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Abstract selection

Oral cavity and oropharyngeal tumors in human immunodeficiency virus-positive patients: acute response to radiation therapy. Kao, G. D., Devine, P., Mirza, N. Department of Radiation Oncology, Philadelphia Veterans Affairs Medical Center, PA, USA. kao@xrt.upenn.edu. *Archives of Otolaryngology– Head and Neck Surgery* (1999) August, Vol. 125 (8), p. 873–6.
BACKGROUND: The survival of patients with human immunodeficiency virus (HIV) has improved considerably with modern medical management. However, there remains surprisingly little information on treating head and neck neoplasms in HIV-positive patients OBJECTIVE: To report our recent experience treating oral cavity and oropharyngeal tumors in HIV-positive patients. DESIGN AND PATIENTS: Retrospective analysis of a cohort of 8 HIV-positive patients with Kaposi sarcoma (KS), lymphoma, or squamous carcinoma of the oral cavity or oropharynx who were consecutively treated during a single year with radiation therapy at a tertiary care referral center. Length of follow-up was at least 2 years (mean, 2.5 years). RESULTS: All patients had partial and complete responses to treatment lasting until the last follow-up. However, we found that treatment was considerably better tolerated by patients with non-KS tumors, with fewer acute reactions and significantly less weight loss, despite larger treatment volumes and higher radiation doses, compared with patients with KS. Patients with non-KS tumors received a mean radiation dose of 62.6 Gy to 2 636 cm^3, yet lost only a mean of 0.1 kg in weight, whereas patients with KS were treated with a mean radiation dose of 19 Gy to a mean volume of 568 cm^3, but lost a mean of 5.8 kg during treatment ($P = .005$) and on average sustained an additional grade of severity on a standard scale of mucosal reaction ($P = .01$). CONCLUSIONS: Oral cavity and oropharyngeal tumors in HIV-positive patients respond to radiation therapy, but there is a marked difference in the degree of acute reactions to treatment between patients with and without KS. Infection with HIV is not a contraindication when aggressive radiation therapy is needed in select patients.

Three-dimensional endoscopic images of vocal fold paralysis by computed tomography. Yumoto, E., Sanuki, T., Hyodo, M. Department of Otolaryngology – Head and Neck Surgery, Kumamoto University School of Medicine, Japan. yumoto@g-po.u.ac.jp. *Archives of Otolaryngology – Head and Neck Surgery* (1999) August, Vol. 125 (8), p. 883–90.
OBJECTIVE: To describe characteristics of 3-dimensional (3-D) computed tomographic (CT) endoscopic images of the laryngx in unilateral vocal fold paralysis and the changes of the paralyzed vocal fold after phonosurgery as indicated by 3-D CT endoscopy. SETTING: A university medical center. PATIENTS: Twelve consecutive patients with unilateral vocal fold paralysis who underwent helical CT examination. Five of them underwent the CT examination before and after phonosurgical treatment. INTERVENTIONS: Three patients underwent arytenoid adduction, and 2 underwent type 1 thyroplasty. MAIN OUTCOME MEASURES: "Sagging," defined as caudal displacement of the vocal fold; and "thinning," "defined as a decrease in the vertical thickness of the vocal fold and expansion of the ventricle on the affected side, were evaluated. RESULTS: Excessive motion artifacts in one patient prevented detailed description of his 3-D images. Sagging and thinning of the vocal fold and expansion of the ventricle on the affected side were noted on 6, 11, and 8 occasions, respectively. Adduction or augmentation of the paralyzed vocal fold after phonosurgery was observed in 3-D CT endoscopic images when displayed with bony densities. CONCLUSIONS: The use of 3-D CT endoscopy enables description of 3-D characteristics of unilateral vocal fold paralysis and supplements stroboscopic findings. Furthermore, CT endoscopic images, when simultaneously displayed with bony densities, may help in evaluating the effects of phonosurgical treatment of the paralyzed vocal fold.

The recurrent laryngeal nerve related to thyroid surgery. Sturniolo, G., D'Alia, C., Tonante, A., Gagliano, E., Taranto, F., Lo-Schiavo, M. G. Istituto Di Discipline Chirurgiche Generali E Speciali, Cattedra Di Chirurgia Generale, Universita' Delgi Studi di Messina, Italy. *American Journal of Surgery* (1999) June, Vol. 177 (6), pp. 485–8.
BACKGROUND: Iatrogenic injury of inferior laryngeal nerve is one of the most serious concerns in thyroid surgery. Paralysis of vocal cords is a common sequelae of thyroidectomy. It represents a serious complication inducing, when bilateral, serious functional sequelae such as phonatory, respiratory and psychological problems that limit working capacities and social relationships of patients. We carried out an intraoperative study aimed to define anatomical relationships between the recurrent laryngeal nerve and the adjacent structures (the inferior thyroid artery in particular), intraoperative identification of which may allow prevention of iatrogenic injuries of the laryngeal nerve. METHODS: One hundred ninety-two patients (165 females, 27 males whose age was between 18 and 90 years, median age 55) who had undergone thyroidectomy in our department in the last three years. Among them, 179 patients underwent total extracapsular thyroidectomy, and of the 13 remaining, 12 were completions of thyroidectomy in patients who had previously undergone a first thyroid surgical intervention and underwent istmo-lobectomy. RESULTS: Despite a systematic intraoperative search, we identified the recurrent laryngeal nerve in 158 of 192 patients (82.3 per cent), while in the remaining 34 (17.7 per cent), the recurrent laryngeal nerve was not identified. In 122 out of the 158 patients (77.2 per cent) in whom the recurrent laryngeal nerve had been detected, the nerve was identified bilaterally: in 19 of 158 (12 per cent) only on the right side; in 17 of 158 (10.7 per cent) only on the left. Concerning the postoperative results we noticed only one case (0.5 per cent) of recurrent laryngeal nerve injury for neoplastic infiltration of its own branch, one case (0.5 per cent) of monolateral cordal hypomotility, and two cases (1.04 per cent) of bilateral cordal hypomotility with temporary disphonia, which regressed in six months of time. CONCLUSION: The results of our study may confirm that iatrogenic injury to the recurrent laryngeal nerve, or to its branches, might be better avoided by searching, identifying and exposing the nerve itself and by following its course with care. In our view, total extracapsular thyroidectomy, with systematic search for the nerve, is the best approach. We believe that deep knowledge of the thyroid region's surgical anatomy and the awareness of the extremely varying course of the recurrent laryngeal nerve and the inferior thyroid artery and their relations should be taken into account by surgeons.

Documentation of the prevalence of penicillin-resistant Streptococcus pneumoniae isolated from the middle ear and sinus fluid of children undergoing tympanocentesis or sinus lavage. Shapiro, N. L., Pransky, S. M., Martin, M., Bradley, J. S. Division of Pediatric Otolaryngology, Children's Hospital and Health Center, San Diego, California, USA. *Annals of Otology, Rhinology and Laryngology* (1999) July, Vol. 108 (7 Pt 1), pp. 629–33.
With increasing pneumococcal resistance to penicillin and other antibiotics, use of antibiotic therapy for children with upper respiratory tract infections such as otitis media and sinusitis has become difficult. Selecting an appropriate treatment regimen has become more challenging due to frequent concomitant microbial resistance to multiple antibiotics. In a prospective, nonrandomized study, we obtained middle ear and sinus aspirate specimens from all children undergoing outpatient tympanocentesis or sinus lavage for any indication at our institution over two four-week periods. One hundred fifty-four specimens were obtained. Of these, 12 grew Streptococcus pneumoniae, seven of which were resistant to penicillin. A six-month retrospective review of these patients' medical histories evaluated their antibiotic use prior to surgical

intervention. An association between penicillin resistance and recent use of two or more antibiotics in children with positive S pneumoniae cultures was confirmed, as has been documented in prior reports. Those with penicillin-resistant S pneumoniae also demonstrated a higher incidence of multidrug-resistant organisms.

Autologous and heterologous blood transfusion in head and neck cancer surgery. Moir, M. S., Samy, R. N., Hanasono, M. M., Terris, D. J. Department of Surgery, Stanford University Medical Center, Calif 94305-5328, USA. *Archives of Otolaryngology – Head and Neck Surgery* (1999) August, Vol. 125 (8), pp. 864–8.
OBJECTIVE: To determine if the use of autologous blood ameliorates the increased risk for cancer recurrence that has been associated with perioperative blood transfusion. DESIGN: Retrospective medical record review. SETTING: Tertiary care hospital. PATIENTS: One hundred sixty-five consecutive patients with stages II to IV squamous cell carcinoma of the head and neck treated surgically at a university hospital from January 1, 1989, through December 31, 1994. MAIN OUTCOME MEASURES: We evaluated the impact of perioperative autologous and heterologous blood transfusion and 10 other variables on recurrence. Univariate and multivariate analyses were used. RESULTS: Heterologous blood recipients had a 59 per cent recurrence rate, whereas those who had received autologous blood or no transfusion had recurrence rates of 33 and 35 per cent, respectively. The following four variables had a statistically significant association with recurrence by multivariate analysis: previous treatment of current malignancy ($p<0.001$); receipt of heterologous blood ($p = 0.04$); positive margin ($p = 0.04$); and notal disease ($p = 0.04$). The receipt of heterologous blood was associated with a 40 per cent increased risk for recurrence. CONCLUSION: Autologous blood products should be used during head and neck cancer surgery if possible when transfusion is necessary.

Management of sore throats in children: a cost-effectiveness analysis. Tsevat, J., Kotagal, U. R. Department of Internal Medicine, University of Cincinnati Medical Center, Ohio 45267–0535, USA. joel.tsevat@ucedu. *Archives of Pediatrics and Adolescent Medicine* (1999) July, Vol. 153 (7), pp. 681–8. Comment in: *Archives of Pediatrics and Adolescent Medicine* (1999) July, Vol. 153 (7), pp 672–4.
OBJECTIVE: To perform a cost-effectiveness analysis of treatment management strategies for children older than three years who present with signs or symptoms of pharyngitis. DESIGN: Decision model with seven strategies, including neither testing for streptococcus nor treating with antibiotics; treating empirically with penicillin V; basing treatment on results of a throat culture (Culture); and basing treatment on results of enzyme immunoassay or optical immunoassay rapid tests, performed alone or in combination with throat cultures. In these seven strategies, all tests are performed in a local reference laboratory. In a sensitivity analysis, we examined the cost-effectiveness of four strategies involving office-based testing. We obtained data on event probabilities and test characteristics from our hospital's clinical laboratory and the literature; costs for the analysis were based on resource use. RESULTS: At a baseline prevalence of 20.8 per cent for streptococcal pharyngitis, the Culture strategy was the least expensive and most effective, with an average cost of $6.85 per patient. The outcome was sensitive to the prevalence of streptococcal pharyngitis, the rheumatic fever attack rate, the cost of the enzyme immunoassay test, and the cost of culturing and reporting culture results. The Culture strategy was also preferred if amoxicillin was substituted for oral penicillin. For office-based testing, Culture was the least costly strategy, but treatment based on results of the optical immunoassay test alone had an incremental cost-effectiveness ratio of $1.6 million per additional life saved. CONCLUSION: In a setting with adherent patients, children with sore throats should generally get throat cultures in lieu of rapid streptococcus antigen tests.

Clinical findings for a group of infants and young children with auditory neuropathy. Rance, G., Beer, D. E., Cone-Wesson, B., Shepherd, R. K., Dowell, R. C., King, A. M., Rickards, F. W., Clark, G. M. Co-operative Centre for Cochlear Implant Speech and Hearing Research, Royal Victorian Eye and Ear Hospital, University of Melbourne, VIC, Australia. *Ear and Hearing* (1999) June, Vol. 20 (3), pp. 238–52.
OBJECTIVE: To examine the prevalence of auditory neuropathy in a group of infants at risk for hearing impairment and to present an overview of the clinical findings for affected children. DESIGN: Results for 20 subjects who showed repeatable cochlear microphonic potentials in the absence of click-evoked auditory brain stem responses are included in this study. Behavioural and steady state evoked potential thresholds were established in each case. Where possible, otoacoustic emission and speech perception results (unaided and aided) also were obtained. RESULTS: One in 433 (0.23 per cent) of the children in our series had evidence of auditory neuropathy. The audiometric findings for these subjects varied significantly, with behavioural thresholds ranging from normal to profound levels. Discrimination skills were also variable. Approximately half of the subjects showed little understanding, or even awareness, of speech inputs in both the unaided and aided conditions. There were, however, a number of children who could score at significant levels on speech discrimination tasks and who benefited from the provision of amplification. CONCLUSION: The results suggest that auditory neuropathy is more common in the infant population than previously suspected. The effects of neuropathy on auditory function appear to be idiosyncratic, producing significant variations in both the detection and discrimination of auditory signals. As such, the management of children with this disorder must allow for individual differences.

Squamous cell carcinoma of the nasal vestibule. Mendenhall, W. M., Stringer, S. P., Cassisi, N. J., Mendenhall, N. P. Department of Radiation Oncology, University of Florida College of Medicine, P O Box 100385, Gainesville FL 32610-0385, USA. *Head and Neck* (1999), August, Vol. 21 (5), pp. 385–93. Comment in: *Head and Neck* (1999), August, Vol. 21 (5), pp. 383–4.
BACKGROUND AND METHODS: Sixty patients were treated with radiation therapy alone (56 patients) or followed by surgery (four patients) between 1970 and 1995 for squamous cell carcinoma of the nasal vestibule. RESULTS: Local control rates at five years after irradiation alone in 56 patients were: T1-T2, 94 per cent; T4, 71 per cent; and overall, 85 per cent. Multivariate analysis revealed that tumour size and bone invasion significantly influenced local control. All four patients with extensive T4 tumours treated with radiation therapy plus surgery were cured. Cause-specific survival rates at five years for 56 patients treated with radiation therapy alone were: T1-T2, 94 per cent; T4, 86 per cent; and overall, 91 per cent. Multivariate analysis revealed that bone invasion and tumour size adversely influenced cause-specific survival. No patient treated with irradiation alone experienced a major complication, compared with three of four patients who underwent irradiation and surgery. CONCLUSIONS: Radiation therapy results in a high cure rate with good cosmesis. Patients with extensive T4 cancers have an improved chance of cure with radiation and surgery but more complications.

Smoking withdrawal and relapse in head and neck cancer patients. Gritz, E. R., Schacherer, C., Koehly, L., Nielsen, I. R., Abemayor, E. Department of Behavioural Science, Box 243, UT M.D. Anderson Cancer Center, 1515 Holcombe Boulevard, Houston, Texas 77030-4095, USA. *Head and Neck* (1999) August, Vol. 21 (5), pp. 420–7.
BACKGROUND: Smoking withdrawal and relapse were characterized among newly diagnosed head and neck cancer patients participating in a physician-delivered smoking cessation intervention. METHODS: Patients completed questionnaires at baseline, one, six and 12 months following intervention delivery. RESULTS: Significant baseline predictors of smoking relapse included medical treatment (XRT versus surgical treatment), stage of change/readiness to quit (precontemplators), age of initiation (younger), and greater addiction (smoking </=30 minutes after waking). Relapsers were significantly more likely to quit using gradual reduction versus cold turkey and had less confidence in remaining quit. Relapsers experienced significantly higher levels of anxiety and craving during withdrawal. Relapse was temporally delayed compared with healthy populations. CONCLUSION: Assistance with cessation efforts should be ongoing for one year and should include nicotine replacement therapy and psychotropic medications to address significant relapse triggers.

Techniques for improving ear definition in microtia reconstruction. Leach, J. L. Jr., Jordan, J. A., Brown, K. R., Biavati, M. J. Department of Otolaryngology, University of Texas Southwestern Medical Center, Dallas 75235-9035, USA. *International Journal of Pediatric Otorhinolaryngology* (1999) April 25, Vol. 48 (1), pp. 39–46.
Surgeons involved in microtia repair recognize the difficulty in creating a natural appearing ear. One key to successful reconstruction is to provide sufficient relief between the helix, scaphoid fossa and antihelix to create the illusion of thin skin overlying thin cartilage. Problems such as thick skin, hair-bearing skin and poor-quality cartilage serve to frustrate the surgeons attempt to achieve the desired result. Surgical techniques to improve cartilaginous framework definition in microtia repair are discussed.

Central deafness in a young child with Moyamoya disease: paternal linkage in a Caucasian family: two case reports and a review of the literature. *International Journal of Pediatric Otorhinolaryngology* (1999) April 25, Vol. 48 (1), pp. 53–76.
A case of 'central deafness' is presented in a three-year-old male Caucasian child with Moyamoya disease (MMD); a rare, progressive and occlusive cerebrovascular disorder predominantly affecting the carotid artery system. Documentation of normal peripheral auditory function and brainstem pathway integrity is provided by acoustic admittance, otoacoustic emission and brainstem auditory evoked potential measurements. The lack of behavioral response to sound, and absent middle and long latency auditory evoked potentials suggest thalamo-cortical dysfunction. Magnetic resonance imaging showed diffuse ischemic damage in subcortical white matter including areas of the temporal lobes. In addition, there were multiple and focal cortical infarctions in both cerebral hemispheres, focused primarily in the frontal, parietal and temporal areas. Taken together, these structural and functional abnormalities in addition to severely delayed speech and language development are consistent with the diagnosis of central deafness and suggest a disconnection between higher brainstem and cortical auditory areas. The child's father also has MMD, but was diagnosed only recently. The presence of paternal linkage is informative since it rules out X-linked recessive and maternal inheritance. To our knowledge, this represents the first documented case of paternal linkage in MMD with central deafness in a Caucasian child with no apparent Japanese ancestry. Herein, we focus on central auditory dysfunction and consider how lesion-induced changes have contributed to a deficit in basic auditory responsiveness, including a severe disturbance in receptive and expressive auditory-based speech and language skills.

Otoacoustic emission criteria for neonatal hearing screening. Smyth, V., McPherson, B., Kei, J., Young, J., Tudehope D., Maurer, M., Rankin, G. Department of Speech Pathology and Audiology, The University of Queensland, Brisbane, Australia. *International Journal of Pediatric Otorhinolaryngology* (1999), April 25, Vol. 48 (1), pp. 9–15.
Transient evoked otoacoustic emission measures are gaining acceptance as a technique in new-born hearing screening. At present a wide variety of pass-fail screening criteria are used in otoacoustic emission screening programs. In a study of 100 special care neonates and 35 well, full term babies, a number of screening criteria were examined for sensitivity and specificity characteristics when compared to a standard auditory brainstem response protocol. Results indicate that, for normal and special care neonates with a gestational age at test of 38–41 weeks, high sensitivity (>80 per cent) could be obtained when a pass-fail criterion involving analysis of emission reproducibility, or emission reproducibility and emission response level, was set. Sensitivity was reduced for special care neonates who fell outside this age range. Specificity was found to be relatively low overall (always < 65 per cent) and may relate to clinical factors in special care neonates not investigated in this study.

Quality of life in nasal polyposis. Radenne, F., Lamblin, C., Vandezande, L. M., Tillie-Leblond, I., Darras, J., Tonnel, A. B., Wallaert, B. Service de Pneumologie et Immuno-Allergologie, Clinique des Maladies Respiratoires, Hopital Albert Calmette CH et U de Lille, INSERM U 416, France. *Journal of Allergy and Clinical Immunology* (1999) July, Vol. 104 (1), pp. 79–84.
BACKGROUND: Nasal polyposis (NP) is a frequent inflammatory chronic disease of the upper respiratory tract, which may impair quality of life (QOL). The NP impact, which is frequently associated with lower respiratory disorders, has never before been studied. OBJECTIVE: We initiated this prospective study to establish internal validity and reliability of the generic SF-36 questionnaire in NP and to determine to what level daily functioning becomes impaired as a result of NP. METHODS: Forty-nine consecutive patients with NP were included. They were assessed for the severity of nasal symptoms and underwent pulmonary function tests. The QOL profiles in patients with NP were compared with those of patients with perennial rhinitis ($n = 111$) and healthy subjects ($n = 116$). RESULTS: Cronbach's coefficient alpha demonstrated the high reliability and validity of the SF-36 questionnaire for patients with NP (alpha = 0.89). NP impaired QOL more than perennial allergic rhinitis ($p<0.05$). The impairment of QOL was greater when NP was associated with asthma ($p<0.05$). SF-36 scores appeared highly correlated to pulmonary function (FEV1, maximal midexpiratory flow, forced vital capacity), suggesting relationships between QOL in NP and associated bronchial obstruction. Severity of nasal symptoms were not related to QOL scales. In addition, sequential evaluations of QOL, nasal symptoms, and pulmonary function were performed 10 months after the first evaluation in 28 patients with NP. These evaluations demonstrated that NP treatment either with nasal steroids or endonasal ethmoidectomy significantly improved both nasal symptoms and QOL without significant change of pulmonary function. CONCLUSION: Our study clearly demonstrated that the SF-36 questionnaire presented a high internal validity and reliability in patients with NP. NP impaired QOL to a greater degree than perennial allergic rhinitis. QOL improvement after NP treatment is related to nasal symptoms improvement.

Neuromechanical interaction in human snoring and upper airway obstruction. Huang, L., Williams, J. E. Department of Mechanical Engineering, The Hong Kong Polytechnic University, Hunghom, Kowloon, Hong Kong. mmlhuang@polyu.edu.hk. *Journal of Applied Physiology* (1999) June, Vol. 86 (6), pp. 1759–63.
The fact that snoring and obstructive apnea only occur during sleep means that effective neuromuscular functioning of the upper airway during sleep is vital for the maintenance of unimpeded breathing. Recent clinical studies in humans have obtained evidence demonstrating that upper airway neural receptors sense the negative pressure generated by inspiration and 'trigger', with a certain delay, reflex muscle activation to sustain the airway that might otherwise collapse. These findings have enabled us to propose a model in which the mechanics is coupled to the neuromuscular physiology through the generation of reflex wall stiffening proportional to the retarded fluid pressure. Preliminary results on this model exhibit three kinds of behaviour typical of unimpeded breathing, snoring, and obstructive sleep apnoea, respectively. We suggest that the increased latency of the reflex muscle activation in sleep, together with the reduced strength of the reflex, have important clinical consequences.

Epiphyseal, vertebral, and ear (EVE) dysplasia: a new syndrome? Amiel, J., Cormier-Daire, V., Journeau, P., Mussat, P., Munnich, A., Lyonnet, S. Departement de Genetique, Hopital Necker-Enfants Malades, Paris, France. *Journal of Medical Genetics* (1999) July, Vol. 36 (7), pp. 561–4.
We report on the association of epiphyseal, vertebral, and ear dysplasia in two sisters with normal stature and psychomotor development born to distantly related, healthy parents. This distinctive association has not been reported previously and is likely to represent a new condition with an autosomal recessive mode of inheritance. For this syndrome, we propose the acronym EVE standing for epiphyseal, vertebral, and ear dysplasia.

The use of botulinum toxin for the treatment of temporomandibular disorders: preliminary findings. Freund, B., Schwartz, M., Symington, J. M. Faculty of Dentistry, University of Toronto, Ontario, Canada. brian@max.facial.com. *Journal of Oral and Maxillofacial Surgery* (1999) August, Vol. 57 (8), pp. 916–20.
PURPOSE: The aim of this study was to evaluate the response of patients with temporomandibular disorders to Botulinum toxin A (BTX-A) therapy. METHODS: The 15 subjects enroled in this uncontrolled study were diagnostically categorized and treated with 150 units of BTX-A. Both masseter muscles received 50 units each under electromyographic (EMG) guidance. Similarly, both temporalis muscles were injected with 25 units each. Subjects were

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assessed at two week intervals for eight weeks. Outcome measures included subjective pain by visual analog scale (VAS), measurement of bite force, interincisal opening, tenderness to palpation, and a functional index based on multiple VAS. RESULTS: All mean outcome measures, with the exception of bite force, showed a significant ($p = 0.05$) difference between the preinjection assessment and the four follow-up assessments. No side effects were reported. CONCLUSIONS: BTX-A injections produced a statistically significant improvement in four of five measured outcomes, specifically pain, function, mouth opening, and tenderness. No statistically significant changes were found in mean maximum voluntary contraction or in paired correlation of factors such as age, sex, diagnosis, depression index, or time of onset.

The relationship between chronic facial pain and a history of trauma and surgery. Plesh, O., Gansky, S. A., Curtis, D. A., Pogrel, M. A. Department of Restorative Dentistry, School of Dentistry, University of California, San Francisco 94143-0758, USA. *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology and Endodontics* (1999) July, Vol. 88 (1), pp. 16–21.
OBJECTIVE: Because pain is the most commonly reported symptom of patients presenting to temporomandibular disorders clinics, it is important to identify factors that modify the perception or reality of such pain. The purpose of this study was to investigate the hypothesis that a patient with a history of trauma and/or non-temporomandibular joint surgery might be sensitized to pain and might report increased pain levels if a temporomandibular disorder later developed. STUDY DESIGN: This was a retrospective study of 778 consecutive patients seen over a one year period in an Orofacial Pain Clinic. Study parameters included gender, lifetime number of self-reported traumas, lifetime number of non-temporomandibular joint operations, and location, intensity, frequency, and type of temporomandibular disorder-related pain. RESULTS: There were significantly more women than men in the study (609 to 169). There was no relationship between numbers of previous traumas and non-temporomandibular joint operations and types of temporomandibular disorder. However, there were statistically significant relationships between the severity of facial pain and the frequency of facial pain as well as between the severity and frequency of joint pain and the number of traumas. There were also statistically significant associations between the severity and frequency of facial pain and the number of non-temporomandibular joint-related surgical procedures that the patient had undergone. CONCLUSIONS: There is a relationship between a patient's reported history of trauma and/or non-temporomandibular joint-related operations and the severity and frequency of facial and temporomandibular joint pain, should it develop. It is possible that such traumas and operations sensitize the patient in such a way that the pain of subsequent temporomandibular joint disorders is heightened.

Cerebellar encephalomalacia on magnetic resonance imaging after removal of acoustic tumour. Bordure, P., O'Donoghue, G. M., Jaspan, T., Denunzio, M. Service d'Oto-rhino-laryngologie, Hotel-Dieu, CHRU de Nantes, France. *Otolaryngology – Head and Neck Surgery* (1999) July, Vol. 121 (1), pp. 144–9.
MRI is widely used for postoperative surveillance of patients undergoing surgery for removal of acoustic neuroma. The purpose of this study was to investigate the frequency and pattern of postoperative changes in the cerebellum and brain stem on MRI after removal of acoustic neuroma. A retrospective study was conducted in 30 consecutive patients who underwent postoperative MRI between 1994 and 1995. The timing of the scans after surgery ranged from 12 months to 10 years. T2-weighted turbo spin-echo images revealed cerebellar encephalomalacia in 17 of 30 cases. Cerebellar encephalomalacia was found more consistently in patients who had large tumours and was more frequent after the suboccipital approach. Encephalomalacia is largely caused by gliotic changes in the adjacent cerebellar tissues after tumour removal.

Minimally invasive surgery for posterior glottic stenosis. Rovo, L., Jori, J., Brzozka, M., Czigner, J. Department of Otorhinolaryngology, Albert Szent-Gyorgyi Medical University, Szeged, Hungary. *Otolaryngology– Head and Neck Surgery* (1999) July, Vol. 121 (1), pp. 153–6.
Posterior glottic stenosis most commonly results from prolonged endotracheal intubation. The tube causes decubitis and perichondritis with a consequent scar tissue formation in the posterior commissure that often limits the abduction of the vocal cords. Many different surgical methods are known for the treatment, but in most cases temporary tracheostomy is required. We recommend a minimally invasive method to avoid tracheostomy, which is a very inconvenient state for the patient. The scar of the posterior commissure is excised endoscopically with the CO^2 laser, and a modification of the endoextralaryngeal vocal cord laterofixation described by Lichtenberger is used to lateralize one or both vocal cords until the posterior commissure is completely reepithelialized. In this article we report on the first five cases. All patients had satisfactory airways immediately after the laterofixation procedure, which proved to be stable later on as well. In the cases of moderate stenosis, further scarring was prevented, and after the healing of the mucosa in the posterior glottic area, the laterofixation sutures were removed. The vocal cord mobility was recovered in the cases in which the cricoarytenoid joint was not fixed. In one case of severe stenosis (bilateral cricoarytenoid joint fixation), the procedure yielded only partial improvement.

Why the prone position is a risk factor for sudden infant death syndrome. Jeffery, H. E., Megevand, A., Page, H. D. Department of Neonatal Medicine, Royal Prince Alfred Hospital, Camperdown, Australia. hjeffery@med.usyd.edu.au. *Pediatrics* (1999) August, Vol. 104 (2 Pt 1), pp: 263–9.
INTRODUCTION: The laryngeal chemoreflex may explain why prone sleeping increases the risk of sudden infant death syndrome (SIDS). Swallowing and arousal are crucial to prevent laryngeal chemoreflex stimulation. Our aim was to examine these reflexes and breathing responses in healthy neonates after pharyngeal infusion of water in the supine versus the prone position, controlling for sleep state. METHODS: A total of 10 term infants were recruited after parental consent and ethics approval. Polygraphic recordings included sleep state (active and quiet sleep by electroencephalogram, eye movements, breathing, and behaviour), cardiorespiratory measurements (nasal airflow, chest wall movements, heart rate, and oxygen saturation), swallowing, and esophageal activity (solid state pressure catheter). Initial sleeping position was assigned randomly. Measurements were made for 1 minute before and after 0.4 ml of water was instilled into the oropharynx. To detect a 30 per cent decrease in swallowing, power analysis indicated that >/= 10 babies were required. Analysis, blinded to position, was made using nonparametric statistics. RESULTS: Of the 164 infusions, the most commonly evoked airway protective responses to pharyngeal infusion were swallowing (95 per cent) and arousal (54 per cent). After infusion in active sleep, there was a significant reduction in swallowing and breathing when the prone position was compared with the supine position (prone: 21.3 (1.0) swallows/min and −9.6 (2.1) breaths/min; and supine: 32 (2.2) and −2.9 (1.5), respectively). However, there was no difference in the occurrence of arousal after water infusion. CONCLUSION: These data suggest that airway protection is compromised in the prone sleeping position during active sleep, even in healthy infants exposed to minute pharyngeal fluid volumes of 0.4 ml. This is because swallowing rate is reduced significantly, and there is no compensatory increase in arousal. The reduction in airway protective reflexes when in the prone position and in active sleep may be the mechanism for the increased risk of SIDS in the prone position.

Maternal cigarette smoking during pregnancy is an independent predictor for symptoms of middle ear disease at five years' postdelivery. Stathis, S. L., O'Callaghan, D. M., Williams, G. M., Najman, J. M., Andersen, M. J., Bor, W. Child Developmental and Rehabilitation Services, Mater Children's Hospital, South Brisbane, Australia. *Pediatrics* (1999) August, Vol. 104 (2), pp. 16.
Although an increasing body of literature has demonstrated a link between in utero exposure to cigarette smoke and childhood morbidity, the extent to which such exposure is associated with middle ear disease (MED) is less certain. We hypothesized that in utero exposure to cigarette smoke was associated with an increased risk of MED and aimed to calculate the proportion of disease at five years' postdelivery attributable to cigarette exposure during pregnancy. METHODS: at their first antenatal session, 8556 women were enrolled in a prospective study of pregnancy. Mothers were followed during pregnancy, at birth, at six months' and at five years' postdelivery and completed a

detailed questionnaire aimed at assessing the frequency of acute (<one month) and subacute (one to three months) symptoms of MED and ear surgery. The relationship between MED and smoking status during pregnancy was then examined and subsequently adjusted simultaneously for smoking status at other times and for other potentially confounding variables. RESULTS. In the adjusted analyses, acute ear infections were associated with consumption of one to nine cigarettes (OR: 1.6; 95 per cent CI: 1.1–2.5), 10 to 19 cigarettes (OR: 2.6; 95 per cent CI: 1.6–4.2) and 20+ cigarettes (OR: 3.3; 95 per cent CI: 1.9–5.9) per day at the first clinic visit. In utero exposure to 20+ cigarettes per day at the first clinic visit was also associated with an increased risk of ear surgery by five years' postdelivery (OR: 2.9; 95 per cent CI: 1.3–6.6). These associations were independent of smoking at six months and at five years, age and gender of the child, breastfeeding history, maternal age, maternal education, maternal employment at five years, marital status at five years, socioeconomic status, use of day care, and the number of siblings or children in the household. A population attributable risk percent at five years of 39.4 per cent for acute ear infections, 37 .9 per cent for subacute ear infections, and 30 per cent for previous ear surgery was found for in utero exposure to cigarette smoke at the first clinic visit. CONCLUSIONS. Smoking at the first clinic visit was associated with an increased risk of MED and ear surgery at five years of age. The frequency of maternal smoking in the general population gives rise to a high population attributable risk percent for MED. Therefore, it is a significant contributor to childhood morbidity and provides another reason why women should be encouraged to avoid smoking during pregnancy.

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