

## Abstract Selection

**Disappearance of click-evoked potentials on the neck of the guinea pig by pharmacological and surgical destruction of the peripheral vestibular afferent system.** Matsuzaki Masaki, Murofushi Toshihisa. Department of Otolaryngology, Tokyo Postal Services Agency Hospital, 2-14-23 Fujimi, Chiyoda-ku, Tokyo, Japan. yomiyama-tky@umin.ac.jp *Hearing Research* 2003 Oct, Vol. 184 (1-2), pp. 11–5, ISSN 0378-5955. English.

In order to establish an animal model of acoustically evoked vestibulo-colic reflex, the so-called vestibular evoked myogenic potential in humans, potentials evoked by loud clicks on the neck of the guinea pig were recorded using subjects whose peripheral vestibular endorgans or vestibular afferents had been damaged. Four normal control guinea pigs, four guinea pigs that received an intramuscular injection of gentamicin for 20 days (90 mg/kg/day) and five guinea pigs whose vestibular nerves were surgically sectioned were used in this study. Under general anaesthesia with an intraperitoneal injection of pentobarbital sodium (40 mg/kg), auditory brainstem responses (ABRs) were recorded. Then, potentials evoked by loud clicks on the pre-vertebral muscle at the level of the third cervical vertebral bone were recorded using silver ball electrodes. As a result, a distinctive negative peak (NP) with a latency of 6–8 ms was recorded in all animals in the control group. NP was not observed in the gentamicin-administered group while ABR was preserved. After sectioning the vestibular nerve, NP was abolished while ABR was preserved. From these results, NP could be of vestibular origin. These results are in agreement with a previous report of NP using subjects whose cochlea had been damaged pharmacologically.

**Fungal sinusitis: histological spectrum and correlation with culture.** Granville Laura, Chirala Minnie, Cernoch Patricia, Ostrowski Mary, Truong Luan D. Department of Pathology, The Methodist Hospital and Baylor College of Medicine, Houston, TX, USA. *Human Pathology* 2004 Apr, Vol. 35 (4), pp. 474–81, ISSN 0046-8177. English.

Fungi are important aetiological agents of sinusitis. However, features of fungal sinusitis including the histological spectrum, diagnostic mishaps, incidence, and fungal types have not been systematically studied. From 1996 through 2001, a total of 788 surgical pathology sinus specimens from 384 cases was retrieved. Fungal sinusitis was diagnosed in 58 specimens (seven per cent) from 47 cases (12 per cent). Four histological categories of fungal sinusitis were identified: (1) allergic fungal sinusitis in 34 cases (copious mucin, abundant eosinophils, Charcot-Leyden crystals (so-called allergic mucin), with rare non-invasive fungal hyphae); (2) mycetoma/fungus ball in 11 cases (tightly packed fungal hyphae without allergic mucin or tissue invasion); (3) chronic invasive fungal sinusitis in one case (tissue granulomas with fungal hyphae); and (4) acute fulminant fungal sinusitis in one case (fungal vascular invasion). The diagnosis was initially missed in 16/34 (47 per cent) cases of allergic fungal sinusitis despite typical features; incorrect classification was noted in 47 per cent of cases. Sixty-seven per cent of cases had positive fungal cultures, dematiaceous fungi being the most common. Allergic fungal sinusitis accounted for the majority of fungal sinusitis. Although misdiagnosis or incorrect classification is rather frequent for fungal sinusitis, awareness of the distinctive morphological features of this entity may prevent these errors.

**Capillary haemangioma of the nasal cavity in a seven-week-old baby – successful treatment using intralesional steroid injection.** Tasca Razvan Alexandru, Williams Richard Gareth. Department of Otolaryngology, Head and Neck Surgery, University Hospital of Wales, Heath Park, Cardiff, CF14 4XW, UK. razvanta@onetel.net.uk. *International Journal of Pediatric Otorhinolaryngology* 2004 Mar, Vol. 68 (3), pp. 365–7, ISSN: 0165-5876. English.

A case of a seven-week-old baby who presented with a capillary haemangioma of the nasal cavity is presented. We describe a novel treatment modality and provide a literature review of head and neck capillary haemangioma in the paediatric population. Capillary haemangioma of the nasal cavity and our treatment option has not previously been described in the literature at such an early age.

**Sleep-disordered breathing, pharyngeal size and soft tissue anatomy in children.** Fregosi R F, Quan S F, Kaemingk K L, Morgan W J, Goodwin J L, Cabrera R, Gmitro A. Department of Physiology, University of Arizona, Tucson, Arizona 85721, USA. Fregosi@u.arizona.edu *Journal of Applied Physiology* 2003 Nov (epub: 2003 Aug 01), Vol. 95 (5), pp. 2030–8, ISSN: 8750-7587. English.

We tested the hypothesis that pharyngeal geometry and soft tissue dimensions correlate with the severity of sleep-disordered breathing. Magnetic resonance images of the pharynx were obtained in 18 awake children, seven to 12 years of age, with obstructive apnoea-hypopnoea index (OAH) values ranging from 1.81 to 24.2 events/h. Subjects were divided into low-OAH ( $n = 9$ ) and high-OAH ( $n = 9$ ) groups ( $2.8 \pm 0.7$  and  $13.5 \pm 4.9$  (SD)  $p < 0.001$ ). The OAH correlated positively with the size of the tonsils ( $r_2 = 0.42$ ,  $p = 0.024$ ) and soft palate ( $r_2 = 0.33$ ,  $p = 0.049$ ) and inversely with the volume of the oropharynx ( $r_2 = 0.42$ ,  $p = 0.038$ ). The narrowest point in the pharyngeal airway was smaller in the high-compared with the low-OAH group ( $4.4 \pm 1.2$  vs.  $6.0 \pm 1.3$  mm;  $p = 0.024$ ), and this point was in the retropalatal airway in all but two subjects. The airway cross-sectional area (CSA)-airway length relation showed that the high-OAH group had a narrower retropalatal airway than the low-OAH group, particularly in the retropalatal region where the soft palate, adenoids, and tonsils overlap ( $p = 0.001$ ). The retropalatal air space, which we defined as the ratio of the retropalatal airway CSA to the CSA of the soft palate, correlated inversely with the OAH ( $r_2 = 0.49$ ,  $p = 0.001$ ). We conclude that seven to 12-year-old children with a narrow retropalatal air space have significantly more apnoeas and hypopnoeas during sleep compared with children with relatively unobstructed retropalatal airways. Grant ID: HL-51056, Acronym: HL, Agency: NHLBI; Grant ID: HL-62373, Acronym: HL, Agency: NHLBI.

**Treatment of anterior canal benign paroxysmal positional vertigo by a prolonged forced position procedure.** Crevits L. Department of Neurology, Oto-Neuro-Ophthalmology Unit, Ghent University Hospital, Ghent, Belgium. luc.crevits@agent.be *Journal of Neurology, Neurosurgery, and Psychiatry* 2004 May, Vol. 75 (5), pp. 779–81, ISSN 0022-3050. English.

This report presents a therapeutic procedure for refractory benign paroxysmal positional vertigo (antBPPV) of the anterior canal. Two patients with refractory antBPPV were treated by a prolonged forced position procedure (PFPP). The technique is based on the assumption that the pathophysiological mechanism of antBPPV is similar to that generating posterior canal canalolithiasis. The patients recovered from refractory antBPPV after one or more PFPPs. The rationale for this therapy is that when the patient lies in the proposed forced position, the affected anterior canal is uppermost in an almost gravitationally vertical position. If the patient remains in this position for several hours, the floating particles lying in the non-ampullary arm of the canal can gradually slip out of the canal towards the vestibule due to gravity. We recommend trying PFPP when the side of lithiasis cannot be determined, in cases that are resistant to particle repositioning canal manoeuvres, and before considering canal plugging for refractory antBPPV.

**Development of a cancer-specific anterior skull base quality-of-life questionnaire.** Gil Ziv, Abergel Avraham, Spektor Sergey, Shabtai Esther, Khafif Avi, Fliss Dan M. Department of Otolaryngology Head and Neck Surgery, Tel-Aviv Sourasky Medical Center, Sackler Faculty of Medicine, Tel Aviv University, Israel. ziv@dot.co.il *Journal of Neurosurgery* 2004 May, Vol. 100(5), pp. 813–9, ISSN 0022-3085. English.

**OBJECT:** The goal of this study was to develop a disease-specific, multidimensional quality of life (QOL) assessment instrument for patients undergoing surgical extirpation of anterior skull base tumours. **METHODS:** This investigation included 35 patients who had been surgically treated for more than three months before the study was begun. Relevant QOL questions were generated from a review of the literature and interviews with health professionals, patients, and their caregivers. The initial multidimensional, 80-item questionnaire was reduced to a 35-item questionnaire by using standard psychometric criteria. Six relevant domains were identified using factor analysis: performance, physical function, vitality, pain, specific symptoms, and influence on emotions. The internal consistency of the instrument had a correlation coefficient of 0.8 and a reliability coefficient (test-retest reliability) of 0.9. The validity of the construct was assessed by testing whether the clinical variable of the patient influenced his QOL domain score as hypothesized. Patients older than 60 years of age had significantly poorer scores in the domains of performance and physical function than younger patients. Patients with malignant tumours had significantly poorer scores in the domains of specific symptoms, influence on emotions, physical function, and performance compared with patients with benign tumours. Radiotherapy was associated with poorer scores in the domains of specific symptoms and influence on emotions. Comorbidity was associated with poor physical function scores. Using the final questionnaire, we prospectively evaluated the QOL of 12 additional patients before they underwent surgery and again between five and six months post-operatively to test the utility and validity of the instrument further. Again, significantly poorer QOL scores were recorded for patients with malignancy. **CONCLUSIONS:** The proposed questionnaire appears to be sufficiently reliable and valid in estimating a patient's QOL after extirpation of anterior skull base tumours. The instrument can be used in face-to-face interviews and via electronic or regular mail.

**Neurosurgical implications of allergic fungal sinusitis.** Liu James K, Schaefer Steven D, Moscatello Augustine L, Couldwell William T. Department of Neurosurgery, University of Utah School of Medicine, Salt Lake City, Utah 84132, USA. *Journal of Neurosurgery* 2004 May, Vol. 100(5), pp. 883–90, ISSN: 0022-3085. English.

**OBJECT:** Allergic fungal sinusitis (AFS) is a form of paranasal mycosis that often involves bone destruction and extension into the orbit and anterior skull base. Treatment consists of surgical extirpation and a course of corticosteroids. Despite frequent intracranial involvement, AFS is rarely reported in the neurosurgical literature. **METHODS:** The records of 21 patients with the histological diagnosis of AFS were reviewed. The histological diagnosis was based on findings of branching septated fungi interspersed with eosinophilic mucin and Charcot-Leyden crystals without fungal invasion of soft tissue. The average age of the 21 patients in this study was 25 years (range nine to 46) and the male/female ratio was 3.75:1. All patients were immunocompetent. All had a history of chronic sinusitis and imaging findings of expansile disease involving multiple sinuses. Fifteen patients had nasal polyposis, eight had erosion of bone, which was observed on computerized tomography (CT) scans, eight had disease extending intracranially, and six had disease that involved the lamina papyracea. All patients underwent transnasal and/or transmaxillary endoscopic approaches for debridement and irrigation, six underwent orbital decompression, and three underwent a bifrontal craniotomy for removal of intracranial extradural disease. No patient had a cerebrospinal fluid leak. Post-operatively, one patient was treated with amphotericin B and the other 20 were treated with a short course of corticosteroids. The follow-up period ranged from two to 19 years. **CONCLUSIONS:** Allergic fungal sinusitis is a unique form of fungal disease that may mimic anterior skull base and paranasal sinus tumours. A cranial base team approach of neurosurgeons and otolaryngologists is recommended. Most cases can be successfully managed with transnasal and/or transmaxillary

endoscopic techniques. A craniotomy is rarely indicated unless there is the suspicion of dural invasion or extensive intracranial and/or intraorbital involvement that is inaccessible from below.

**Inferior meatal antrostomy: is it necessary after radical sinus surgery through the Caldwell-Luc approach?** Al Belasy Fouad A. Oral Surgery Department, Faculty of Dentistry, Mansoura University, Egypt. albelasy@netscape.net *Journal of Oral and Maxillofacial Surgery* 2004 May, Vol. 62 (5), pp. 559–62, ISSN: 0278-2391. English.

**PURPOSE:** In the Caldwell-Luc (CWL) operation, an antrostomy at the inferior meatus is created surgically to promote sinus drainage. This inferior meatal antrostomy (IMA) has been criticized because of the need for an additional time, early loss of the sinusotomy, injury to the nasolacrimal duct, epistaxis from the sphenopalatine artery, and deviation from the normal sinus physiology. This trial was undertaken with specific attention to the question: Is it necessary to perform antrostomy at the inferior meatus after radical sinus surgery through the CWL approach? **MATERIALS AND METHODS:** Thirty-three patients with a dental origin of sinus disease indicating the CWL operation were entered into this trial. They were treated in blocks of three, in which IMA was not performed in the first and second patients of each successive block. Only the third patient of each block had IMA performed. Cheek swelling, infection, and failure to relieve the patient's symptoms were the criteria for comparison between patient groups. Cheek swelling was measured by the eye-mouth line and the ear-nose line on the second and fourth day after surgery. **RESULTS:** At no time was there a statistically significant difference in cheek swelling between the treated groups ( $p > .05$ ). No infection or failure of treatment was encountered. However, some patients in both groups had numbness or paresthesias of the cheek, upper lip, upper front gingiva, and teeth. These complaints were transient and lasted for several weeks. **CONCLUSION:** Based on our findings, it does not seem necessary to perform antrostomy at the inferior meatus, provided the patient has a patent osteomeatal complex and no anatomical abnormalities.

**Immediate reconstruction of frontal sinus fractures: review of 26 cases.** Gabrielli Mario Francisco Real, Gabrielli Marisa Aparecida Cabrini, Hochuli Vieira Eduardo, Pereira Filho Valfrido Antonio. Oral and Maxillofacial Surgery Division, Araraquara Dental School, UNESP (Sao Paulo State University), Brazil. mfrg@foar.unesp.br *Journal of Oral and Maxillofacial Surgery* 2004 May, Vol. 62 (5), pp. 582–6, ISSN 0278-2391. English.

**PURPOSE:** The purpose of this study was to evaluate complications occurring after immediate reconstruction of severe frontal sinus fractures, including cases where the fracture was not limited to the anterior wall and also involved the posterior wall and/or sinus floor. **PATIENTS AND METHODS:** The records of 26 patients presently undergoing follow-up for frontal sinus fracture reconstruction were reviewed. Information regarding demographics, fracture characteristics and causes, associated facial fractures, use of grafts or implants, type of fixation used, nasofrontal duct management, use of antibiotics, and complications were noted. Patients were asked to return for clinical and radiographic follow-up to access late complications. **RESULTS:** The average age of patients with frontal fractures was 29.1 years and 92.3 per cent were male. Mean follow-up was 3.6 years. The most common causes of fracture were motor vehicle accidents and physical aggression. All patients presented with comminuted and dislocated anterior wall fractures, 34.6 per cent presented with posterior wall fractures, and 46 per cent had sinus floor fractures. Complications occurred in seven patients (26.92 per cent) and included pneumocephalus, frontal cutaneous fistula, frontal bone irregularity, and sinusitis. **CONCLUSIONS:** Frontal sinus reconstruction is a good procedure for immediate fracture treatment if there is not excessive comminution, dislocation, or instability of the posterior wall and if the frontonasal duct area is intact or can be repaired. Most complications result from incorrect indication for reconstruction.

**Changes in the human vocal tract due to ageing and the acoustic correlates of speech production: a pilot study.** Xue Steve An, Hao Grace Jianping. Ohio University, Athens, USA. sxue@pdx.edu *Journal of Speech, Language, and Hearing Research* 2003 Jun, Vol. 46 (3), pp. 689–701, ISSN 1092-4388. English.

This investigation used a derivation of acoustic reflection (AR)

technology to make cross-sectional measurements of changes due to ageing in the oral and pharyngeal lumina of male and female speakers. The purpose of the study was to establish preliminary normative data for such changes and to obtain acoustic measurements of changes due to ageing in the formant frequencies of selected spoken vowels and their long-term average spectra (LTAS) analysis. Thirty-eight young men and women and 38 elderly men and women were involved in the study. The oral and pharyngeal lumina of the participants were measured with AR technology, and their formant frequencies were analyzed using the Kay Elemetrics Computerized Speech Lab. The findings have delineated specific and similar patterns of ageing changes in human vocal tract configurations in speakers of both genders. Namely, the oral cavity length and volume of elderly speakers increased significantly compared to their young cohorts. The total vocal tract volume of elderly speakers also showed a significant increment, whereas the total vocal tract length of elderly speakers did not differ significantly from their young cohorts. Elderly speakers of both genders also showed similar patterns of acoustic changes of speech production, that is, consistent lowering of formant frequencies (especially F1) across selected vowel productions. Although new research models are still needed to succinctly account for the speech acoustic changes of the elderly, especially for their specific patterns of human vocal tract dimensional changes, this study has innovatively applied the non-invasive and cost-effective AR technology to monitor age-related human oral and pharyngeal lumina changes that have direct consequences for speech production.

**Observations of the marginal incision and lateral crura alar cartilage asymmetry in rhinoplasty: a fixed cadaver study.** Hatzis Gregory P, Sherry Steven D, Hogan Grant M, Finn Richard A. University of Texas Southwestern Medical Center, Dallas, USA. *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontics* 2004 Apr, Vol. 97 (4), pp. 432–7, ISSN 1079-2104. English.

**OBJECTIVE:** This anatomical cadaver study was intended to incrementally determine the precise relationship between the alar rim skin margin and the caudal aspect of the lateral crus of the nose. The second intention was to preliminarily test the hypothesis of sexual dimorphism in the lateral crura size and of right to left asymmetry of the lateral crura in the same individual. **STUDY DESIGN:** Demographic information of 39 Caucasian cadavers was collected. Dissection of 28 unilateral and 11 bilateral noses included the removal of all of the soft tissue from the lateral surface of lateral crura cartilages. The distance from the caudal edge of the lateral crus to the alar margin was measured beginning at the junction of the middle and lateral crura moving posteriorly. The lateral crus was then completely dissected out from the remaining surrounding soft tissue for measurement of the length, height, and thickness. **RESULTS:** Comparison of the cartilage dimensions between the sexes showed significant differences between the length, height, and thickness of the cartilages. The distance between the caudal aspect of the lateral crus and alar skin margin was less than 6.7 mm on average for the anterior 15 mm of the lateral crus. Comparison for intraindividual right to left asymmetry showed significant differences in three infracartilaginous-alar skin margin distance measurements and in cartilage length and height. **CONCLUSION:** The marginal incision can be close to the alar skin margin in the first 15 mm. Right to left intraindividual asymmetry in the first 20 mm was significant. Intraindividual right to left asymmetry was significant in the lateral crura length and height. Sexual dimorphism in the lateral crura length, height, and thickness was observed.

**Association of anterior glottic webs with velocardiofacial syndrome (chromosome 22q11.2 deletion).** Miyamoto R, Christopher, Cotton Robin T, Rope Alan F, Hopkin Robert J, Cohen Aliza P, Shott Sally R, Rutter Michael J. Division of Pediatric Otolaryngology-Head and Neck Surgery, Cincinnati Children's Hospital Medical Center, Cincinnati, OH 45229-3039, USA. *Otolaryngology-Head and Neck Surgery* 2004 Apr, Vol. 130(4), pp. 415–7, ISSN 0194-5998. English.

**OBJECTIVE:** An association between anterior glottic webs and velocardiofacial syndrome (chromosome 22q11.2 deletion) has previously been noted in a number of case reports. Our objective was to determine if the presence of such webs warrants a high index of suspicion for this chromosome deletion. **STUDY**

**DESIGN AND SETTING:** This study was carried out in the Division of Pediatric Otolaryngology-Head and Neck Surgery at Cincinnati Children's Hospital Medical Center. Chromosome 22q11.2 deletion status was determined for all patients endoscopically diagnosed with anterior glottic webs between July 1998 and December 2000. Families of patients who tested positive for the deletion were referred to the Cincinnati Children's Division of Human Genetics for additional evaluation and counselling. **RESULTS:** Eleven of 17 patients (65 per cent) with anterior glottic webs were positive for chromosome 22q11.2 deletion. Of these 11 patients, five showed subtle clinical manifestations of velocardiofacial syndrome and underwent genetic testing due only to the presence of a web. All 11 patients were diagnosed with velocardiofacial syndrome. **CONCLUSION:** We strongly recommend that all patients diagnosed with anterior glottic webs undergo fluorescence *in situ* hybridization evaluation for this chromosome deletion.

**Benign positional vertigo prognostic factors.** Del Rio Maria, Arriaga Moises A. Otolaryngology Department, University Faculty, University of Santiago de Compostela, Algeheeny General Hospital. *Otolaryngology-Head and Neck Surgery* 2004 Apr, Vol. 130 (4), pp. 426–9, ISSN 0194-5998. English.

**OBJECTIVE/HYPOTHESIS:** We sought to assess prognostic factors associated with initial successful treatment and recurrence of benign paroxysmal positional vertigo (BPPV) with the canalith repositioning (CRP) manoeuvre with mastoid vibration. **STUDY DESIGN AND SETTING:** We conducted a retrospective chart review of 104 consecutive BPPV patients at a tertiary care referral centre during 1999. **METHODS:** The main outcome measures were resolution of BPPV and absence of nystagmus on Hallpike manoeuvre. **RESULTS:** Ninety-three patients (89.4 per cent) experienced initial symptom resolution, and 21 of the initially successful patients had a recurrence (recurrence rate of 22.6 per cent). Prior trauma or labyrinthitis was found to predict the lowest initial CRP success. Endolymphatic hydrops and central nervous system-related dizziness as cofactors with BPPV were associated with the highest recurrence rates. **CONCLUSION AND SIGNIFICANCE:** Specific concurrent otological conditions are associated with different outcomes in BPPV.

**Revision endoscopic frontal sinus surgery with surgical navigation.** Chiu Alexander G, Vaughan Winston C. Department of Otolaryngology-Head and Neck Surgery, Stanford University Medical Center, Stanford, CA 94305, USA. *Otolaryngology-Head and Neck Surgery* 2004 Mar, Vol. 130 (3), pp. 312–8, ISSN 0194-5998. English.

**BACKGROUND:** Revision surgery of the frontal sinus remains one of the most difficult operations for the endoscopic surgeon. Most agree that knowledge and recognition of its complex anatomy and sparing of frontal recess mucosa are keys to a successful operation. The use of surgical navigation systems may allow for more precise dissections and greater rates of frontal recess patency. **METHODS:** Retrospective review of all patients undergoing revision endoscopic frontal sinus surgery with surgical navigation was performed with a minimum 24-month follow-up. **RESULTS:** Sixty-seven patients underwent revision endoscopic frontal sinus surgery with surgical navigation. The average follow-up was 32 months. Fifty-eight (86.6 per cent) had a patent frontal recess and significant subjective improvement in symptoms. No patient underwent external frontal sinus obliteration, and there were no major complications. **CONCLUSIONS:** Endoscopic techniques with surgical navigation are effective in revision frontal sinus cases. The dissection of remnant agger nasi, obstructing frontal and supraorbital cells are necessary to widen the anterior-posterior as well as the medial-lateral dimensions of the recess. Computer navigational systems appear to serve as a valuable adjunct in pre-operative planning and safe intra-operative dissection.

**Infections after endoscopic polypectomy using nasal steroids.** Bross Soriano Daniel, Arrieta Gomez Jose R, Prado Calleros Hector. Department of Otolaryngology, "Manuel Gea Gonzalez" General Hospital, Mexico City, Mexico. dbross@glw.com.mx *Otolaryngology-Head and Neck Surgery* 2004 Mar, Vol. 130 (3), pp. 319–22, ISSN 0194-5998. English.

**BACKGROUND** Topical nasal steroids such as beclomethasone dipropionate and fluticasone propionate have been widely used in

the treatment of rhinitis and polyposis. An increase in infection has occurred with the use of fluticasone propionate after endoscopic polypectomy. **OBJECTIVE:** The purpose of this study was to determine the prevalence of nasal and paranasal infections with the use of topic nasal steroids after endoscopic polypectomy and to compare the recurrence rates of the polyposis. **DESIGN AND SETTING:** We conducted a prospective, comparative, open, experimental, longitudinal study at an academic tertiary referral medical centre. **METHODS:** One hundred and sixty-two patients in whom endoscopic polypectomy had been indicated were randomly divided into three groups of 54 patients each. The patients from the first group were treated with saline lavage only. Patients from the second group also received fluticasone propionate 400 microg/day in nasal spray after lavage. Patients from the third group received beclomethasone dipropionate 600 microg/day after lavage. The prevalence of infections and recurrence of polyposis was compared in the three groups. **RESULTS:** Three patients, two in the placebo group and one in the beclomethasone group, developed infections during the first three months after surgical procedure. The recurrence of polyps in the group without steroids was 44 per cent. In contrast, 15 per cent from the patients treated with fluticasone showed recurrence of polyposis; furthermore, 26 per cent of the patients treated with beclomethasone showed recurrence of polyposis, with a minimum follow-up of 12 months. **CONCLUSIONS:** The use of nasal steroids does not seem to increase the prevalence of infections after endoscopic polypectomy.

**Vaccine-preventable paediatric postmeningitic sensorineural hearing loss in southern India.** Cherukupally Shilpa Reddy, Eavey Roland. Department of Otolaryngology, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA02114, USA. *Otolaryngology-Head and Neck Surgery* 2004 Mar, Vol. 130(3), pp. 339–43, ISSN 0194-5998. English.

**OBJECTIVE:** The study goal was to assess vaccine-preventable paediatric postmeningitic sensorineural hearing loss in southern India. **STUDY DESIGN AND SETTING:** We conducted a prospective pilot study from January through March 2001 in a tertiary paediatric hospital in southern India. **RESULTS:** Sixty-five patients were studied. Thirty-five (54 per cent) patients had positive cerebrospinal fluid cultures, with the most common organisms being *Streptococcus pneumoniae* and *Haemophilus influenzae*. An additional 10 (15 per cent) patients were diagnosed with tuberculous meningitis. Of 28 patients who could comply with audiometric evaluations, eight (28 per cent) had sensorineural hearing loss. **CONCLUSIONS:** The aetiological organisms of bacterial meningitis in this study population are similar to those organisms in the developed world, with the minority exception of tuberculous meningitis. Further, a similar prevalence of postmeningitic sensorineural hearing loss occurred. **SIGNIFICANCE:** An effective vaccination programme against *S. pneumoniae* and *H. influenzae* type b should reduce the prevalence of sensorineural hearing loss due to bacterial meningitis in developing countries with similar bacterial profiles.

**Teleotolaryngology: a retrospective review at a military tertiary treatment facility.** Haegen Timothy W, Cupp Craig C, Hunsaker Darrell H. Department of Surgical Services, Naval Medical Center San Diego, California 92134-2200, USA. [twhaegen@nmcscd.med.navy.mil](mailto:twhaegen@nmcscd.med.navy.mil) *Otolaryngology-Head and Neck Surgery* 2004 May, Vol. 130 (5), pp. 511–8, ISSN 0194-5998. English.

**OBJECTIVE/HYPOTHESIS:** The use of real-time telemedicine in providing quality health-care in multiple specialties has been demonstrated in several small studies; however, a review of the literature reveals no large-scale prospective or retrospective telemedicine studies in otolaryngology. The telemedicine office at Naval Medical Center San Diego (NMCSD) acquired a large otolaryngology telemedicine patient database, and this study reviews the otolaryngology telemedicine experience at NMCSD over an 18-month period. **STUDY DESIGN:** We conducted a retrospective and reviewed new patient consults for the NMCSD otolaryngology telemedicine clinic from April 1, 2001, until November 6, 2002. **RESULTS:** During the study period, a total of 883 patients received new patient evaluations. Of 883 patients, 568 (64.3 per cent) received a preliminary diagnosis and were treated accordingly. Telemedicine resulted in the avoidance of 22.7 per cent consults. Only 115 (13 per cent) of 883 patients required traditional face-to-face otolaryngology consultation. In addition,

only 30 (4.3 per cent) of 705 patients who underwent flexible nasopharyngoscopy, otomicroscopy, or nasal endoscopy received incomplete examinations. **CONCLUSIONS:** Our study demonstrates the ability of telemedicine to function in a general otolaryngology setting.

**Nasal ciliary beat after insertion of septo-valvular splints.** Piatti G, Scotti A, Ambrosetti U. Institute of Respiratory Diseases, Ospedale Maggiore di Milano, IRCCS, University of Milan, Italy, [gioia.piatti@unimi.it](mailto:gioia.piatti@unimi.it) *Otolaryngology-Head and Neck Surgery* 2004 May, Vol. 130 (5), pp. 558–62, ISSN: 0194-5998. English.

**OBJECTIVE:** At present, endonasal paraseptal splints are devices frequently employed in rhinosurgery. We evaluated the local tolerance of a newly shaped device, the Guastella/Mantovani splint (G/M-SVS), with respect to the physiological mechanism of mucociliary clearance. **STUDY DESIGN AND SETTING:** The study involved 20 patients who underwent septoplasty and/or turbinoplasty or other nasal surgical procedures. A sample of ciliated cells was obtained by nasal brushing and was examined *ex vivo* to determine the ciliary beat frequency (CBF) and morphology, before and 15 days after surgery. **RESULTS:** Before surgery the mean CBF was 10.87 Hz +/- 0.56 Hz and when splints were removed it was 10.25 Hz +/- 1.9 Hz. Morphological evaluation of the ciliary motion after surgery demonstrated a normal, coordinated beat. **CONCLUSIONS:** The G/M-SVS does not appear to interfere with the physiological mechanism of mucociliary clearance since CBF remain within a normal range. **SIGNIFICANCE:** This is the first study that demonstrates an optimal tolerability and safety of the septo-valvular splints on nasal mucosa.

**Misoprostol in the treatment of tinnitus: a double-blind study.** Yilmaz Ismail, Akkuzu Babuer, Cakmak Ozcan, Ozlueoglu Levent N. Department of Otolaryngology-Head and Neck Surgery, Baskent University School of Medicine, Ankara, Turkey. *Otolaryngology-Head and Neck Surgery* 2004 May, Vol. 130 (5), pp. 604–10, ISSN: 0194-5998. English.

**OBJECTIVE:** To test the efficacy of misoprostol as a treatment for tinnitus. **DESIGN:** A prospective, placebo-controlled, double-blind study. **SETTING:** Baskent University Otolaryngology Clinic. **PATIENTS:** Forty adult patients who had had tinnitus for a minimum of six months and were free of systemic or otolaryngological disease. Twenty-eight patients were randomly assigned to the experimental group (group I) and 12 to the control group (group II). **INTERVENTION:** The respective groups received active drug and placebo in increasing doses for four months. The effect of medications on tinnitus were evaluated by determining improvement rates in tinnitus loudness and subjective tinnitus scoring. **RESULTS:** In the experimental group, 18 of 28 patients showed improvement in tinnitus loudness, representing an improvement rate of 64 per cent. The improvement rate based on subjective tinnitus scoring was 36 per cent (10 of 28 patients). In the control group, the improvement rate for tinnitus loudness was 33 per cent (n = 4), and the rate for subjective tinnitus scoring was 17 per cent (n = 2). The difference between improvement rate for tinnitus loudness of the experimental group and control group was found to be statistically significant (p = 0.039), but difference between improvement rate based on subjective tinnitus scoring was insignificant (p = 0.119). When results in the experimental group were analyzed according to aetiological factors, the improvement rate was highest in the sudden-onset subgroup (77 per cent). **CONCLUSIONS:** Misoprostol provided therapeutic relief for some patients with tinnitus we studied, but further investigation of larger groups is needed.

**Patient choice in treatment of vestibular schwannoma.** Pogodzinski Matthew S, Harner Stephen G, Link Michael J. Department of Otolaryngology, Mayo Clinic, Rochester, Minnesota 55905, USA. [Pogodzinski.Matthew@mayo.edu](mailto:Pogodzinski.Matthew@mayo.edu) *Otolaryngology-Head and Neck Surgery* 2004 May, Vol. 130 (5), pp. 611–6, ISSN: 0194-5998. English.

**OBJECTIVES:** There are options available to patients newly diagnosed with vestibular schwannoma. Our institution employs stereotactic radiosurgery, microsurgical removal, and watchful waiting. There are no studies in the literature examining which of these treatment options patients are choosing. **STUDY DESIGN AND SETTING:** Using a retrospective chart review from January

2000 through December 2001, we noted several variables and patients' initial treatment choices. **RESULTS:** During the 24-month study period, 139 patients were seen at our institution with a new diagnosis of vestibular schwannoma and made a clear initial treatment choice. Of these, 32 (23 per cent) patients elected watchful waiting; 51 (36 per cent) underwent stereotactic radiosurgery; and 56 (40 per cent) underwent surgical removal. Surgical excision correlated with younger age and larger tumour size. **CONCLUSIONS:** Our initial hypothesis, that patients choosing treatment would choose stereotactic radiosurgery more than 50 per cent of the time, was untrue for the time course studied. **SIGNIFICANCE:** This is the first study to examine patient choice in treatment of vestibular schwannoma.

**Clinical practice guideline: Otitis media with effusion.** Rosenfeld Richard M, Culpepper Larry, Doyle Karen J, Grundfast Kenneth M, Hoberman Alejandro, Kenna Margaret A, Lieberthal Allan S, Mahoney Martin, Wahl Richard A, Woods Charles R Jr, Yawn Barbara. SUNY-HSC Brooklyn, Department of Pediatric Otolaryngology, NY 11201, USA. richrosenfeld@msn.com *Otolaryngology-Head and Neck Surgery* 2004 May, Vol. 130 (5 Suppl), pp. S95–118, ISSN: 0194-5998. English.

The clinical practice guideline on otitis media with effusion (OME) provides evidence-based recommendations on diagnosing and managing OME in children. This is an update of the 1994 clinical practice guideline 'Otitis Media With Effusion in Young Children', which was developed by the Agency for Healthcare Policy and Research (now the Agency for Healthcare Research and Quality). In contrast to the earlier guideline, which was limited to children aged one to three years with no craniofacial or neurological abnormalities or sensory deficits, the updated guideline applies to children aged two months through 12 years with or without developmental disabilities or underlying conditions that predispose to OME and its sequelae. The American Academy of Pediatrics, American Academy of Family Physicians, and American Academy of Otolaryngology-Head and Neck Surgery selected a subcommittee composed of experts in the fields of primary care, otolaryngology, infectious diseases, epidemiology, hearing, speech and language, and advanced practice nursing to revise the OME guideline. The subcommittee made a strong recommendation that clinicians use pneumatic otoscopy as the primary diagnostic method and distinguish OME from acute otitis media (AOM). The subcommittee made recommendations that clinicians should (1) document the laterality, duration of effusion, and presence and severity of associated symptoms at each assessment of the child with OME; (2) distinguish the child with OME who is at risk for speech, language, or learning problems from other children with OME and more promptly evaluate hearing, speech, language, and need for intervention in children at risk; and (3) manage the child with OME who is not at risk with watchful waiting for three months from the date of effusion onset (if known), or from the date of diagnosis (if onset is unknown). The subcommittee also made recommendations that (4) hearing testing be conducted when

OME persists for three months or longer, or at any time that language delay, learning problems, or a significant hearing loss is suspected in a child with OME; (5) children with persistent OME who are not at risk should be re-examined at three- to six-month intervals until the effusion is no longer present, significant hearing loss is identified, or structural abnormalities of the eardrum or middle-ear are suspected; and (6) when a child becomes a surgical candidate, tympanostomy tube insertion is the preferred initial procedure. Adenoidectomy should not be performed unless a distinct indication exists (nasal obstruction, chronic adenoiditis); repeat surgery consists of adenoidectomy plus myringotomy, with or without tube insertion. Tonsillectomy alone or myringotomy alone should not be used to treat OME. The subcommittee made negative recommendations that (1) population-based screening programmes for OME not be performed in healthy, asymptomatic children and (2) antihistamines and decongestants are ineffective for OME and should not be used for treatment; antimicrobials and corticosteroids do not have long-term efficacy and should not be used for routine management. The subcommittee gave as options that (1) tympanometry can be used to confirm the diagnosis of OME and (2) when children with OME are referred by the primary clinician for evaluation by an otolaryngologist, audiologist, or speech-language pathologist, the referring clinician should document the effusion duration and specific reason for referral (evaluation, surgery), and provide additional relevant information such as history of AOM and developmental status of the child. The subcommittee made no recommendations for (1) complementary and alternative medicine as a treatment for OME based on a lack of scientific evidence documenting efficacy and (2) allergy management as a treatment for OME based on insufficient evidence of therapeutic efficacy or a causal relationship between allergy and OME. Last, the panel compiled a list of research needs based on limitations of the evidence reviewed. The purpose of this guideline is to inform clinicians of evidence-based methods to identify methods to identify, monitor, and manage OME in children aged two months through 12 years. The guideline may not apply to children older than 12 years because OME is uncommon and the natural history is likely to differ from younger children who experience rapid developmental change. The target population includes children with or without developmental disabilities or underlying conditions that predispose to OME and its sequelae. The guideline is intended for use by providers of health care to children, including primary care and specialist physicians, nurses and nurse practitioners, physician assistants, audiologists, speech-language pathologists, and child development specialists. The guideline is applicable to any setting in which children with OME would be identified, monitored, or managed. This guideline is not intended as a sole source of guidance in evaluating children with OME. Rather, it is designed to assist primary care and other clinicians by providing an evidence-based framework for decision-making strategies. It is not intended to replace clinical judgment or establish a protocol for all children with this condition, and may not provide the only appropriate approach to diagnosing and managing this problem.