

Abstract Selection

Extent of lesions in idiopathic sudden hearing loss with vertigo: study using click and galvanic vestibular evoked myogenic potentials

Iwasaki Shinichi, Takai Yoshinari, Ozeki Hidenori, Ito Ken, Karino Shotaro, Murofushi Toshihisa.
Department of Otolaryngology, Faculty of Medicine, University of Tokyo, Tokyo, Japan. iwashin-tky@umin.ac.jp.
Archives of Otolaryngology–Head & Neck Surgery (2005) Oct, Vol. 131, pp. 857–62, ISSN: 0886-4470.

Objective To clarify the extent of the vestibular lesions in idiopathic sudden hearing loss with vertigo using vestibular evoked myogenic potentials (VEMPs) in response to click (click-VEMP) and galvanic (galvanic-VEMP) stimulation, as well as caloric tests.

Design Retrospective study.

Setting University hospital.

Patients We enrolled 22 patients with idiopathic sudden hearing loss with vertigo in this study. All patients underwent audiometry and click-VEMP and caloric tests. Eight patients underwent a galvanic-VEMP test.

Results Among the 22 patients, 17 (77%) showed an absence of click-VEMPs on the affected side. In response to caloric testing, 10 patients (45%) showed a decreased response on the affected side. All 8 patients who underwent galvanic-VEMP testing showed normal responses. Most patients with decreased caloric responses (9 (90%) of 10 patients) showed an absence of click-VEMPs, whereas 9 (53%) of the 17 patients who showed abnormal click-VEMPs showed decreased caloric responses. Initial hearing level and hearing outcome significantly correlated with abnormalities on the vestibular test results.

Conclusions The lesion site of vestibular disorders in idiopathic sudden hearing loss with vertigo appeared to be within the labyrinth on the basis of galvanic-VEMP findings. Results of the click-VEMP and caloric tests suggested that the saccule could be involved more frequently than the semicircular canals. The combined use of click-VEMP and caloric tests is useful for evaluating vestibular functions in idiopathic sudden hearing loss with vertigo because the extent of vestibular abnormalities correlated well with hearing outcome.

Methicillin-resistant *Staphylococcus aureus* otorrhea after tympanostomy tube placement

Coticchia James M, Dohar Joseph E.
Department of Otolaryngology, Wayne State University School of Medicine, Detroit, Mich, USA.
Archives of Otolaryngology–Head & Neck Surgery (2005) Oct, Vol. 131, pp. 868–73, ISSN: 0886-4470.

Objective To compare a retrospective cohort of nonhospitalized children with methicillin-resistant *Staphylococcus aureus* (MRSA) otorrhea with those with methicillin-sensitive *S aureus* (MSSA) otorrhea to determine the risk factors predisposing to MRSA otorrhea and the treatments used.

Design Retrospective case-controlled series.

Setting Tertiary pediatric care facility.

Patients Seventeen children with MRSA otorrhea after bilateral myringotomy with tympanostomy tube insertion (BM&T) and 19 age- and sex-matched control subjects who demonstrated MSSA otorrhea. The average age at culture in MRSA patients was 52 months; in MSSA patients, 54 months. There were 8 boys and 3 girls in the MRSA group and 8 boys and 4 girls in the MSSA group.

Interventions Oral, topical, and intravenous antimicrobial agents.

Main outcome measures Antibiotic exposure and history of otitis media and routine antibiotic administration (topical, oral, or intravenous).

Results The following findings were statistically significant ($P < \text{or} = .06$, Mann-Whitney test): (1) longer duration of antibiotic treatment after BM&T for patients with MRSA vs those with MSSA; (2) increased number of episodes of acute otitis media before BM&T in patients with MRSA vs those with MSSA; and (3) increased number of courses of antibiotics after BM&T in patients with MRSA vs those with MSSA.

Conclusions Methicillin-resistant *S aureus* otorrhea is commonly seen as a community-acquired infection in otherwise healthy pediatric outpatients. Risk factors for development of MRSA otorrhea include the number of episodes of acute otitis media before BM&T and number of treatment courses and duration of antibiotic therapy after BM&T.

Long-term quality of life for surgical and nonsurgical treatment of head and neck cancer

El Deiry Mark, Funk Gerry F, Nalwa Sarvi, Karnell Lucy H, Smith Russell B, Buatti John M, Hoffman Henry T, Clamon Gerry H, Graham Scott M, Trask Douglas K, Dornfeld Kenneth J, Yao Min.
Department of Otolaryngology-Head and Neck Surgery, University of Iowa Hospitals and Clinics, Iowa City 52242-1093, USA.

Archives of Otolaryngology–Head & Neck Surgery (2005) Oct, Vol. 131, pp. 879–85, ISSN: 0886-4470.

Objective To compare the long-term, health-related quality-of-life outcomes in patients with advanced head and neck cancer (HNC) treated with surgery and postoperative radiation therapy (SRT) or concurrent chemotherapy and radiation therapy (CRT).

Design Matched-pair study comparing patients with advanced HNC treated with SRT or CRT at least 12 months after treatment. Patients completed 2 validated surveys addressing HNC-specific outcomes and depressive symptoms and provided information on employment and tobacco and alcohol use. Results for the 2 groups were compared using paired-sample t test and chi2 analysis.

Setting University-based study.

Patients Patients with stage III or IV squamous cell carcinoma of the oropharynx, hypopharynx, and larynx who underwent SRT or received CRT.

Main outcome measures Head and neck cancer-specific health-related quality of life from the Head and Neck Cancer Inventory and level of depressive symptoms from the Beck Depression Inventory.

Results The matching process resulted in 27 patients in each treatment group. The HNC-specific domain scores (with higher scores representing better outcomes) for CRT vs SRT were eating, 37.8 vs 40.8 ($P = .69$); speech, 65.1 vs 56.0 ($P = .23$); aesthetics, 80.3 vs 69.2 ($P = .14$); and social disruption, 69.7 vs 70.6 ($P = .90$). Overall health-related quality of life was 64.0 with SRT and 55.0 with CRT ($P = .142$). For the Beck Depression Inventory (with higher scores representing worse outcomes), patients who underwent SRT had a mean score of 9.6 compared with 11.6 for patients who received CRT ($P = .42$).

Conclusion As nonsurgical means of treating HNC have become more aggressive and surgical techniques have become more focused on function preservation and rehabilitation, the overall

health-related quality of life resulting from these different approaches is similar. Grant ID: R01CA106908-01, Acronym: CA, Agency: NCI.

Percutaneous transtracheal jet ventilation in head and neck surgery

Gulleth Yusuf, Spiro Jeffrey.
University of Connecticut School of Medicine, Farmington 06030, USA.

Archives of Otolaryngology-Head & Neck Surgery (2005) Oct, Vol. 131, pp. 886–90, ISSN: 0886-4470.

Objective To assess the safety and efficacy of percutaneous transtracheal jet ventilation (PTJV) in the management of the difficult airway.

Design Retrospective case series.

Setting Academic, tertiary care medical center.

Patients Forty-three consecutive PTJV procedures performed on 33 patients with anticipated airway difficulty undergoing direct laryngoscopy for diagnosis and/or, treatment of head and neck cancer (91%) or benign lesions.

Main outcome measures Duration of PTJV, oxygen saturation values by pulse oximetry, and incidence of tracheotomy and complications.

Results The mean duration of PTJV was 43 minutes, and mean minimum oxygen saturation was 97%. Biopsy was performed in 27 (62%) of the cases, and a laser excision in 12 (28%). Seven tracheotomies were planned preoperatively, and 2 were performed intraoperatively. Two additional patients required tracheotomies in the immediate postoperative period. Two (5%) complications occurred: 1 pneumothorax that resolved with chest tube insertion and 1 kinked catheter resulting in soft tissue emphysema that resolved spontaneously.

Conclusions Percutaneous transtracheal jet ventilation is a safe and effective method of ventilation in patients with anticipated airway difficulty. It is particularly useful in patients who are not in immediate airway distress preoperatively but who may be difficult or impossible to intubate after induction of general anesthesia. Percutaneous transtracheal jet ventilation may help to avoid tracheotomy in this setting and should be routinely available as an option for airway management in patients with head and neck cancer.

Arterial coupling for microvascular free tissue transfer in head and neck reconstruction

Ross Douglas A, Chow Jen Y, Shin Joseph, Restifo Richard, Joe John K, Sasaki Clarence T, Ariyan Stephen.

Section of Otolaryngology-Head and Neck Surgery, Yale University School of Medicine, New Haven, Conn 06520-8041, USA. douglas.ross@yale.edu.

Archives of Otolaryngology-Head & Neck Surgery (2005) Oct, Vol. 131, pp. 891–5, ISSN: 0886-4470.

Objective To demonstrate the efficacy of arterial coupling.

Design We report our experience in head and neck reconstruction with the Unilink Microvascular Anastomotic System (Synovis MCA, Birmingham, Ala). Data were collected in a consecutive series of 49 patients undergoing composite resection of head and neck tumors followed by free tissue transfer.

Setting All patient care took place at Yale-New Haven Hospital, New Haven, Conn, a university-based tertiary care, facility.

Patients Forty-nine consecutive patients aged 43 to 85 years underwent a total of 50 microvascular free tissue transfers using the Unilink coupling device. There were 18 women and 31 men, and the following 3 types of flaps were performed: radial forearm (n = 36), fibula (n = 12), and rectus abdominus (n = 2).

Interventions The Unilink coupling device was used in this case series. Each arterial and venous anastomosis was performed with the coupling device. Free tissue transfers were monitored clinically and outcomes were recorded.

Main outcome measures Flap survival and thrombosis of the arterial anastomoses were determined, as was median length of stay.

Results There were no flap failures in the series. Of the 50 coupled arterial anastomoses, the predominant coupler size used was 2.5 mm in diameter. Reconstructions included 36 radial forearm, 12 fibular osteocutaneous, and 2 rectus abdominus myocutaneous free flaps. One intraoperative arterial thrombosis occurred, requiring hand-sewn anastomosis, and another pulled away from the intact coupler in a steroid-dependent patient. There were no complications related to technical performance of the coupling device. The median length of stay was 14 days.

Conclusion While hand-sewn anastomoses in free tissue transfer remain the preferred technique for many microsurgeons, use of the coupler is a viable alternative to sutured anastomoses.

Pediatric cricotracheal resection: surgical outcomes and risk factor analysis

White David R, Cotton Robin T, Bean Judy A, Rutter Michael J. Department of Pediatric Otolaryngology-Head and Neck Surgery, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio
Archives of Otolaryngology-Head & Neck Surgery (2005) Oct, Vol. 131, pp. 896–9, ISSN: 0886-4470.

Objective To identify risk factors for operation-specific outcomes of pediatric cricotracheal resection (CTR).

Design We identified the first 100 consecutive children undergoing CTR at our institution from January 1, 1993, to December 31, 2004. Retrospective review of medical records provided data on demographics, operation dates, decannulation dates, and proposed risk factors, including age, stenosis grade, vocal cord function, Down syndrome, history of distal tracheal surgery, history of open laryngotracheal surgery, presence of tracheotomy at the time of operation, use of suprahyoid release, extended CTR, and use of chin-to-chest sutures. Complete data sets were available for 93 patients. We performed multivariable logistic regression analysis to identify significant independent risk factors.

Setting A tertiary care children's hospital.

Patients All patients younger than 18 years who underwent CTR at our institution.

Main outcome measures Operation-specific and overall decannulation rates.

Results Results of the preoperative evaluation showed grade III or IV stenosis in 89 patients (96%). The overall decannulation rate included 87 patients (94%); the operation-specific decannulation rate, 66 patients (71%). The only significant risk factor for failure to decannulate after 1 operation was the presence of unilateral or bilateral vocal cord paralysis (P = .007).

Conclusions Cricotracheal resection may be safely performed in patients with multiple airway lesions. Patients with a history of vocal cord paralysis who undergo CTR often require more than 1 open airway procedure for decannulation and should be counseled appropriately. This study represents the largest reported series of pediatric CTR.

Mobile phone use and risk of acoustic neuroma: results of the Interphone case-control study in five North European countries

Schoemaker M J, Swerdlow A J, Ahlbom A, Auvinen A, Blaasaas K G, Cardis E, Christensen H Collatz, Feychting M, Hepworth S J, Johansen C, Klæboe L, Loenn S, McKinney P A, Muir K, Raitanen J, Salminen T, Thomsen J, Tynes T.

Section of Epidemiology, Institute of Cancer Research, Brookes Lawley Building, Sutton, UK.

British Journal of Cancer (2005) 3 Oct, Vol. 93, pp. 842–8, ISSN: 0007-0920.

There is public concern that use of mobile phones could increase the risk of brain tumours. If such an effect exists, acoustic neuroma would be of particular concern because of the proximity of the acoustic nerve to the handset. We conducted, to a shared protocol, six population-based case-control studies in four Nordic countries and the UK to assess the risk of acoustic neuroma in relation to mobile phone use. Data were collected by personal interview from 678 cases of acoustic neuroma and 3553

controls. The risk of acoustic neuroma in relation to regular mobile phone use in the pooled data set was not raised (odds ratio (OR) = 0.9, 95% confidence interval (CI): 0.7–1.1). There was no association of risk with duration of use, lifetime cumulative hours of use or number of calls, for phone use overall or for analogue or digital phones separately. Risk of a tumour on the same side of the head as reported phone use was raised for use for 10 years or longer (OR = 1.8, 95% CI: 1.1–3.1). The study suggests that there is no substantial risk of acoustic neuroma in the first decade after starting mobile phone use. However, an increase in risk after longer term use or after a longer lag period could not be ruled out.

The impact of anatomic manipulations on pharyngeal collapse: results from a computational model of the normal human upper airway

Huang Yaqi, White David P, Malhotra Atul.
Sleep Medicine Division and Pulmonary/Critical Care Division, Brigham and Women's Hospital and Harvard Medical School, 75 Francis St, Boston, MA 02115, USA.
Chest (2005) Sep, Vol. 128, pp. 1324–30, ISSN: 0012-3692.

Obstructive sleep apnea (OSA) is a common disease with important neurocognitive and cardiovascular sequelae. Existing therapies are unsatisfactory, leading investigators to seek alternative forms of anatomic manipulation to influence pharyngeal mechanics. We have developed a two-dimensional computational model of the normal human upper airway based on signal averaging of MRI. Using the finite element method, we can perform various anatomic perturbations on the structure in order to assess the impact of these manipulations on pharyngeal mechanics and collapse. By design, the normal sleeping upper airway model collapses at -13 cm H₂O. This closing pressure becomes more negative (ie, less collapsible) when we perform mandibular advancement (-21 cm H₂O), palatal resection (-18 cm H₂O), or palatal stiffening (-17 cm H₂O). Where clinical data are available in the literature, the results of our model correspond reasonably well. Furthermore, our model provides information regarding the site of obstruction and provides hypotheses for clinical studies that can be undertaken in the future (eg, combination therapies). We believe that, in the future, finite element modeling will provide a useful tool to help advance our understanding of OSA and its response to various therapies. Grant ID: AG024837-01, Acronym: AG, Agency: NIA. Grant ID: HL60292, Acronym: HL, Agency: NHLBI. Grant ID: R01 HL48531, Acronym: HL, Agency: NHLBI.

Mutation screening of USH3 gene (clarin-1) in Spanish patients with Usher syndrome: low prevalence and phenotypic variability

Aller E, Jaijo T, Oltra S, Alio J, Galan F, Najera C, Beneyto M, Millan J M.
Unidad de Genetica y Diagnostico Prenatal, Hospital Universitario La Fe, Spain.
Clinical Genetics (2004) Dec, Vol. 66, pp. 525–9, ISSN: 0009-9163

Usher syndrome type III is an autosomal recessive disorder clinically characterized by the association of retinitis pigmentosa (RP), variable presence of vestibular dysfunction and progressive hearing loss, being the progression of the hearing impairment the critical parameter classically used to distinguish this form from Usher syndrome type I and Usher syndrome type II. Usher syndrome type III clinical subtype is the rarest form of Usher syndrome in Spain, accounting only for 6% of all Usher syndrome Spanish cases. The gene responsible for Usher syndrome type III is named clarin-1 and it is thought to be involved in hair cell and photoreceptor cell synapses. Here, we report a screening for mutations in clarin-1 gene among our series of Usher syndrome Spanish patients. Clarin-1 has been found to be responsible for the disease in only two families: the first one is a previously reported family homozygous for Y63X mutation and the second one, described here, is homozygous for C40G. This accounts for 1.7% of Usher syndrome Spanish families. It is noticeable that, whereas C40G family is clinically compatible with Usher syndrome type III due to the progression of the hearing loss, Y63X family could be diagnosed as Usher syndrome type I because the hearing impairment is profound and stable. Thus, we consider that the progression of hearing

loss is not the definitive key parameter to distinguish Usher syndrome type III from Usher syndrome type I and Usher syndrome type II.

Markers of malignant transformation of sinonasal inverted papilloma

Katori H, Nozawa A, Tsukuda M.
Department of Otolaryngology, Yokohama City University Medical Center, 4-57 Urafune-chou, Minami-ku, Yokohama 232-0024, Japan.
European Journal of Surgical Oncology (2005) Oct, Vol. 31, pp. 905–11, ISSN: 0748-7983.

Aim To measure HPV status, epidermal growth factor receptor (EGFR) and transforming growth factor-alpha (TGF-alpha) expression and Ki-67 index in exophytic papilloma (EP), inverted papilloma (IP) with dysplasia, IP with carcinoma and invasive squamous cell carcinoma (SCC).

Methods Forty-four patients with sinonasal papilloma and invasive SCC were selected. The nasal tissues were stained with monoclonal antibodies to EGFR, TGF-alpha and Ki-67. The results were analysed using quantitative immunohistochemical analysis. In situ hybridization studies for HPV DNA for 6/11, 16/18 and 31/33 were also performed on the tissue.

Results Significant increase of EGFR and TGF-alpha was observed in IP with severe dysplasia, IP with carcinoma and invasive SCC compared to IP with mild dysplasia and control nasal mucosa. And a serial upregulation in terms of Ki-67 index in IP with dysplasia was observed. Among IP, HPV 6/11-positive was present in 42% tumour and HPV 16/18-positive was present in 31% of tumours. Among HPV 6/11 and 16/18-positive IP, significant increase of EGFR and Ki-67 index were observed.

Conclusion Pre-cancerous lesions of IP exhibited elevated levels of EGFR and TGF-alpha and these expression may be associated with early events in IP carcinogenesis. HPV infection may be an early event in a multistep process of malignant formation of IP.

Treatment results of 1070 patients with nasopharyngeal carcinoma: an analysis of survival and failure patterns

Leung To Wai, Tung Stewart Yuk, Sze Wing Kin, Wong Frank Chi Shing, Yuen Kwok Keung, Lui Collin Ming Ming, Lo Sing Hung, Ng Ting Ying, O Sai Ki.
Department of Clinical Oncology, Tuen Mun Hospital, Tsing Chung Koon Road, Hong Kong, People's Republic of China. tw_leung@hotmail.com.
Head & Neck (2005) Jul, Vol. 27, pp. 555–65, ISSN: 1043-3074.

Background The aim of this analysis was to evaluate the outcomes of patients with nasopharyngeal carcinoma (NPC) treated primarily by external beam irradiation (ERT) and to explore for possible ways to improve the treatment results.

Methods One thousand seventy patients with nonmetastatic NPC treated from 1990 to 1998 were retrospectively analyzed. The distribution according to the Union Internationale Contra le Cancer (UICC) (1997 edition) staging system at initial diagnosis was as follows: stage I, n = 113; stage IIA, n = 38; stage IIB, n = 360; stage III, n = 306; stage IVA, n = 136; stage IVB, n = 117; T1, n = 284; T2a, n = 88; T2b, n = 398; T3, n = 149; T4, n = 151; NO, n = 321; N1, n = 393; N2, n = 238; N3a, n = 29; N 3b, n = 89. Two hundred eight patients were given neoadjuvant chemotherapy. Ninety-seven patients were diagnosed with locally persistent disease and were salvaged with high dose rate intracavitary brachytherapy. Multivariate analysis was performed with the Cox regression proportional hazards model.

Results The 5-year actuarial local failure-free survival, regional failure-free survival, distant metastasis-free survival, progression-free survival, cancer-specific survival, and overall survival rates were 80.9%, 93.3%, 77.2%, 62.7%, 71.4%, and 66.5%, respectively. Isolated distant metastasis occurred in 191 patients (18%). The distributions were as follow: stage I, 2.1% (two of 95); stage IIA, 5.7% (two of 35); stage IIB, 14.9% (45 of 302); stage III, 26.4% (62 of 235); stage IVA, 40% (40 of 100); stage IVB, 47.1% (40 of 85). Results of the multivariate analysis of various clinical endpoints were discussed. By studying these failure

patterns, it is hoped that we could refine future treatments according to the failure patterns of patients with different risks of locoregional and distant failure.

Conclusions The 18% incidence of isolated distant metastasis is too high to be ignored. Maximizing the local control and minimizing the risk of distant metastasis and late complications should be the key objectives in designing future clinical trials.

Antibiotic treatment of children with sore throat

Linder Jeffrey A, Bates David W, Lee Grace M, Fin kelstein Jonathan A.

Division of General Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, MA 02120, USA. jlinder@partners.org.

JAMA (2005) 9 Nov, Vol. 294, pp. 2315–22, ISSN: 1538-3598.

Context Of children with sore throat, 15% to 36% have pharyngitis caused by group A beta-hemolytic streptococci (GABHS). Performance of a GABHS test prior to antibiotic prescribing is recommended for children with sore throat. Penicillin, amoxicillin, erythromycin, and first-generation cephalosporins are the recommended antibiotics for treatment of sore throat due to GABHS.

Objectives To measure rates of antibiotic prescribing and GABHS testing and to evaluate the association between testing and antibiotic treatment for children with sore throat.

Design, setting, and participants Analysis of visits by children aged 3 to 17 years with sore throat to office-based physicians, hospital outpatient departments, and emergency departments in the National Ambulatory Medical Care Survey and National Hospital Ambulatory Medical Care Survey, 1995 to 2003 (N = 4158) and of a subset of visits with GABHS testing data (n = 2797).

Main outcome measures National rates of antibiotic prescribing, prescribing of antibiotics recommended and not recommended for GABHS, and GABHS testing.

Results Physicians prescribed antibiotics in 53% (95% confidence interval (CI); 49%–56%) of an estimated 7.3 million annual visits for sore throat and nonrecommended antibiotics to 27% (95% CI, 24%–31%) of children who received an antibiotic. Antibiotic prescribing decreased from 66% of visits in 1995 to 54% of visits in 2003 (P = .01 for trend). This decrease was attributable to a decrease in the prescribing of recommended antibiotics (49% to 38%; P = .002). Physicians performed a GABHS test in 53% (95% CI, 48%–57%) of visits and in 51% (95% CI, 45%–57%) of visits at which an antibiotic was prescribed. GABHS testing was not associated with a lower antibiotic prescribing rate overall (48% tested vs 51% not tested; P = .40), but testing was associated with a lower antibiotic prescribing rate for children with diagnosis codes for pharyngitis, tonsillitis, and streptococcal sore throat (57% tested vs 73% not tested; P < .001).

Conclusions Physicians prescribed antibiotics to 53% of children with sore throat, in excess of the maximum expected prevalence of GABHS. Although there was a decrease in the proportion of children receiving antibiotics between 1995 and 2003, this was due to decreased prescribing of agents recommended for GABHS. Although GABHS testing was associated with a lower rate of antibiotic prescribing for children with diagnosis codes of pharyngitis, tonsillitis, and streptococcal sore throat, GABHS testing was underused. Grant ID: K08 HS013908, Acronym: HS, Agency: AHCPR. Grant ID: K08 HS014563, Acronym: HS, Agency: AHCPR.

High division of the accessory nerve: a rare anatomical variation as a possible pitfall during neck dissection surgery

Bater Michael C, Dufty James, Brennan Peter A.

Maxillofacial Unit, Queen Alexandra Hospital, Cosham, Portsmouth, UK. mikebater@hotmail.com.

Journal of Cranio-Maxillo-Facial Surgery (2005) Oct, Vol. 33, pp. 340–1, ISSN: 1010-5182

A rare clinical variant found during neck dissection surgery is reported in which the spinal accessory nerve divided at a high level in the neck, before entering the sternocleidomastoid muscle. This case documents the need for meticulous technique

in identification and dissection of the spinal accessory nerve in order to reduce the risk of postoperative morbidity.

Predictors of diabetes insipidus after transsphenoidal surgery: a review of 881 patients

Nemergut Edward C, Zuo Zhiyi, Jane John A Jr, Laws Edward R Jr.

Department of Anesthesiology, University of Virginia Health System, Charlottesville, Virginia 22908, USA. en3x@virginia.edu.

Journal of Neurosurgery (2005) Sep, Vol. 103, pp. 448–54, ISSN: 0022-3085.

Object Diabetes insipidus (DI) is a common complication of transsphenoidal surgery. The purpose of this study was to elucidate patient- and surgery-specific risk factors for DI.

Methods The perioperative records of 881 patients who had undergone transsphenoidal microsurgery at the authors' institution between January 1995 and June 2001 were reviewed. Among 857 patients without preoperative DI, the overall incidence of immediate postoperative DI was 18.3%, with 12.4% of patients requiring treatment with desmopressin at some point during their hospitalization. Persistent DI requiring long-term treatment with desmopressin was noted in 2% of all patients. An observable intraoperative cerebrospinal fluid (CSF) leak was strongly associated with an increased incidence of both transient (33.3%) and persistent (4.4%) DI. Craniopharyngioma and Rathke cleft cyst (RCC) were also associated with an increased incidence of transient and persistent DI, whereas repeated operation was not. Among patients with pituitary adenomas, those with Cushing's disease had an increased risk of transient (22.2%), but not persistent, DI. Patients with a microadenoma were more likely to suffer transient DI than those harboring a macroadenoma (21.6 compared with 14.3%) but were not more likely to experience persistent DI.

Conclusions Diabetes insipidus remains a common complication of transsphenoidal surgery; however, it is most frequently transient in nature. Patients with an intraoperative CSF leak, a microadenoma, a craniopharyngioma, or an RCC appear to have an increased risk of transient DI. Risk factors for persistent DI include an intraoperative CSF leak, a craniopharyngioma, or an RCC.

Acute neurological complications following gamma knife surgery for vestibular schwannoma. Case report

Pollack Anta G, Marymont Maryanne H, Kalapurakal John A, Kepka Alan, Sathiaselam Vythialingam, Chandler James P.

Department of Neurological Surgery, Northwestern University Feinberg School of Medicine, Northwestern Memorial Hospital, Chicago, Illinois 60611, USA.

Journal of Neurosurgery (2005) Sep, Vol. 103, pp. 546–51, ISSN: 0022-3085.

The authors describe an acute facial and acoustic neuropathy following gamma knife surgery (GKS) for vestibular schwannoma (VS). This 39-year-old woman presenting with tinnitus underwent GKS for a small right-sided intracanalicular VS, receiving a maximal dose of 26 Gy and a tumor margin dose of 13 Gy to the 50% isodose line. Thirty-six hours following treatment she presented with nausea, vomiting, vertigo, diminished hearing, and a House-Brackmann Grade III facial palsy. She was started on intravenous glucocorticosteroid agents, and over the course of 2 weeks her facial function returned to House-Brackmann Grade I. Unfortunately, her hearing loss persisted. A magnetic resonance (MR) image obtained at the time of initial deterioration demonstrated a significant decrease in tumor enhancement but no change in tumor size or peritumoral edema. Subsequently, the patient experienced severe hemifacial spasms, which persisted for a period of 3 weeks and then progressed to a House-Brackmann Grade V facial palsy. During the next 3 months, the patient was treated with steroids and in time her facial function and hearing returned to baseline levels. Results of MR imaging revealed transient enlargement (3 mm) of the tumor, which subsequently returned to its baseline size. This change corresponded to the tumor volume increase from 270 to 336 mm³. The patient remains radiologically and neurologically stable at 10 months posttreatment. This is the first detailed report of acute facial and vestibulocochlear neurotoxicity following GKS for VS that improved with time. In addition, MR imaging findings were indicative of early neurotoxic changes. A review of

possible risk factors and explanations of causative mechanisms is provided.

Watchful waiting for acute otitis media: are parents and physicians ready?

Finkelstein Jonathan A, Stille Christopher J, Rifas Shiman Sheryl L, Goldmann Donald.

Department of Ambulatory Care and Prevention, Harvard Medical School and Harvard Pilgrim Health Care, Boston, Massachusetts, USA. jonathan_finkelstein@harvardpilgrim.org.

Pediatrics (2005) Jun, Vol. 115, pp. 1466–73, ISSN: 1098-4275.

Objective To assess the current use of initial observation (watchful waiting) of acute otitis media among community physicians and the acceptability of this option to parents of young children.

Setting Sixteen nonoverlapping Massachusetts communities enrolled in a community intervention study on appropriate antibiotic use.

Design Pediatricians, family physicians, and a random sample of parents of children <6 years old were surveyed. Parents predicted what their satisfaction would be with initial observation of an ear infection without antibiotics if suggested by their physician and concerns they would have regarding this watchful-waiting approach. Physicians reported the frequency with which they use this approach in children ≥ 2 years and those <2 years old. Separate multivariable models identified factors independently associated with parental satisfaction and with frequency of self-reported use by physicians. All models accounted for clustering of responses within communities.

Results Two thousand fifty-four (40%) parents and 160 (58%) physicians responded. Of the parents, 34% would be somewhat or extremely satisfied if initial observation was recommended, another 26% would be neutral, and the remaining 40% would be somewhat or extremely dissatisfied. The multivariable model showed lower parental education (odds ratio (OR): 0.50; 95% confidence interval (CI): 0.35, 0.71, for high school education or less compared with college graduation) and Medicaid enrollment (OR: 0.77; CI: 0.57, 1.0) was associated with lower predicted satisfaction. Higher antibiotic-related knowledge (OR: 1.2; CI: 1.1, 1.3, per question correct), belief that antibiotic resistance is a serious problem (OR: 2.3; CI: 1.8, 2.8), and reporting feeling included in medical decisions (OR: 1.4; CI: 1.1, 1.7) all were independently associated with higher predicted satisfaction. Thirty-eight percent of physicians treating children $>$ or $=$ 2 years old never or almost never reported using initial observation, 39% reported use occasionally, 17% sometimes, and 6% most of the time. In a multivariable model, only more years in practice (OR: 0.96; CI: 0.93, 0.99) was associated with a decreased likelihood of occasional or more-frequent use of watchful waiting (compared with those who never use initial observation). However, a secondary model that combined occasional users with nonusers (compared with those reporting use sometimes or more often) identified several correlates of use of observation: years in practice (OR: 0.95; CI: 0.91, 0.99), family medicine specialization (OR: 4.5; CI: 1.9, 11), belief that antibiotic resistance is a significant problem (OR: 4.3; CI: 1.3, 14.5), and practice in a community receiving a judicious antibiotic-use intervention (OR: 3.5; CI: 1.3, 9.1).

Conclusions A majority of physicians reported at least occasionally using initial observation, but few use it frequently. Many parents have concerns regarding this option, but acceptability is increased among those with more education and those who feel included in medical decisions. Substantial change in both parental and provider views would be needed to make initial observation a widely used alternative for acute otitis media. Grant ID: HS 10247, Acronym: HS, Agency: AHCPR.

Tracheoesophageal voice restoration following laryngotracheal separation procedure

Shah Rahul K, Rebeiz Elie E.

Department of Otolaryngology-Head and Neck Surgery, Tufts-New England Medical Center, Boston, Massachusetts, USA.

The Annals of Otolaryngology Rhinology and Laryngology (2005) Aug, Vol. 114, pp. 634–7, ISSN: 0003-4894.

Objectives Laryngeal dysfunction leading to incompetence and intractable aspiration can be a life-threatening problem.

Laryngotracheal separation (LTS) can be used to prevent aspiration, but results in aphonia. The options for laryngeal speech following LTS are limited.

Methods We performed tracheoesophageal puncture (TEP) and insertion of a Blom-Singer valve in 3 patients in an attempt to restore their voice after LTS for chronic aspiration.

Results Two patients had intractable aspiration (5 and 14 years) after full-course radiotherapy for laryngeal cancer, and 1 patient had aspiration after a stroke. In the first patient TEP was done as a secondary procedure, and in the other 2 patients it was done at the time of the LTS. The TEP was successful in providing these patients with phonation ability after their LTS procedure. There was no morbidity from these procedures.

Conclusions Creation of a TEP after an LTS procedure is relatively simple and relatively safe, and allows for the control of aspiration while maintaining vocal function.

Medical treatment for rhinosinusitis associated with adenoidal hypertrophy in children: an evaluation of clinical response and changes on magnetic resonance imaging

Georgalas Christos, Thomas Karen, Owens Catherine, Abramovich Solomon, Lack Gideon.

Department of Otolaryngology, St Mary's Hospital, London, England.

The Annals of Otolaryngology Rhinology and Laryngology (2005) Aug, Vol. 114, pp. 638–44, ISSN: 0003-4894.

Objectives The association between adenoidal hypertrophy and rhinosinusitis with upper airway inflammation is increasingly recognized; however, no study has used magnetic resonance imaging (MRI) to assess the changes in adenoid size after medical treatment of rhinosinusitis.

Methods Thirteen children referred to a tertiary allergy clinic with symptoms of rhinosinusitis received medical treatment over a 4-month period. All underwent MRI before and after treatment. The medical treatment regimen comprised a short course of oral antibiotics and oral steroids and a longer course of oral antihistamines and intranasal steroids.

Results The pretreatment MRI demonstrated enlarged adenoids and rhinosinusitis in all 13 children, with evidence of extensive rhinosinusitis in 9 of the 13. The treatment resulted in an improvement in overall symptom score; the most significant improvement was seen in mouth breathing. The posttreatment MRI showed a statistically significant reduction in adenoid size and adenoid/nasopharynx ratio, which was associated with a significant decrease in sinus involvement on MRI.

Conclusions There is a high association between adenoidal hypertrophy and rhinosinusitis in the context of an allergy clinic. Magnetic resonance imaging can document the changes in adenoid size associated with resolution of rhinosinusitis. Further studies are necessary to validate these pilot data and further assess the effects of medical treatment and the role of MRI in adenoidal hypertrophy.

Oxymetazoline solutions inhibit middle ear pathogens and are not ototoxic

Isaacson Glenn, Buttaro Bettina A, Mazeffa Valorie, Li Geming, Frenz Dorothy A.

Dept of Otolaryngology-Head and Neck Surgery, Temple University School of Medicine, 3400 North Broad St, Philadelphia, PA 19140, USA.

The Annals of Otolaryngology Rhinology and Laryngology (2005) Aug, Vol. 114, pp. 645–51, ISSN: 0003-4894.

Objectives This study was performed to explore the antimicrobial activity of two commercially available oxymetazoline hydrochloride preparations against the common pathogens of otitis media and to demonstrate the lack of ototoxicity of these agents and of United States Pharmacopeia (USP) oxymetazoline in a standard animal model.

Methods Disc diffusion assays and minimum inhibitory concentration studies against American Type Culture Collection reference strains of common middle ear pathogens were used to evaluate the antimicrobial activity of oxymetazoline solutions

and fluoroquinolone drops, and outer hair cell counts were performed on scanning electron micrographs of guinea pig basal cochlear segments after chronic exposure to oxymetazoline solutions and positive and negative controls.

Results Oxymetazoline nasal spray and eyedrops had activity against all species tested except *Haemophilus influenzae* and *Pseudomonas aeruginosa*. The USP oxymetazoline had limited antimicrobial activity. Oxymetazoline nasal spray, oxymetazoline eyedrops, and USP oxymetazoline had ototoxicity profiles indistinguishable from that of the saline solution control.

Conclusions Commercially available oxymetazoline solutions are active against several of the common pathogens of otitis media. This antimicrobial activity is not due to oxymetazoline, and is more likely due to preservatives present in the solutions. The solutions tested are not ototoxic to guinea pig outer hair cells. Oxymetazoline solutions are potential substitutes for broad-spectrum antibiotic drops after tympanostomy tube placement.

Imaging the mucosa of the human vocal fold with optical coherence tomography

Burns James A, Zeitels Steven M, Anderson R Rox, Kobler James B, Pierce Mark C, de Boer Johannes F.
Department of Surgery, Harvard Medical School, Boston, MA 02114, USA.

The Annals of Otolaryngology Rhinology and Laryngology (2005) Sep, Vol. 114, pp. 671–6, ISSN: 0003-4894.

Objectives Discerning the layered microstructure of the vocal folds is critical for effective phonosurgery. Optical coherence tomography (OCT), a noncontact, noninvasive technology that provides cross-sectional images by means of backscattered light, offers the potential for delineating these layers in vivo.

Methods The glottal mucosa of 3 human cadaver larynges was imaged with conventional OCT and polarization-sensitive OCT (PS-OCT). Images were obtained through the epithelium and lamina propria.

Results Although the superficial layer of the lamina propria appeared quite homogeneous, the outer surface of the superficial lamina propria was correlated with an increase in backscatter with OCT. The superficial lamina propria and vocal ligament were correlated with a marked increase in tissue birefringence with PS-OCT.

Conclusions This preliminary study demonstrates the capacity of OCT and PS-OCT for visualizing the layered microstructure of the vocal fold mucosa. We believe that these imaging techniques will have applications in the exploration of solutions to vocal fold scarring and in imaging vocal fold disorders in the clinic and operating room.

Otosclerosis: incidence of positive findings on high-resolution computed tomography and their correlation to audiological test data

Naumann Ilka C, Porcellini Beat, Fisch Ugo.
Department of Otolaryngology-Head and Neck Surgery, Indiana University, Indianapolis, Indiana, USA.

The Annals of Otolaryngology Rhinology and Laryngology (2005) Sep, Vol. 114, pp. 709–16, ISSN: 0003-4894.

Objectives Computed tomographic (CT) scanning with slices of 1 mm or more has not been sufficient to demonstrate otosclerotic foci in most cases to date.

Methods We investigated the validity of CT scans with a 0.5-mm cubical scan technique, with and without planar reconstruction, and correlated these findings with audiological data. Forty-four temporal bone CT scans from 30 patients with conductive or mixed hearing loss were evaluated.

Results Otosclerotic foci were visualized in 74% of the cases. With reconstruction at the workstation, the sensitivity increased to 85%. Whereas in fenestral otosclerosis a correlation was found between the size of the focus and the air-bone gap, no correlation was seen between the size of the focus and bone conduction thresholds with cochlear involvement. Otosclerotic foci in patients treated with sodium fluoride were smaller than those in patients without treatment. This finding may indicate a beneficial effect of sodium fluoride on otosclerotic growth.

Conclusions High-resolution CT scans are a valid tool that can be used to confirm, localize, and determine the size of clinically suspected otosclerotic foci.

Cross-sectional study of the length of the nasal bone in cleft lip and palate subjects

Nielsen Bo Werner, Moelsted Kirsten, Skovgaard Lene-Theil, Kjaer Inger.

Department of Orthodontics, School of Dentistry, Faculty of Health Sciences, University of Copenhagen, Denmark.

The Cleft Palate-Craniofacial Journal (2005) Jul, Vol. 42, pp. 417–22, ISSN: 1055-6656.

Objective The purpose of this study was to analyze the human nasal bone length in newborns and male adults with cleft lip (CL), cleft palate (CP), and unilateral cleft lip and palate (UCLP) and to compare the results to previous findings in prenatal material.

Design This study was a radiographic profile cephalometric cross-sectional analysis.

Subjects and methods Profile radiographs from 60 newborns with a male-to-female ratio of 1:1 in each group (20 CL, 20 CP, and 20 UCLP) and 60 male adults (20 CL, 20 CP, and 20 UCLP) were randomly selected among radiographs, taken for optimizing the treatment planning. The nasal bone lengths (n-na) were measured with a digital caliper on the profile radiographs. To compare the nasal bone lengths in the different cleft groups, Student's *t* tests at a significant level at 5% were performed.

Results Nasal bone length was significantly shorter in male adult patients with CL compared with patients with CP. Furthermore, the nasal bone length was significantly shorter in newborns with CL (2 months) compared to newborns with UCLP (2 months). A borderline significance was seen in the comparison of patients with CL and UCLP in male adults. There was no significant difference in the nasal bone length between the patients with CP and UCLP, in either the newborns or the male adults.

Conclusions Nasal bone length was significantly shorter in subjects with CL compared with subjects in whom the palate was clefted. The results show that the clefted lip in CL is associated with a subadjacent skeletal deviation in the upper midface.