is preserved, while TORP is indicated in cases of complete ossicular chain defects. These implants reconstruct the sound-conducting system and improve hearing function following chronic otitis media, cholesteatoma, and trauma.

An important passive middle ear implant is also the piston prosthesis, which is used in the surgical treatment of otosclerosis. During stapedotomy or stapedectomy, the piston connects the long process of the incus to the oval window of the inner ear, thereby restoring the transmission of sound vibrations. This method significantly improves hearing outcomes and is considered the gold standard in the treatment of otosclerosis.

Nasal airway implants, including the Awengen Breathe Implant, are used in cases of medial and lateral nasal valve insufficiency and dynamic collapse. These implants reinforce the lateral nasal cartilages and improve nasal breathing. They are particularly effective in cases of medial movement of the lateral nasal wall and collapse of the soft nasal sidewall during inspiration. Such conditions commonly develop after rhinoplasty or other nasal surgeries, making airway implants especially relevant in postoperative patients. However, nasal valve weakness and lateral wall collapse may also occur in patients without previous surgery due to congenital or anatomical factors, where implantation may likewise be indicated.

Eyelid passive implants are used for the treatment of lagophthalmos, which frequently develops in patients with facial nerve paresis. Implantation of platinum/iridium weights into the upper eyelid improves eyelid closure, protects the cornea from dryness and injury, and reduces the risk of ophthalmologic complications. This method represents an effective and minimally invasive approach for patients with facial nerve dysfunction.

The most commonly used implants are gold and platinum-iridium implants. Platinum-iridium implants are characterized by smaller volume, superior cosmetic outcomes, and high biocompatibility. Their conditional MRI safety at 1.5, 3.0, and 7.0 Tesla is also noteworthy.

Passive implants represent an important component of modern otorhinolaryngology, as they provide functional restoration, symptom reduction, and improvement in patients' quality of life with minimal invasiveness and high effectiveness. The presentation also included clinical cases of eyelid implantation with comparative evaluation of patients' preoperative and postoperative conditions.

*TAMAR DEVDARIANI, ZURAB KEVANISHVILI, SHOTA JAPARIDZE*

## **COGNITION PROPERTIES OF SENSORINEURAL HEARING-LOSS CHILDREN WITHOUT AND WITH CYTOMEGALOVIRUS INFECTION WHILE WITHOUT AND WITH COCHLEAR IMPLANTATION OR HEARING AIDS**

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The cognition function was purposed to estimate in children with sensorineural hearing losses, SNHLs, without and with cytomegalovirus, CMV, infection while without and with cochlear implantation, CI, or hearing aids, HAs. Investigations were performed in Tbilisi, Georgia.

*Material and Methods.* Five groups of children of 4-11 years of age constituted the test-sample: (1) SNHL children without CMV (n = 14); (2) SNHL children with CMV (n = 15); (3) SNHL children with CI (n = 10); (4) SNHL children with HAs (n = 13); (5). Normally-hearing children (n = 62). The Raven's test of colored progressive matrices has been applied for computation of cognition properties of the checked individuals. The enzyme-linked immunosorbent assay was utilized for revealing the CMV bearing. Evoked otoacoustic emission recording test was used for hearing screening. The tympanometry was done for evaluation of the middle-ear state in individuals with negative screening outcomes. Via recordings of auditory brainstem responses hearing thresholds were assessed in individuals with negative screening and negative tympanometry outcomes.

*Results.* The Raven's indices of the cognition function in normally-hearing children were highest. Twice less on the mean and individually much variable Raven's marks were documented in SNHL children while the cognition measures appeared of similar characteristics in test groups without and with CMV. In SNHL children but with CI or HAs the cognition values approximated those in normally hearings while significantly exceeded the quantities in SNHL mates but without any instrumental auditory support. After 6-12 months from CI or HA installation, the cognition properties of the handled children demonstrated no statistically significant differences from those in normally hearings.

*Conclusions.* (1) The cognition level is lower and much variable in SNHL than in normally-hearing children. (2) CMV or any other hearing pathology cause has no key significance for the cognition level of SNHL children. (3) In-time and reliable SNHL habilitation/rehabilitation by CI or HAs along with the hearing initiation/recovery factor promotes the lucky outcome of cognition disorders in SNHL sufferers.



*VENERA DAVITULIANI, NINO DATUNISHVILI*

## **PRESERVATION RHINOPLASTY AS A MODERN APPROACH TO NASAL SURGERY**

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*Background:* In recent years, preservation rhinoplasty has emerged as a paradigm shift in nasal surgery, offering an anatomy-preserving alternative to traditional reductive techniques. This approach focuses on maintaining native nasal structures, thereby enhancing both functional integrity and aesthetic predictability.

*Objective:* The aim of this presentation is to systematically review the surgical principles of preservation rhinoplasty and to assess its clinical advantages compared with conventional rhinoplasty techniques.

*Methods:* This presentation is based on a critical review of current scientific literature combined with clinical experience in patients undergoing preservation rhinoplasty. Key aspects of surgical technique, intraoperative management, and postoperative outcomes were analyzed.

*Results:* Preservation rhinoplasty demonstrated reduced surgical trauma, improved maintenance of dorsal nasal architecture, and more stable aesthetic outcomes. Furthermore, patients experienced decreased postoperative edema and a shorter recovery period compared with traditional approaches.

*Conclusion:* Preservation rhinoplasty represents an effective and safe surgical strategy in appropriately selected patients. Its success underscores the importance of respecting native nasal anatomy and adopting an individualized, structure-preserving approach in modern rhinoplasty.



ANA MATSABERIDZE<sup>1</sup>, NINO SHARASHENIDZE<sup>2</sup>

### THE INFLUENCE OF ANTIHYPERTENSIVE THERAPY ON THE COURSE OF POSTNASAL DRIP SYNDROME

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*Background:* Chronic treatment of arterial hypertension is frequently associated with specific adverse effects that clinically manifest as upper respiratory tract symptoms. These manifestations are commonly misdiagnosed as primary postnasal drip syndrome (PNDS), significantly impairing patients' daily quality of life and sleep.

*Objective:* To investigate the role of antihypertensive medications—specifically ACE inhibitors and beta-blockers—in mimicking or provoking PNDS symptoms and to develop optimal, evidence-based management strategies.

*Methodology:* A retrospective analysis of various clinical cases (patients aged 47 to 78) was conducted. The diagnostic algorithm included a detailed chronological history, anterior/posterior rhinoscopy, pharyngoscopy, nasopharyngeal endoscopy, and differential investigations (CT, allergy tests, spirometry) to rule out underlying pathologies.

*Results:* It was confirmed that ACE inhibitors induce dry, tickling cough via bradykinin accumulation, often manifesting months after initiating therapy. Conversely, non-selective beta-blockers cause mucosal edema, severe dryness, and thick mucus accumulation through vasodilatory effects on nasal blood vessels. Substituting ACE inhibitors with ARBs (telmisartan) and replacing non-selective beta-blockers with highly selective alternatives (nebivolol, bisoprolol) led to complete resolution or an 80% regression of symptoms within 10–14 days, effectively overcoming chronic decongestant dependence.

*Conclusion:* "Treatment begins with a medical history"; In hypertensive patients presenting with PNDS symptoms, timely identification of the pharmaceutical factor is crucial. Effective management requires a coordinated approach between cardiologists and otolaryngologists, focusing on modifying cardiovascular therapy and localized isotonic humidification.



*ZURA GIORGADZE, TEIMURAZ MCHEDLISHVILI, ELISABED TOPURIA, GRIGOL TOPURIA*  
**SURGICAL TREATMENT OF OTOGENIC FACIAL NERVE PARESIS, TYMPANO-MASTOID APPROACH**

Clinic-Topuria Clinic, Georgia

Otogenic facial nerve palsy is an uncommon but serious complication of middle ear disease, most frequently associated with chronic suppurative otitis media with cholesteatoma. The facial nerve may be affected due to direct bony erosion, inflammatory edema, ischemia, or toxin-mediated neuritis, leading to varying degrees of lower motor neuron facial weakness. Prompt diagnosis and timely surgical intervention are crucial to prevent permanent nerve damage and to improve functional outcomes.

This presentation discusses the role of surgical management of otogenic facial nerve palsy using the tympano-mastoid approach. High-resolution computed tomography of the temporal bone plays a key role in identifying the extent of disease and facial canal involvement. Surgical management involves eradication of middle ear and mastoid pathology combined with decompression of the affected segment of the facial nerve while preserving the nerve sheath. The tympano-mastoid approach provides adequate exposure for disease clearance and facial nerve decompression, with the added advantage of addressing associated middle ear pathology in the same setting.

Early surgical intervention, particularly in cases associated with cholesteatoma or progressive facial weakness, has been shown to yield favorable outcomes, with most patients achieving significant improvement in facial nerve function. This abstract highlights the indications, surgical technique, and outcomes of the tympano-mastoid approach in the management of otogenic facial nerve palsy, emphasizing the importance of early diagnosis and appropriate surgical treatment.



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**CYSTIC FIBROSIS MANIFESTATIONS IN OTORHINOLARYNGOLOGY**

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Cystic fibrosis is a multisystem autosomal recessive disorder caused by mutations in the CFTR gene. CFTR regulates epithelial transport of sweat, mucus, and digestive secretions; dysfunction of the protein results in thickened secretions that accumulate across multiple organ surfaces. Classic manifestations include recurrent pulmonary infections, pancreatic insufficiency, and elevated sweat chloride levels. However, a subset of patients present with mild or atypical disease, posing diagnostic challenges. Diagnosis relies on genetic confirmation and/or demonstration of CFTR functional impairment. In the airways, retained viscous mucus creates a niche for bacteria that are poorly accessible to immune clearance and antimicrobials, leading to chronic infection and progressive airway remodeling. Early colonization commonly involves *Staphylococcus aureus* and *Haemophilus influenzae*, whereas *Pseudomonas aeruginosa* predominates later, infecting approximately 80% of patients by late adolescence. Fungal colonization is also observed, most frequently *Aspergillus fumigatus*, which may trigger allergic bronchopulmonary aspergillosis. In the paranasal sinuses, inspissated secretions obstruct sinus ostia, resulting in chronic rhinosinusitis—the most common otorhinolaryngologic feature of CF. Clinical symptoms include nasal obstruction, purulent discharge, facial pressure or pain, fever, and dyspnea. Persistent inflammation predisposes to nasal polyposis, which develops in roughly 10–25% of patients.

Additional ENT manifestations may include recurrent otitis media, conductive hearing loss, sleep-disordered breathing, and olfactory or gustatory dysfunction.

Cystic fibrosis should be recognized as a differential concern in otorhinolaryngology, as upper airway manifestations such as chronic rhinosinusitis, bilateral nasal polyposis, and recurrent middle-ear disease may precede classic pulmonary findings. Thickened mucous secretions and airway colonization contribute to refractory and recurrent ENT disease, underscoring the importance of early identification and referral for genetic evaluation and multidisciplinary care. Consequently, otorhinolaryngologists play a pivotal role in early detection and improvement of long-term patient outcomes.



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### **THE CONDITION OF THE PARANASAL SINUSES IN PATIENTS WITH CERTAIN IMMUNE DISORDER**

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Rhinosinusitis is a common inflammatory condition affecting the nasal cavity and paranasal sinuses, significantly impacting quality of life and healthcare systems worldwide. It may present as acute or chronic disease and can be caused by viral, bacterial, allergic, or environmental factors. Typical clinical manifestations include nasal obstruction, rhinorrhea, facial pain or pressure, headache, hyposmia, and cough. Diagnosis is based on clinical history, physical examination, nasal endoscopy, and imaging studies such as computed tomography when complications or chronic disease are suspected. Management depends on the etiology and severity of the condition and may include nasal saline irrigation, intranasal corticosteroids, antibiotics, antihistamines, and surgical intervention in refractory cases. Chronic rhinosinusitis is often associated with underlying inflammatory disorders, nasal polyps, and immune dysfunction, requiring long-term multidisciplinary management. Early diagnosis and appropriate treatment are essential to prevent complications involving the orbit, bone, and intracranial structures. This presentation reviews the anatomy, pathophysiology, classification, clinical features, diagnostic methods, treatment options, and possible complications of rhinosinusitis.



*USHANGI AVALIANI, NINO SHARASHENIDZE, IRAKLI KHUNDADZE*

### **COMPREHENSIVE ANALYSIS OF OTOLOGIC CHANGES FOLLOWING PROLONGED INTUBATION: INTEGRATED ASSESSMENT OF PHYSICAL, RADIOLOGICAL AND ACUMETRIC FINDINGS**

Simon Khechinashvili University Clinic, Georgia

Prolonged intubation represents an essential component of critical care medicine; however, it is associated with a variety of complications, including otologic changes that are often underestimated and insufficiently investigated. The present study aims to provide a comprehensive evaluation of structural

and functional alterations of the auditory system associated with prolonged intubation through an integrated analysis of physical, radiological, and acumatic findings.

The study included 25 patients who underwent endotracheal intubation for more than 14 days. All patients received detailed otologic examinations, with particular attention directed toward pathological middle ear findings, tympanic membrane status, and Eustachian tube function.

Radiological assessment included computed tomography (CT) and/or magnetic resonance imaging (MRI), which were utilized to identify anatomical changes involving the middle ear and mastoid system. Acumatic evaluation was based on tympanometric data, allowing assessment of middle ear ventilation and conductive dysfunction.

Analysis of the obtained findings may contribute to the early diagnosis of otologic complications associated with prolonged intubation and support the development of effective preventive and therapeutic strategies. Ultimately, these approaches may improve patient management and optimize long-term clinical outcomes in critically ill patients undergoing prolonged airway support.



*NINO SHARASHENIDZE*

#### **MALIGNANT EXTERNAL OTITIS: A SIMPLE ONSET AND SEVERE CLINICAL COURSE**

Simon Khechinashvili University Clinic, Tbilisi, Georgia

Malignant external otitis, also referred to as necrotizing external otitis or skull base osteomyelitis, is a severe and potentially life-threatening infection of the external auditory canal and surrounding soft tissues with progressive extension to the periosteum and skull base. Although not a malignant neoplastic process, the disease is characterized by aggressive clinical behavior, high morbidity, and significant mortality if diagnosis and treatment are delayed. The condition occurs predominantly in elderly patients with diabetes mellitus and immunocompromised states, while *Pseudomonas aeruginosa* remains the principal causative pathogen.

The presentation reviews the epidemiology, etiology, pathophysiology, clinical manifestations, diagnostic criteria, radiological evaluation, treatment strategies, and prognostic factors associated with malignant external otitis. Particular attention is paid to the routes of infection spread and cranial nerve involvement, which represent indicators of advanced disease and poor prognosis. Clinical diagnosis is supported by microbiological studies and imaging modalities including computed tomography, magnetic resonance imaging, technetium bone scanning, and gallium scintigraphy.

The importance of prolonged targeted intravenous antibiotic therapy, strict glycemic control, local ear management, and timely recognition of fungal infections is emphasized. The presentation also discusses common diagnostic and therapeutic errors that contribute to delayed treatment and unfavorable outcomes. Despite advances in antimicrobial therapy and imaging techniques, malignant external otitis remains a challenging condition requiring early multidisciplinary management to reduce complications, prevent intracranial spread, and improve survival outcomes.



*NINO DZHANGA VADZE, MELANO ZIRAKASHVILI*

## **NAZAL AND ORAL COMPLICATIONS AFTER CHEMOTHERAPY**

National Center of Otorhinolaryngology, Japaridze-Kevanishvili Clinic, Georgia

Chemotherapy is an essential part of cancer treatment, but it often affects healthy tissues in addition to cancer cells. Because the cells lining the mouth and nose divide rapidly, they are especially vulnerable to the toxic effects of chemotherapy. As a result, many patients experience uncomfortable oral and nasal complications during treatment, which can significantly reduce quality of life and sometimes interfere with ongoing therapy.

One of the most common oral complications is oral mucositis, a painful inflammation and ulceration of the oral mucosa that can make eating, drinking, and speaking difficult. Patients may also develop dry mouth, taste changes, gingival bleeding, and opportunistic infections such as oral candidiasis due to chemotherapy-induced immunosuppression. These complications can contribute to dehydration, malnutrition, and an increased risk of systemic infection.

Nasal complications are less frequently discussed but are also important. Chemotherapy may cause nasal dryness, crusting, mucosal irritation, and recurrent nosebleeds. In immunocompromised patients, secondary bacterial or fungal infections may also develop.

The severity of these complications often depends on the type and dose of chemotherapy, the patient's immune status, and overall oral hygiene.

Early recognition and supportive management of these side effects are essential to improve patient comfort and maintain continuity of cancer treatment. Preventive measures such as proper oral care, hydration, and timely treatment of infections can greatly reduce complications and improve the overall well-being of patients undergoing chemotherapy.



*IRAKLI KHUNDADZE*

## **ANTIBACTERIAL TREATMENT WITH MODERN GUIDELINES**

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The presented presentation reviews the importance of oral cephalosporins in modern antibacterial therapy and is based on international clinical guidelines, including IDSA, AAP, Sanford Guide and UpToDate recommendations. The paper pays special attention to the growing problem of antimicrobial resistance, which is considered one of the main challenges of global health. The high rates of resistance to macrolides are discussed and it is noted that their use in monotherapy is only appropriate in patients with anaphylactic allergy to penicillin. It is also emphasized that resistance to penicillins and cephalosporins is still relatively low.

The presentation discusses the generations of oral cephalosporins and their antibacterial spectrum. Special emphasis is placed on the second-generation cephalosporin — cefuroxime (Zinate), which has a balanced effect on both gram-positive and gram-negative bacteria and plays an important role in the treatment of respiratory tract infections. It is noted that third-generation oral cephalosporins are too broad-spectrum drugs and their irrational use leads to damage to the normal microflora. The paper discusses in detail the etiology, clinical signs, diagnostic criteria and empirical antibiotic therapy regimens for acute bacterial otitis, pharyngitis and rhinosinusitis in children and adults. Special attention is paid to differentiating viral

and bacterial infections in order to reduce the inappropriate use of antibiotics. Duration of treatment, risk factors for resistance, and alternative therapy regimens are also presented.

The presentation emphasizes the importance of rational antibiotic therapy based on modern guidelines, which contributes to increasing the effectiveness of treatment, preventing complications, and reducing antimicrobial resistance.



*IRINA ANUASHVILI, NINO SHARASHENIDZE*

### **MEDICATION-INDUCED EPISTAXIS**

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Epistaxis is one of the most common clinical manifestations encountered in both outpatient and emergency settings, affecting up to 60% of the population during their lifetime. Among its diverse etiologies, medication-induced epistaxis represents an increasingly significant and often under-recognized condition. This study reviews the role of various pharmacological agents, including anticoagulants, antiplatelet drugs, nonsteroidal anti-inflammatory drugs, systemic retinoids, corticosteroids, and chemotherapeutic agents, in the pathogenesis of nasal bleeding. Particular emphasis is placed on isotretinoin, a widely used systemic retinoid for moderate to severe acne, which contributes to mucosal dryness and capillary fragility, thereby increasing the risk of epistaxis. Clinical observations demonstrate a high prevalence of mild anterior nasal bleeding, predominantly originating from Kiesselbach's plexus. In addition, chemotherapy-associated epistaxis is analyzed, highlighting mechanisms such as thrombocytopenia, mucosal damage, coagulation disorders, and vascular instability. The findings underscore the importance of patient education, early risk assessment, and preventive strategies, including nasal mucosa hydration, regular monitoring, and interdisciplinary management. Improved awareness among healthcare providers can significantly reduce complications and enhance patient outcomes in medication-related epistaxis. Furthermore, identifying predisposing factors such as preexisting nasal conditions, dehydration, and anatomical variations is essential for minimizing risk and optimizing individualized treatment strategies in clinical practice and outcomes overall.

