

## Abstract Selection

**Meta-analysis of upper probe measurements in normal subjects and patients with laryngopharyngeal reflux.** Meran, A., L., Lim, H., J., Utualp, S., O., Toohill, R., J. Department of Otolaryngology and Communication Sciences and the Division of Biostatistics, The Medical College of Wisconsin, Milwaukee, Wisconsin 53226-0099, USA. *The Annals of otology rhinology and laryngology* (2005) Mar, Vol. 114, pp. 177–82, ISSN: 0003-4894.

We report a meta-analysis of a series of studies in which 24-hour ambulatory pH monitoring was performed in 1) normal subjects, 2) the normal control subjects in studies of laryngopharyngeal reflux (LPR), and 3) the patients with LPR in these controlled studies. The statistical analysis utilized the fixed-effects model by Mantel-Haenszel and the random-effects mixed model. There were 16 studies from the past 12 years that fulfilled the inclusion criteria. They involved 793 subjects (264 normal and 529 with LPR). The numbers of positive pharyngeal reflux events for normal subjects and for patients with LPR differed with a  $p$  value of  $<.0001$ . There was also a significant difference in the mean percentage of acid exposure times between normal subjects and patients with LPR ( $p = .003$ ). We conclude that the upper probe gives accurate and consistent information in normal subjects and patients with LPR. The numbers of reflux events and acid exposure times are most important in distinguishing normal subjects from patients with LPR. The technology and methodology of probe testing is quite reliable and is consistent on a worldwide basis.

**Elective neck dissection versus observation in primary parotid carcinoma.** Zbaeren, P., Schuepbach, J., Nuyens, M., Stauffer, E. Department of Oto-Rhino-Laryngology, Head and Neck Surgery, University Hospital, Berne, Switzerland. zbaeren@insel.ch. *Otolaryngology-head and neck surgery* (2005) Mar, Vol. 132, pp. 387–91, ISSN: 0194-5998.

**OBJECTIVE:** To evaluate the efficacy of elective neck dissection in the clinically negative neck of patients with primary carcinoma of the parotid gland. **Study design and setting** A retrospective analysis was undertaken at a university Department of Otorhino-laryngology-Head and Neck Surgery on 83 previously untreated patients with primary carcinoma of the parotid gland and a clinically negative neck. The reliability of fine needle aspiration cytology, frozen section, and the clinico-pathologic findings of patients with occult neck metastases were analyzed. The regional recurrence rate and the outcome were compared among 2 groups; one with elective neck dissection ( $N = 41$ ) and one without elective neck dissection ( $N = 42$ ). **RESULTS:** The diagnosis of malignancy was known preoperatively in 59 (71%) cases, the exact histologic tumor type in 36 (43%) and the grade in 37 (44%) of 83 cases. Occult metastases were detected in 8 (20%) of 41 cNO patients, in 5 cases associated with a high-grade and in 3 cases with a low-grade carcinoma. Recurrence of disease developed in 5 (12%) patients in the elective neck dissection group and in 11 (26%) patients in the observation group. All of the 7 neck recurrences occurred in the observation group. The 5-year actuarial and disease-free survival rate was 80% and 86% for patients with elective neck dissection and 83% and 69% for patients without neck dissection. **CONCLUSION AND SIGNIFICANCE:** A routine elective neck dissection is suggested in all patients with primary carcinoma of the parotid gland. The efficacy of elective neck dissection, nevertheless, has never been evaluated prospectively.

**Role of tonsillectomy in histology for adults with unilateral tonsillar enlargement.** Spinou, C., Kubba, H., Konstantinidis, I., Johnston, A. Department of Otolaryngology Head and Neck Surgery, Monklands General Hospital, Airdrie ML6 0RD, Scotland, UK. Catherine\_Spinou\_jf@ukgateway.net. *The British journal of oral & maxillofacial surgery* (2005) Apr, Vol. 43, pp. 144–7, ISSN: 0266-4356. Unilateral tonsillar enlargement (UTE) may indicate malignancy. The purpose of this study was to evaluate the necessity of

tonsillectomy for histological examination as a routine practice for every such case. We attempted to identify every adult who had tonsillectomy in our unit from January 1991 to January 2000 in whom the indication for operation was unilateral tonsillar enlargement. The case notes and pathology records were reviewed. One hundred and seven cases were identified but 9 case records could not be found, leaving 98 cases for analysis. Forty-eight were men and 50 were women, aged 16–85 (median age 32). Twenty-three malignancies were identified (23%). A high degree of clinical suspicion was noted pre-operatively in 37 cases, which included all 23 malignancies. Malignancy was more common in the presence of ulceration, male sex, lymphadenopathy, age 45 years or more, and when it was the patient who first noticed the tonsillar enlargement. Current smoking and persistent pain were not significantly associated with malignancy. Night sweats and weight loss were uncommon. In many cases the apparent tonsillar enlargement was spurious due to asymmetry of the tonsillar pillars.

**Rhinophototherapy: a new therapeutic tool for the management of allergic rhinitis.** Koreck, A., I., Csoma, Z., Badai, L., Ignacz, F., Kenderessy, A., S., Kadocsa, E., Szabo, G., Bor, Z., Erdei, A., Szony, B., Homey, B., Dobozy, A., Kemeny, L. Department of Dermatology and Allergology, University of Szeged, Hungary. akoreck@yahoo.com. *The Journal of allergy and clinical immunology* (2005) Mar, Vol. 115, pp. 541–7, ISSN: 0091-6749.

**BACKGROUND:** Phototherapy has a profound immunosuppressive effect and is able to inhibit hypersensitivity reactions in the skin. **OBJECTIVE:** We evaluated whether phototherapy using a combination of UV-B (5%), UV-A (25%), and visible light (70%), referred to as mUV/VIS, is effective in treating allergic rhinitis. **METHODS:** We conducted a randomized, double-blind study, in 49 patients with hay fever. The study was performed during the ragweed season. Each intranasal cavity was illuminated 3 times a week for 3 weeks with mUV/VIS or with low-intensity visible light. Symptom scores, inflammatory cells, and their mediators were assessed in nasal lavages. In vitro effects of mUV/VIS irradiation on T-cell and eosinophil apoptosis and its inhibitory effect on mediator release from basophils were examined. **RESULTS:** Rhinophototherapy was tolerated well and resulted in a significant improvement of clinical symptoms for sneezing ( $P < .016$ ), rhinorrhea ( $P < .007$ ), nasal itching ( $P < .014$ ), and total nasal score ( $P < .004$ ). None of the scores improved significantly in the control group. Scores for nasal obstruction slightly improved after mUV/VIS treatment and significantly increased in the control group ( $P < .017$ ). In the nasal lavage, phototherapy significantly reduced the number of eosinophils and the level of eosinophil cationic protein and IL-5. In vitro irradiation of T cells and eosinophils with mUV/VIS light dose-dependently induced apoptosis. Furthermore, mUV/VIS irradiation inhibited the mediator release from RBL-2H3 basophils. **CONCLUSION:** These results suggest that phototherapy is an effective modality to treat allergic rhinitis and offer new options for the treatment of immune-mediated mucosal diseases.

**Far advanced otosclerosis: stapes surgery or cochlear implantation?** Berrettini, S., Burdo, S., Forli, F., Ravecca, F., Marcaccini, M., Casani, A., P., Franceschini, S., S. Department of Neuroscience, University of Pisa, Italy. *The Journal of otolaryngology* (2004) Jun, Vol. 33, pp. 165–71, ISSN: 0381-6605.

**OBJECTIVE:** Nowadays, two surgical alternatives are to be considered in patients with far advanced otosclerosis: stapedectomy and cochlear implantation. The aim of this study was to analyze and compare the hearing and communicative results obtained in two groups of patients affected with far advanced otosclerosis, who were treated with the two different surgical procedures, to assess the proper surgical approach for these patients. **DESIGN:** Retrospective study. **SETTINGS:** University hospital and referral

audiologic centre. **METHODS:** We submitted 11 adult patients, affected by far advanced otosclerosis and exhibiting unsatisfactory communicative abilities with hearing aids, to two different procedures: 5 to cochlear implantation, and 6 to stapedotomy followed by hearing aid fitting. The benefits afforded by the two procedures were assessed by means of pure-tone audiometry and speech audiometry in an open field and by means of a speech perception test. **MAIN OUTCOME MEASURES:** Hearing and communicative outcomes, measured 1 year after intervention. **RESULTS:** The results achieved in the patients subjected to stapedotomy were unpredictable and variable: very good in some cases but unsatisfactory in others, whereas those who had cochlear implantation all achieved satisfactory results with regard to speech recognition. **CONCLUSIONS:** Patients who underwent cochlear implantation achieved better hearing and communicative results than those who underwent stapedotomy. Even if the number of patients reported in this study is too small to provide definitive results, and despite the reportedly better results, advanced otosclerosis should first be attempted via stapedotomy, and cochlear implantation should instead be reserved for cases in which stapedotomy is unsuccessful or for which imaging techniques unequivocally reveal a fenestral or cochlear obstruction.

**Early operative intervention versus conventional treatment in epistaxis: randomized prospective trial.** Moshaver, A., Harris, J., R., Liu, R., Diamond, C., Seikaly, H. Division of Otolaryngology-Head and Neck Surgery, University of Alberta, Edmonton, Canada. *The Journal of otolaryngology* (2004) Jun, Vol. 33, pp. 185–8, ISSN: 0381-6605.

**OBJECTIVE:** This prospective randomized trial was designed to compare intranasal endoscopic sphenopalatine artery ligation (ESAL) with conventional nasal packing in the treatment of recurrent epistaxis. **METHODS:** Patients were registered in the study data bank following referral for epistaxis control to the otolaryngology service at the University of Alberta. All patients were initially packed using Merocel (Xomed Surgical Products, Jacksonville, FL) nasal dressings bilaterally. Patients were enrolled in the study following failure of Merocel packings. Informed consent was obtained in accordance with the Health Research Ethics Board. The patients were then managed with Vaseline nasal packs or ESAL. Patient demographics treatment characteristics, number of hospitalization days, and rates of recurrence were recorded prospectively. The total cost of treatment for each patient was calculated. **RESULTS:** Nineteen patients were enrolled in the study. There was a significant reduction in cost and length of hospitalization of the patients undergoing ESAL compared with the conventional nasal packings. ESAL was also 89% effective in controlling the bleeding and had minimal sequelae or complications. The overall calculated cost of patients undergoing ESAL was US\$5133 compared with US\$12213 in the conservative group, resulting in an average saving of US\$7080 per patient. There was overwhelming patient satisfaction with ESAL compared with nasal packings. **CONCLUSION:** ESAL is an excellent, well-tolerated, and cost-effective method of treating recurrent epistaxis.

**Flexible endoscopic evaluation of swallowing with sensory testing inpatients with unilateral vocal fold immobility: incidence and pathophysiology of aspiration.** Tabae, A., Murry, T., Zschommler, A., Desloge, R., B. Department of Otorhinolaryngology-Head and Neck Surgery, New York Presbyterian Hospitals, Weill Medical College of Cornell University, New York 10021, USA. *The Laryngoscope* (2005) Apr, Vol. 115, pp.565–9, ISSN: 0023-852X.

**OBJECTIVES/HYPOTHESIS:** The objective was to examine the incidence and pathophysiology of aspiration in patients with unilateral vocal fold immobility presenting with dysphagia. **STUDY DESIGN:** Retrospective review of flexible endoscopic evaluation of swallowing with sensory testing (FEESST) data and medical records in two tertiary medical care centers. **METHODS:** The data for all patients with unilateral vocal fold immobility who underwent FEESST between 2000 and 2003 were reviewed. **RESULTS:** Eighty-one patients (45 male and 36 female patients) were included in the study. The mean age was 59 years. The most common causes or origins were iatrogenic (42%), malignancy (23%), and neurological (18%). The immobility was left-sided in 59% of patients. A majority of the patients exhibited laryngeal edema/erythema (90%), difficulty with secretions (60%), and decreased laryngopharyngeal sensation (83%). The laryngeal adductor reflex was absent in 34% of the patients. An aspiration

rate of 35% was detected with thin liquids. Trials of purees revealed a 76% rate of pooling, 44% rate of spillage, 32% rate of penetration, 18% rate of aspiration, and 24% rate of regurgitation. Rates of penetration and aspiration with purees were significantly higher in patients who had decreased laryngopharyngeal sensation, absent pharyngeal squeeze, and absent laryngeal adductor reflex. **CONCLUSION:** Dysphagia in patients with unilateral vocal fold immobility is demonstrated during FEESST by pooling, spillage, penetration, and aspiration. The pathophysiology of dysphagia is multifactorial with decreased sensation and limitation of airway protective mechanisms both acting as contributing factors.

**Positron-emission tomography for surveillance of head and neck cancer.** Ryan, W., R., Fee, W., E., Jr. Le, Q., T., Pinto, H., A. Department of Otolaryngology-Head and Neck Surgery, Stanford University School of Medicine, Stanford, California 94305, USA. williamryan@stanford.edu. *The Laryngoscope* (2005) Apr, Vol. 115, pp. 645–50, ISSN: 0023-852X.

**OBJECTIVES/HYPOTHESIS:** To determine the diagnostic accuracy and the ideal timing of fluoro-fluorodeoxyglucose positron-emission tomography (PET) in the post treatment surveillance of head and neck mucosal squamous cell carcinoma (HNSCC). **STUDY DESIGN:** Retrospective chart review. **METHODS:** Our sample includes 103 adult patients with 118 post treatment PET scans who had undergone treatment for HNSCC. We correlated PET results with surgical pathology and clinical outcome in the subsequent 6 months. **RESULTS:** For the detection of locoregional persistent or recurrent HNSCC, PET scans had a sensitivity of 82%, specificity of 92%, positive predictive value (PPV) of 64%, negative predictive value (NPV) of 97%, and overall accuracy of 90%. For the detection of distant metastases, PET scans had a sensitivity of 89%, specificity of 97%, PPV of 85%, NPV of 98%, and overall accuracy of 96%. PET scans of the head and neck region performed greater than 1 month after the completion of radiation compared with scans performed within 1 month had a significantly higher sensitivity of 95% versus 55% ( $P < .01$ ) and NPV of 99% versus 90% ( $P < .01$ ). **CONCLUSION:** PET is effective in detecting distant metastases in the post treatment surveillance for HNSCC patients. A negative PET is highly reliable for all sites. However, a positive PET in the head and neck region is unreliable because of a high false positivity rate. PET of the head and neck region has a statistically significant risk of a false-negative reading when performed within 1 month of radiation.

**Classification of the external auditory canal cholesteatoma.** Naim, R., Linthicum, F.-Jr., Shen, T., Bran, G., Hormann, K. Department of Otolaryngology, Head and Neck Surgery, University Hospital Mannheim, Mannheim, Germany. *The Laryngoscope* (2005) Mar, Vol. 115, pp.455–60, ISSN: 0023-852X.

**OBJECTIVES/HYPOTHESIS:** The external auditory canal cholesteatoma (EACC) is a rare disease in the field of otolaryngology. Only 1 in 1,000 new otologic patients present with this entity, which was first described by Toyne. The aim of this article is to classify EACC by different histopathologic and clinical findings of patients presenting to the Department of Otolaryngology at the University of Mannheim, Germany. **METHODS:** From 2000 to 2004, 17 patients presented to our clinic with EACC. The cholesteatoma were treated surgically and the specimens were investigated histologically. Clinical findings were also recorded. We classified four stages: stage I with hyperplasia of the canal epithelium, stage II including periosteitis, Stage III including a defective bony canal, and stage IV showing an erosion of adjacent anatomic structure. **RESULTS:** Eight patients presented with stage II, five patients with stage III, three with stage I, and only one patient presented with erosion of the mastoid cells, which was determined as stage IV. **CONCLUSION:** In summary, our classification serves to describe the different histopathologic and clinical stages of EACC.

**The role of epidermal growth factor receptor and E-cadherin for the outcome of reduction in the overall treatment time of radiotherapy of supraglottic larynx squamous cell carcinoma.** Eriksen, J., G., Steiniche, T., Overgaard, J. Department of Experimental Clinical Oncology, Aarhus University Hospital, Denmark. *Acta oncologica* (2005), Vol. 44, pp. 50–8, ISSN: 0284-186X.

Reduction of the overall treatment time (OTT) of radiotherapy results in increased T-site control in squamous cell carcinomas of the head and neck (HNSCC). However, the response is heterogeneous

and accelerated repopulation of clonogenic tumour cells during therapy may be one of the factors determining this response. The aim of the present study was to identify the influence of the epidermal growth factor receptor (EGFr) and E-cadherin for T-site control when the OTT was reduced and whether the markers add information to the histopathological grading in selecting patients for accelerated radiotherapy. A total of 209 patients from randomized DAHANCA-trials with supraglottic larynx squamous cell carcinomas treated with primary radiotherapy with different OTT of 9(1/2), 6(1/2), and 5(1/2) weeks. Available formalin-fixed paraffin embedded tumour tissues were re-evaluated for histopathological characteristics and stained for EGFr and E-cadherin. Data were correlated with patient and tumour characteristics and 5-year T-site control. EGFr and E-cadherin were not associated with patient or tumour characteristics except that EGFr correlated to carcinomas with a well to moderate histopathological feature. Tumours with high EGFr or low E-cadherin did benefit from reduced OTT, and the combination of the two (high EGFr and low E-cadherin) had the most significant acceleration of treatment effect, compared with tumours with other combinations of EGFr and E-cadherin expression. Tumours with high expression of EGFr and low expression of E-cadherin showed the most significant increase in T-site control when the overall treatment time of radiotherapy was reduced, and the markers may be useful for selecting patients who will benefit from accelerated radiotherapy.

**The microbiology and antimicrobial resistance patterns in chronic rhinosinusitis.** Kingdom, T., T., Swain, R-Jr. Department of Otolaryngology, University of Colorado Health Science Center, Denver, CO 80262, USA. todd.kindom@uchsc.edu. *American journal of otolaryngology* (2004) Sep-Oct, Vol. 25, pp. 323-8, ISSN: 0196-0709.

**OBJECTIVES:** The purpose of this study was to review the microbiology of chronic rhinosinusitis (CRS) in patients undergoing endoscopic sinus surgery (ESS) and comment on antimicrobial resistance trends. **METHODS:** A retrospective review of 101 patients undergoing ESS during the period of 1997 to 2001 was performed. Patients were divided into groups based on their surgical history. Fifty-five patients without prior ESS history were placed in the primary group; 46 patients who had undergone prior ESS were placed in the revision group. Intraoperative microbiology culture data were reviewed and antimicrobial resistance data analyzed. **RESULTS:** Data on 101 patients were analyzed. There were 182 total cultures sent, yielding 257 isolates. The most common isolates were coagulase-negative Staphylococcus (SCN) (45% of cultures), gram-negative rods (25% of cultures), and Staphylococcus aureus (24% of cultures). Pseudomonas aeruginosa was isolated in 9% of cultures. When comparing the 2 patient groups, we did not find consistent trends in the differences in the prevalence of these isolates. Antimicrobial resistance for SCN ( $P = .01$ ) and S aureus ( $P < .001$ ) was greater in the revision surgery. Overall, 62% of patients were found to have at least 1 isolate with decreased antibiotic sensitivity. **CONCLUSION:** The most prevalent microorganisms in patients with CRS are SCN, S aureus, and gram-negative rods. Perhaps more importantly, the antimicrobial sensitivities of these microorganisms appear to be a growing problem.

These findings suggest increased antimicrobial resistance in patients undergoing revision ESS when compared with patients undergoing surgery for the first time.

**Grommets in otitis media with effusion: an individual patient data meta-analysis.** Rovers, M., M., Black, N., Browning, G., G., Maw, R., Zielhuis, G. A., Haggard, M., P. Julius Center for Health Sciences and Primary Care and Department of Pediatrics, University Medical Center Utrecht, Netherlands, mrovers@umcutrecht.nl. *Archives of disease in childhood* (2005) May, Vol. 90, pp. 480-5, ISSN: 1468-2044.

**AIMS:** To identify subgroups of children with otitis media with effusion (OME) that might benefit more than others from treatment with ventilation tubes. **METHODS:** An individual patient data (IPD) meta-analysis on seven randomised controlled trials ( $n = 1234$  children in all), focusing on interactions between treatment and baseline characteristics-hearing level (HL), history of acute otitis media, common colds, attending day-care, gender, age, socioeconomic status, siblings, season, passive smoking, and history of breast feeding. Outcome measures that could be studied were mean time spent with effusion ( $n = 557$ ), mean hearing levels

( $n = 557$  in studies that randomised children, and  $n = 180$  in studies that randomised ears), and language development ( $n = 381$ ). **RESULTS:** In the trials that treated both ears the only significant interaction was between day-care and surgery, occurring where mean hearing level was the outcome measure. None of the other baseline variables showed an interaction effect with treatment that would justify subgrouping. In the trials that treated only one ear, the baseline hearing level showed a significant but not pervasive interaction with treatment-that is, only with a cut-off of 25 dB HL. **CONCLUSIONS:** The effects of conventional ventilation tubes in children studied so far are small and limited in duration. Observation (watchful waiting) therefore seems to be an adequate management strategy for most children with OME. Ventilation tubes might be used in young children that grow up in an environment with a high infection load (for example, children attending day-care), or in older children with a hearing level of 25 dB HL or greater in both ears persisting for at least 12 weeks.

**Heritability of recurrent tonsillitis.** Kvestad, E., Kvaerner, K., J., Roeysemb, E., Tambs, K., Harris, J., R., Magnus, P. Division of Epidemiology, Norwegian Institute of Public Health, Oslo, Norway, ellen.kvestad@fhi.no. *Archives of otolaryngology-head & neck surgery* (2005) May, Vol. 131, pp. 383-7, ISSN: 0886-4470.

**OBJECTIVE:** To estimate the relative contribution of genetic and environmental effects on the variance in the liability of recurrent tonsillitis. **DESIGN:** Retrospective questionnaire data from a population-based cohort. **SETTING:** Population-based data from Norway. **PARTICIPANTS:** A total of 9479 Norwegian twins born between January 1, 1967, and December 31, 1979, identified through the Medical Birth Registry of Norway. **MAIN OUTCOME MEASURE:** Recurrent tonsillitis. **RESULTS:** The lifetime prevalence of recurrent tonsillitis was 11.7% (95% CI, 11.0%–12.3%), with a significant predominance of female cases. The tetrachoric correlations for monozygotic twins were 0.71 for males and 0.60 for females. For dizygotic twins, the correlations were 0.12 for males, 0.14 for females, and 0.24 for dizygotic pairs of opposite sex. Structural equation modeling indicated that genetic effects explained 62% of the variation in the liability of recurrent tonsillitis. The remaining variance was attributed to individual environmental effects. There was no evidence of sex-specific genetic effects on the liability of recurrent tonsillitis. **CONCLUSION:** There is evidence for a substantial genetic predisposition for recurrent tonsillitis.

**Asymmetry of the vocal folds in patients with vocal fold immobility.** Oyamada, Y., Yumoto, E., Nakano, K., Goto, H. Department of Otolaryngology-Head and Neck Surgery, Graduate School of Medicine, Kumamoto University, Kumamoto, Japan. *Archives of otolaryngology-head & neck surgery* (2005) May, Vol. 131, pp. 399-406, ISSN: 0886-4470.

**OBJECTIVES:** To measure the vocal fold length (VFL) during inspiration and phonation and to determine the vertical difference of the vocal folds during phonation in patients with unilateral vocal fold immobility. **DESIGN:** Prospective study. **SETTING:** University hospital. **PATIENTS:** Thirty patients with unilateral vocal fold immobility. **INTERVENTIONS:** Each subject was asked to sustain the vowel /a/ and, after a short rest, to inhale slowly. The region over the larynx was scanned using multislice helical computed tomography during each maneuver; 3-dimensional endoscopic, coronal, and sagittal images were produced. **MAIN OUTCOME MEASURES:** The VFLs on each side and the vertical differences between the vocal folds were calculated. **RESULTS:** The inspiratory VFL on both sides was significantly longer in men than in women. It was significantly longer on the healthy side than on the immobile side in both groups. On the healthy side, the inspiratory VFL was significantly longer than the phonatory VFL in men, but there was no significant difference in women. In contrast, on the immobile side, the phonatory VFL was significantly longer than the inspiratory VFL in women, but there was no significant difference in men. The VFLs of the healthy and immobile sides varied in tandem. The immobile vocal fold was situated lower than the healthy vocal fold during phonation in 3 patients. **CONCLUSIONS:** Multislice helical computed tomography is a novel method to measure the VFL and the vertical level difference between the vocal folds. Application of this method might facilitate further understanding of laryngeal behavior in patients with unilateral vocal fold immobility.