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Abstract Selection

Influence of prior radiotherapy on the development of postoperative complications and success of free tissue transfers in head and neck cancer reconstruction. Bengtson, B. P., Schusterman, M. A., Baldwin, B. J., Miller, M. J., Reece, G. P., Kroll, S. S., Robb, G. L., Goepfert, H. Department of Reconstructive and Plastic Surgery, University of Texas M. D. Anderson Cancer Center, Houston 77030. *American Journal of Surgery* (1993) October, Vol. 166 (4), pp. 326–30.

The purpose of this study was to determine whether prior radiotherapy had any effect on the development of postoperative complications in patients undergoing microvascular tissue transfers for reconstruction of head and neck cancer. A prospective database was used to review 354 consecutive patients who had a total of 368 free tissue transfers limited to the head and neck during the four-year period from July 1988 to June 1992. Postoperative complications in 167 patients who received preoperative radiotherapy (XRT) were compared with those of 187 patients who did not undergo radiotherapy preoperatively (NR). No statistical differences in complications or flap loss between the two groups were noted using the χ^2 test or Fisher's exact test ($P<0.2$). Total flap loss occurred in 5.3 per cent of the XRT group (9 of 169) and 5 per cent of the NR patient group (10 of 199), and partial flap loss occurred in 4.1 per cent of the irradiated patients and 2.5 per cent of the nonirradiated patients. Major wound complications requiring additional surgery occurred in 16 per cent of the XRT group and 11 per cent of the NR group. Minor wound complications that did not require further surgery occurred in 21 per cent of the irradiated patients and 18 per cent of the nonirradiated patients. No significant difference in the timing or dose of preoperative radiation, previous neck dissection, or anastomotic type could be documented in failed versus successful flaps (two-tailed t-test, $P>0.80$, and χ^2, $P>0.2$). Our results show that, in a large group of cancer patients undergoing free tissue transfers to the head and neck, prior radiotherapy or surgery did not predispose them to a higher rate of acute flap loss or wound complications than their nonirradiated cohorts. Author.

Contribution of serum inhibitory factors and immune cellular defects to the depressed cell-mediated immunity in patients with head and neck cancer. Wanebo, H. J., Blackinton, D., Kouttab, N., Mehta, S. Department of Surgery, Roger Williams Medical Center, Providence, Rhode Island 02825. *American Journal of Surgery* (1993) October, Vol. 166 (4), pp. 389–94.

The immune system of patients with head and neck cancer is frequently depressed. Serum inhibitory factors and immune cell dysfunction are known contributors to this depression, but their relative roles are unclear. We have examined these factors to determine whether a common pathway is involved. Is the defect an unresponding 'switched-off cell' or is it a remedial defect responsive to the removal of serum inhibitory factors and/or to lymphokine restoration? Immune tests were performed in 66 patients with high-stage head and neck cancer. Serum inhibitory factors were measured by incubation of heat-inactivated serum (10%) with phytohemagglutinin (PHA)-stimulated lymphocytes or natural killer (NK) cells using the K562 assay. Lymphokine-activated killer (LAK) cell cytotoxicity was measured (in the presence/absence of serum) using chromium 51-labelled Raji tumour cells cultured five days with interleukin-2 (IL-2) (100 or 1,000 U/ml) and/or interferon-alpha (INF-alpha) (100 U/ml). IL-2 receptors, CD25 or p55 (low affinity) and p75 (high affinity), were measured by flow cytometry through fluorescence-activated cell sorter analysis. Serum inhibitory factors were detected in more than 50 per cent of the patients. Head and neck cancer sera significantly inhibiting the normal lymphocyte response to PHA (11 of 22 patients), as well as significantly inhibiting the NK response of normal lymphocytes and the functional expression of the IL-2 receptor. LAK cell function at low-dose IL-2 was depressed in 45 per cent of the patients (9 of 20) and was restored by increased IL-2 (1,000 U/ml) or a combination of IL-2 and INF-alpha. Twenty-five per cent of the patients were unresponsive to maximum lymphokine stimulation. Half of the patients had depressed expression of the low-affinity IL-2 receptor (CD25). The cause of immune depression in patients with head and neck cancer is multifactorial and is related to serum inhibitory factors, as well as the inherent cellular defects. Based on these data, we would suggest a therapeutic approach in selected patients that includes the removal of serum inhibitory factors by plasmapheresis and restoration of cellular defects by combined IL-2 with or without INF-alpha. Author.

Posterior triangle metastases of squamous cell carcinoma of the upper aerodigestive tract. Davidson, B. J., Kulkarny, V., Delacure, M. D., Shah, J. P. Head and Neck Service, Memorial Sloan-Kettering Cancer Center, New York, New York. *American Journal of Surgery* (1993) October, Vol. 166 (4), pp. 395–8.

The trend toward function-conserving surgery in the treatment of squamous cell carcinoma of the head and neck has led to a progression from radical neck dissection to modified neck dissection and selective neck dissection has growing support. These surgical modifications have resulted from an effort to spare structures uninvolved with malignancy. Level V dissection can be associated with spinal accessory dysfunction in some patients even when the nerve remains intact. In this study, we have attempted to address the need for level V dissection by determining the prevalence of level V metastases in a large series of patients undergoing radical neck dissection. There were 1,123 patients who underwent 1,277 neck dissections between 1965 and 1986. A review of pathologic and clinical records revealed 40 patients (three per cent) with positive nodes at level V. The prevalence of level V metastases was greatest with hypopharynx and oropharynx primary tumours (seven and six per cent, respectively). Level V metastases were found in one per cent of patients with oral cancers and two per cent of those with larynx cancers. Groups were divided into N0 (282), N+ (719), and subsequent N+ (276), depending on the clinical status at the time of surgery. Thirty-seven of 40 patients with posterior triangle metastases were clinically N+. The prevalence of metastases at level V was one per cent for N0, five per cent for N+, and 0 per cent for subsequent N+. This large series shows minimal involvement of metastases at level V. The low likelihood of metastases at level V, even in N+ disease, should be considered when performing lymphadenectomy for squamous cell carcinoma of the upper aerodigestive tract. Author.

Face and neck neurogenic neoplasms. Katz, A. D., McAlpin, C. Department of Surgery, Cedars-Sinai Medical Center, Los Angeles, California. *American Journal of Surgery* (1993) October, Vol. 166 (4), pp. 421–3.

Surgeons should be aware that any mass in the region of the cranial nerves, brachial plexus, cervical sympathetic plexus, or a major peripheral nerve can be of neurogenic origin. Solitary neurogenic tumours of the head and neck can simulate metastatic masses or congenital lesions. If they are resected unrecognized and/or without regard to their nerve origin, major and permanent nerve defects can unnecessarily occur. Thirty-two patients, 16 males and 16 females, ranging in age from five to 69 years, had 33 extracranial solitary neurogenic neoplasms resected. The nerves involved were the cervical sympathetic plexus in seven patients, branchial plexus in six, spinal accessory nerve in five, vagus nerve in four, hypoglossal nerve in three, facial nerve in two, and six other nerves in one patient each. The technique is to dissect out the neurilemoma without destroying the nerve sheath or nerve trunk. Despite careful dissection, the four patients with masses of the vagus nerve had permanent ipsilateral cord paralysis. Author.

Composite resection with mandibulectomy in the treatment of posterolateral oral cavity and lateral oropharynx squamous cell carcinoma. Lefebvre, J. L., Vankemmel, B., Prevost, B., Buisset, E., Coche-Dequeant, B., Van J. T., Oszustowicz, T. Department of Head and Neck Surgery, Centre Oscar Lambret, Lille, France. *American Journal of Surgery* (1993) October, Vol. 166 (4), pp. 435–9.
From 1972 to 1987, 403 patients underwent a composite resection consisting of segmental mandibulectomy and neck dissection for the treatment of bucco-pharynx squamous cell carcinoma (303 patients had postoperative radiotherapy (XRT), 29 patients had preoperative XRT, and 100 patients had tissue salvage performed after XRT). Of the 303 patients who received preoperative XRT, 32 were clinically staged T_2, 149 were staged T_3, and 122 were staged T_4; 194 of the 303 patients were staged N_0. In the 100 patients who experienced relapse and who required 'salvage surgery', the restaging found 20 patients staged T_2, 39 staged T_3, and 41 staged T_4; 73 of the 100 patients were staged N_0. The patients' mean postoperative stay was 15 days for those who had prior surgery and 21 days for those who had salvage surgery. With a minimum follow-up of five years, loco-regional recurrences and postoperative death occurred in 86 of 274 patients (31 per cent) in whom surgery and postoperative XRT were performed; in 17 of 29 patients (59 per cent) who had preoperative XRT performed; and in 61 of 100 patients (61 per cent) who had salvage surgery performed. In addition, in terms of functional results, only 61 per cent of patients (206) were able to maintain normal speech function, and only 23 per cent (91) were able to maintain normal oral feeding. Of the 403 patients, the five-year survival rates were 33 per cent for the overall population, 42 per cent for patients with postoperative XRT, 16 per cent for patients in whom operation was performed after preoperative XRT, and 17 per cent for patients who underwent salvage surgery. Author.

Comparison of airway resistance and total respiratory system resistance in infants. Springer, C., Vilozni, D., Bar- Yishay, E., Avital, A., Noviski, N., Godfrey, S. Institute of Pulmonology, Hadassah University Hospital, Jerusalem, Israel. *American Review of Respiratory Diseases.* (1993) October, Vol. 148 (4 Pt. 1), pp. 1008–12.
Airway resistance (Raw) can be measured throughout the respiratory cycle by whole body plethysmography. Total resistance of the respiratory system (Rrs) can be measured from the relaxed expiration that follows end inspiratory occlusion. The purpose of this study was to compare the two methods in normal infants and in infants with airway obstruction of different types and severity. Fifteen infants with essentially normal lungs aged 24.6 ± 18.0 (SD) wk, nine infants with congenital stridor aged 36.0 ± 17.3 wk, and eleven wheezy infants aged 20.1 ± 11.3 wk had simultaneous measurements of Raw and Rrs. Rrs was similar to Raw both during inspiration and expiration in the normal infants, to all expiratory Raw in those with congenital stridor, and to all respiratory and early expiratory Raw in the wheezy infants. Raw was markedly and significantly higher than Rrs during mid and late inspiration in infants with congenital stridor and during late expiration in the wheezy infants. We conclude that Rrs is a good estimate of Raw in normal infants and of early expiratory Raw in all infants. In infants with airway obstruction, Rrs does not reveal the dynamic changes in Raw during tidal breathing, nor can it differentiate between infants with upper and lower airway obstruction. Author.

The distance between the grille of the laryngeal mask airway and the vocal cords. Is conventional intubation through the laryngeal mask safe? Asai, T., Latto, I. P., Vaughan, R. S. Department of Anaesthetics, University of Wales College of Medicine, Heath Park, Cardiff. *Anaesthesia* (1993) August, Vol. 48 (8), pp. 667–9.
The distance between the grille of the laryngeal mask airway and the vocal cords was measured with a fibreoptic bronchoscope in 30 male and 30 female patients. The mean distance was 3.6 cm (SD 0.5 cm; range 2.5–4.7 cm) in males and 3.1 cm (SD 0.5 cm; range 2.0–4.2 cm) in females. These results suggest that the cuff of an uncut 6.0 mm tracheal tube would often lie between the vocal cords when the tube is fully inserted through a laryngeal mask airway. To avoid this complication, the tracheal tube must protrude more than 9.5 cm beyond the grille of the laryngeal mask airway. When either neck extension or flexion is required, the laryngeal mask airway should be removed as the margin of safety is small. Author.

Local hyperthermia and nasal irrigation for perennial allergic rhinitis: effect on symptoms and nasal airflow. Georgitis, J. W. Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, North Carolina. *Annals of Allergy* (1993) October, Vol. 71 (4), pp. 385–9.
Local hyperthermia or inhalation of heated water vapor is often recommended as a home remedy for various nasal disorders such as the common cold and allergic rhinitis. With technical advances in vapor generation, water can be heated to a range of 41°C to 43°C with variation in particle size. The effect of inhaled heated vapour treatments was studied in patients with perennial rhinitis for changes in nasal airflow and patient perception of symptoms. Thirty symptomatic patients underwent three treatments at weekly intervals: (1) a large particle heated water vapour at 43°C for 20 minutes with a particle size of 4 to 8 microns, (2) a molecular water vapour at 41°C for 20 minutes which is a vapour phase, and (3) nasal irrigation. Nasal airflow increased after both vapour treatments at four and six hours ($P<0.05$) whereas airflow decreased after simple nasal irrigation treatment. Rhinitis symptoms improved after vapour treatments but not with nasal irrigation. Patients preferred the molecular water vapour treatment over the large particle vapour treatment and nasal irrigation by 2:1 margin. This study demonstrated the usefulness of heated vapour treatments in improving rhinitis symptoms and nasal airflow. Author.

Efficacy of volatile organic compounds in evoking nasal pungency and odour. Cometto-Muniz, J. E., Cain, W. S. Yale University, New Haven, Connecticut. *Archives of Environmental Health* (1993) September to October, Vol. 48 (5), pp. 309–14.
Sensory irritation (pungency) figures prominently among the symptoms associated with polluted indoor environments. In order to separate the pungent from the olfactory response, we measured nasal pungency thresholds in subjects lacking olfaction (anosmics) and odour thresholds in normal controls (normosmics) for a homologous series of ketones and for selected secondary and tertiary alcohols and acetates. As seen previously for homologous alcohols and acetates, both types of nasal thresholds decreased with increasing carbon chain length. Pungency thresholds decreased exponentially with chain length. With respect to all nonreactive chemicals studied so far, threshold nasal pungency is achieved at a fairly constant percentage of vapour saturation, irrespective of molecular size or chemical functional group. Such a relationship does not hold for odour thresholds. The outcome for pungency implies an important role for a physical, rather than chemical, interaction with nasal mucosa. Author.

A randomized trial of nortriptyline for severe chronic tinnitus. Effects on depression, disability, and tinnitus symptoms. Sullivan, M., Katon, W., Russo, J., Dobie, R., Sakai, C. Department of Psychiatry and Behavioural Sciences, University of Washington Medical School, Seattle. *Archives of Internal Medicine* (1993) October 11, Vol. 153 (19), pp. 2251–9.
OBJECTIVE: To determine whether the antidepressant, nortriptyline, is effective for treatment of depression, tinnitus-related disability, and tinnitus symptoms in patients with severe chronic tinnitus. DESIGN: A 12-week, double-blind, randomized controlled trial. SETTING: A university otolaryngology clinic. PATIENTS: Ninety-two subjects with severe chronic tinnitus: 38 with current major depression and 54 with depressive symptoms and significant tinnitus-related disability. INTERVENTION: Nortriptyline (maintained at 50 to 150 mg/ml for six weeks) or placebo. MAIN OUTCOME MEASURES: Hamilton Depression Rating Scale, Tinnitus Disability Measures, and Audiometric Measures. RESULTS: Nortripyline was superior to placebo by multivariate analysis of covariance for depression (10.6 vs. 14.3 final Hamilton Depression score), for tinnitus-related disability (1.8 vs. 2.4 final MPI Tinnitus Interference), and tinnitus loudness (13.6 vs 20.0 dB final loudness match (in worst ear at tinnitus frequency). When major depression and depressive symptoms groups were considered separately, nortriptyline was superior to placebo on these same measures but differences did not achieve statistical significance. CONCLUSIONS: The antidepressant nortriptyline decreases depression, functional disability, and tinnitus loudness associated with severe chronic tinnitus. What appears to be irreversible disability of otologic origin may, in part, be reversible disability of psychiatric origin. Author.

Efficacy and tolerability of azelastine nasal spray in patients with allergic rhinitis compared to placebo and budesonide. Dorow, P., Aurich, R., Petzold, U. German Red Cross Hospital Mark-Brandenburg, Berlin. *Arzneimittelforschung* (1993) August, Vol. 43 (8), pp. 909–12.
The efficacy and safety of a new antiallergic drug, intranasal azelas-

tine (CAS 58581-89-8), in the treatment of seasonal allergic rhinitis was investigated in a 16 patient double-blind comparison with placebo and another 36 patient open comparison with budesonide (CAS 51333-22-3). Efficacy was assessed in terms of 13 signs and symptoms of allergic rhinitis and tolerability on the basis of spontaneously reported adverse events. In the first study, compared to placebo a one week's treatment with azelastine resulted in substantial relief of sneezing ($P = 0.009$), nasal itching ($P = 0.009$), swelling of the nasal mucosa ($P = 0.067$) and rhinorrhoea ($P = 0.262$) in patients having the above symptoms at baseline of at least moderate to severe intensity. According to the judgement of the supervising physician, 7/8 azelastine-treated patients but none receiving placebo responded well to therapy ($P = 0.001$). In the second study a two weeks' treatment with intranasal azelastine was found not to differ significantly from budesonide 67 per cent of patients showed improvement in principal signs of rhinitis after one week's therapy irrespective of treatment. Nasal symptoms, including nasal obstruction, were most markedly improved by both treatments. Azelastine, but not budesonide, also relieved ocular symptoms associated with rhinitis. Adverse events did not occur more frequently under azelastine than under placebo treatment and were often of uncertain relationship to treatment. Author.

Relationship between evoked otoacoustic emissions and middle-ear dynamic characteristics. Wada, H., Ohyama, K., Kobayashi, T., Sunaga, N., Koike, T. Department of Mechanical Engineering, Tohoku University, Sendai, Japan. *Audiology* (1993) September to October, Vol. 32 (5), pp. 282–92.
Evoked otoacoustic emissions (EOAEs) are considered to originate from outer hair cell movement and to be transmitted to the external auditory meatus through the ossicular chain and eardrum in a retrograde fashion. Therefore, the effect of the middle ear on EOAEs seems to be large. A sweep frequency middle-ear analyzer (MEA) has been developed that gives much more information on middle-ear dynamic characteristics than a conventional impedance meter. In this paper, applying our own EOAE measuring system and the MEA, EOAEs and middle-ear dynamic characteristics of normal subjects were measured, and an attempt was made to clarify the relationship between EOAEs and middle-ear dynamic characteristics. It is concluded that EOAEs are detected most distinctly at the middle-ear resonance frequency and that EOAEs are most detectable in normal subjects whose middle-ear mobility is moderate. Author.

Chinese hyper-susceptibility to vection-induced motion sickness. Stern, R. M., Hu, S., LeBlanc, R., Koch, K. L. Department of Psychology, Pennsylvania State University, University Park 16802. *Aviation, Space and Environmental Medicine* (1993) September, Vol. 64 (9 Pt 1), pp. 827–30.
Little is known about the factors that control individual differences in susceptible to motion sickness. A serendipitous observation in our laboratory that most Chinese subjects become motion sick prompted this study. We used a rotating optokinetic drum to provoke motion sickness and compared gastric responses and symptom reports of Chinese, European-American, and African-American subjects. There was no difference in the responses of European-American and African-American subjects; however, Chinese subjects showed significantly greater disturbances in gastric activity and reported significantly more severe symptoms. We suggest that this hyper-susceptibility presents a natural model for the study of physiological mechanisms of nausea and other symptoms of motion sickness. Author.

Management of malignant melanoma of the head and neck. Orr, D. J., Hughes, L. E., Horgan, K. Department of Surgery, University of Wales College of Medicine, Health Park, Cardiff, UK. *British Journal of Surgery* (1993) August, Vol. 80 (8), pp. 998–1000.
A total of 91 patients with melanoma of the head and neck treated between 1973 and 1991 were studied prospectively with regard to prognostic features, treatment and outcome. Other than Breslow thickness, the only important prognostic feature was the less aggressive nature of lentigo maligna melanoma. A policy of selective excision margins, 1 cm for impalpable and 2 cm for palpable lesions, was found to be safe, although preliminary biopsy should be used if there is diagnostic uncertainty or where the expected extent of surgery entails a mutilating procedure. Local recurrence rates were not affected by the method of wound closure, which should be determined by the best functional and cosmetic outcome. These results support the trend against prophylactic neck dissection. Such dissection, when indicated for lesions of the face, pinna, anterior scalp and parotid area, should routinely include superficial parotidectomy. Uncontrolled symptomatic loco-regional recurrence is an uncommon complication that may occur despite radical primary surgery. The role of preoperative radiotherapy for high-risk melanoma in this situation warrants investigation. Author.

Acoustic analysis of vowel emission in obstructive sleep apnoea. Fiz, J. A., Morera, J., Abad, J., Belsunces, A., Haro, M., Fiz , J. I., Jane, R., Caminal, P., Rodenstein, D. Servei de Pneumologia, Hospital Universitary Germans Trias i Pujol de Badalona, Barcelona, Spain. *Chest* (1993) October, Vol. 104 (4), pp. 1093–6.
We studied vocalization in 18 men with obstructive sleep apnoea syndrome (OSAS) (age, 49 (7.5) years; body mass index (BMI) 33.6 (7.6)) and 10 normal men as a control group (age, 46.7 (6.2) years; BMI 24.6 (2.2)). Polysomnographic data for patients with OSAS were as follows: total sleep time (TST), 387.5 (27.9) min; awake, 17.6 (12.6 per cent TST); stage 1, 19.8 (18.7 per cent TST); stage 2, 54.8 (23.2 per cent TST); stage 3 and 4, 1.5 (0.3 per cent TST); and stage REM, 4.2 (1.7 per cent TST). Apnoea hypopnea index (AHI) was 43.0 (18.2) and lowest O2 saturation was 73.6 (11.4). We recorded the following sounds in all subjects: /a/ as in 'father'; /e/ as in 'get'; /i/ as in 'see'; /o/ as in 'go'; /u/ as in 'too'. Three manoeuvres for each vowel sound were taken for analysis. Signals were digitized at 10,000 Hz. Fast Fourier transformation was applied to segments of 512 points of each utterance corresponding to the vowel sound. The following parameters were obtained: maximum frequency of harmonics, mean frequency of harmonics, and the number of harmonics. RESULTS: There were significant differences between both groups in the maximum frequency of harmonics of /i/ and /e/ vowels. (For /i/: 2,650 (672) Hz controls; 425 (71.2) Hz OSAS. For /e/: 2,605 (772.3) Hz controls; 1,250.0 (828.4) OSAS). The number of harmonics for /i/ vowel was 4.5 (1.2) for controls as compared with 2.7 (1) Hz for OSAS. CONCLUSIONS: Vocalization in patients with OSAS is different from normal subjects. Vowel /i/ can distinguish these patients from normal subjects. Author.

The flow-volume loop in bilateral vocal cord paralysis. Bolliger, C. T., Sopko, J., Maurer, P., Soler, M., Perruchoud, A. P. Department of Internal Medicine, University Hospital, Basel, Switzerland. *Chest* (1993) October, Vol. 104 (4), pp. 1302–4.
A 38-year-old man with post-traumatic bilateral vocal cord paralysis and a surgically repaired avulsion of the extrathoracic trachea presented with a slight increase of exertional dyspnoea (grade 2). Spirometry showed high normal FEV1 for FVC variables, but the F-V loop was characteristic for highly variable UAO with an increased FEV1/PEF ratio of 11 ml/l/min as well as a MEF50/MIF50 of 4.55. Endoscopy during forced respiration showed near total inspiratory obstruction of the larynx due to paradoxical behaviour of the vocal cords. In extrathoracic airway obstruction a FEV1/PEF ratio >10 ml/l/min combined with a MEF50/MIF50 ratio >4 is suggestive of variable UAO caused by bilateral vocal cord paralysis rather than by a tracheal lesion. Author.

Auditory evoked potentials in epileptic patients. Soliman, S., Mostafa, M., Kamal, N., Raafat M., Hazzaa, N. Ear, Nose and Throat Department, AinShams University, Cairo, Egypt. *Ear and Hearing* (1993) August, Vol. 14 (4), pp. 235–41.
Auditory brain stem response (ABR) and middle latency response (MLR) were recorded in 49 epileptic patients. Responses were evoked and recorded at 90 dB nHL down to threshold. A statistically significant number of epileptic patients showed elevated ABR (30.1 per cent) and MLR (40.7 per cent) thresholds, even though their pure-tone audiograms showed normal hearing sensitivity. Threshold elevation was more frequent in subjects with grand mal epilepsy compared to subjects with temporal lobe epilepsy reflecting poorer response in the former subgroup. Furthermore, chronicity of illness was significantly related to the elevated ABR and MLR thresholds in grand mal patients in contrast to patients with temporal lobe epilepsy. On the other hand, the effect of antiepileptic drugs did not seem to be significantly related to the elevated thresholds in both subgroups. Threshold elevation was attributed to a disturbance in the neurotransmitters of the brain stem as well as other subcortical structures. The inhibitory effect of the efferent auditory pathway on the incoming neural signals was also suggested to explain such elevated thresholds. Author.

The influence of personality-related factors upon consultation for two different 'marginal' organic pathologies with and with-

out reports of auditory symptomatology. Saunders, G. H., Haggard, M. P. Department of Speech and Hearing, City University of New York, NY 10036. *Ear and Hearing* (1993) August, Vol. 14 (4), pp. 242–8.
Obscure Auditory Dysfunction (OAD) is explained by a combination of hearing-related deficits and personality factors Saunders & Haggard (1992). In this study, we determine which factors are associated specifically with OAD and which are associated with the seeking of medical attention in general. We achieved this by obtaining a second patient group with a parallel syndrome to OAD, called 'chronic pelvic pain without obvious organic pathology' (CPPWOOP). CPPWOOP patients complain of lower abdominal pain that is not explainable by conventional medical tests. Fifteen CPPWOOPs underwent the OAD test battery. For the analyses they were retrospectively matched to 15 of the original OADs and their matched controls. The three groups were compared by analysis of variance and Kruskall-Wallis analyses. The CPPWOOPs and controls performed significantly better than OADs on hearing-related variables, but did not differ from each other, whereas the OADs and CPPWOOPs were significantly more anxious than the controls, but did not differ from each other. We conclude that anxiety-related traits are associated with the seeking of medical attention in general, whereas the hearing-related deficits we measured are associated specifically with OAD. Anxiety-related traits should, therefore, be considered when dealing with marginal pathologies, but in depth investigation may also reveal an organic basis; therefore, patients should not be dismissed as simply neurotic. Author.

Loudness balance between acoustic and electric stimulation by a patient with a multichannel cochlear implant. Dorman, M. F., Smith, L., Parkin, J. L. Arizona State University, Tempe, Arizona. *Ear and Hearing* (1993) August, Vol. 14 (4), pp. 290–2.
Estimates of loudness balance were obtained for acoustically and electrically presented 250 Hz sine signals from a patient who uses the Ineraid multichannel cochlear implant. Acoustic and electric loudness matching was possible because the patient evidenced a 25 dB HL threshold at 250 Hz in his nonimplanted ear. The level of the electrical stimulus in microamperes required for a balance of loudness grew linearly with equal increments in decibels for the acoustic stimulus. These data, in concert with the very limited data from previous studies, provide a rationale for using a logarithmic transformation of acoustic to electric intensity in signal processors for cochlear implants. Author.

Auditory and visual event-related potentials in a controlled investigation of HIV infection. Baldeweg, T., Gruzelier, J. H., Catalan, J., Pugh, K., Lovett, E., Riccio, M., Stygall, J., Irving, G., Catt, S., Hawkins, D. Academic Department of Psychiatry, Charing Cross and Westminster Medical School, London, UK. *Electroencephalography and Clinical Neurophysiology* (1993) September to October, Vol. 88 (5), pp. 356–68.
Auditory and visual event-related brain potentials (ERPs) were used to complement neurophysiological and medical assessment in neurologically healthy subjects with asymptomatic and symptomatic human immunodeficiency virus type 1 (HIV-1) infection. Auditory and visual ERPs, recorded using standard oddball paradigms, disclosed delays in late waves (N_2 and P_3) in symptomatic subjects (CDC stage IV) when compared with matched controls. Abnormally delayed P_3 waves in at least one modality were recorded in 41 per cent of symptomatics and this was associated with deficits in neuropsychological performance, particularly psychomotor slowing. However, no differences in late wave latencies between asymptomatic and control subjects were found, though asymptomatics showed delays in auditory N_1 and P_2 latencies. The number of morphological abnormalities, such as indiscernible late waves as well as topographical variability of the P_3 wave, was increased in both HIV seropositive groups and possibly indicates a distinct mechanism of impairment, different from latency delay. Whilst P_3 delay in symptomatics was not associated with changes in immune function (T_4 cells) there was, however, a link with anaemia and subclinical hepatic dysfunction. Author.

Positron emission tomography with fluorodeoxyglucose to evaluate tumour response and control after radiation therapy. Chaiken, L., Rege, S., Hoh, C., Choi, Y., Jabour, B., Juillard, G., Hawkins, R., Parker, R. Department of Radiation Oncology, Jonsson Comprehensive Cancer Clinic, UCLA School of Medicine. *International Journal of Radiation, Oncology, Biology and Physics* (1993) September 30, Vol. 27 (2), pp. 455–64.
PURPOSE: Following radiation therapy, evaluation of viable tumour can often be difficult with anatomic imaging criteria (tumour size alone). In this study, the utility of biochemical imaging with the glucose analog 2-(F-18)fluoro-2-deoxy-D-glucose and positron emission tomography was investigated in patients treated with radiation therapy. METHODS AND MATERIALS: Between 1990 and 1992, 19 patients were studied, including 15 patients with head and neck cancer, (four oropharynx, four sinus, three larynx, two hypopharynx, two oral cavity (one patient), one nasopharynx), and four patients with breast cancer. Post-radiation positron emission tomography with 2-(F-18)fluoro-2-deoxy-D-glucose studies were done in all patients, with nine head and neck patients receiving pre-radiation positron emission tomography with 2-(F-18)fluoro-2-deoxy-D-glucose scans as well. Results were correlated with other imaging techniques and pathology. RESULTS: Positron emission tomography with 2-(F-18)fluoro-2-deoxy-D-glucose detected head and neck primary tumours and lymph node metastases in all nine pre-radiation scans, while magnetic resonance imaging failed to detect two primary tumours. Serial positron emission tomography with 2-(F-18)fluoro-2-deoxy-D-glucose showed a significant decrease in tumour activity after radiation therapy, compared to pre-radiation levels, ($P<0.05$), except for two patients with increased uptake at the primary site. Biopsies of these two patients showed persistent/recurrent disease after radiation therapy, which was not detected by magnetic resonance imaging. Six additional head and neck patients, with suspicious examination and inconclusive magnetic resonance imaging, were imaged with positron emission tomography after radiation therapy only. Five patients had increased positron emission tomography activity, with corresponding biopsies positive in four patients, and negative in one patient with clinically worsening symptoms. The remaining sixth patient had minimal and stable positron emission tomography uptake, and is improving clinically. Four patients had mammogram findings suspicious for recurrence after conservation treatment for breast cancer. Positron emission tomography with 2-(F-18)fluoro-2-deoxy-D-glucose showed no focal activity in the breast in two patients, and increased activity in the area suspicious for recurrence in the other two patients. Biopsies correlated with positron emission tomography results. CONCLUSION: Changes and presence of positron emission tomography with 2-(F-18)fluoro-2-deoxy-D-glucose activity correlated with pathologic findings in head and neck and breast cancer patients in this series. In patients with elevated or rising positron emission tomography activity after radiation therapy, persistent or recurrent disease was found in 89 per cent of patients, (8/9). Magnetic resonance imaging did not detect the head and neck recurrences, and mammography was suspicious in patients with both benign and malignant breast changes after radiation therapy. In addition, our data indicate that in head and neck patients with pre-radiation positron emission tomography scans, a significant decrease in activity should occur after radiation therapy, if local control is to be expected. Author.

Synchronous radiotherapy and chemotherapy in the treatment of nasopharyngeal carcinoma. Turner, S. L., Tiver, K. W. Department of Radiation Oncology, Westmead Hospital, NSW, Australia. *International Journal of Radiation, Oncology, Biology and Physics* (1993) September 30, Vol. 27 (2), pp. 371–7.
PURPOSE: Because of the high rates of local tumour control obtained by combining moderate doses of external beam radiotherapy and synchronous 5-fluorouracil/mitomycin C chemotherapy in the treatment of squamous and basiloid cancers of the anal canal, we chose to investigate this regimen for nasopharyngeal cancer which shows significant local and distant failure rates after treatment with radiotherapy alone. METHODS AND MATERIALS: Between 1983 and 1990, 43 patients with previously untreated squamous cell and undifferentiated nasopharyngeal cancer, without evidence of distant metastases at diagnosis were treated with radical radiotherapy and concurrent chemotherapy using mitomycin C (10 mg/m^2 i.v. day 1 of radiotherapy) and 5-fluorouracil (1000 mg/m^2 continuous i.v. infusion days 1–4 of radiotherapy and repeated at least 28 days later). Ninety-one per cent of cases had Stage IV tumours and 93 per cent had clinically involved regional lymph nodes. RESULTS: Actuarial rates of survival, local control, regional nodal control and distant metastases at five years were 37 per cent, 71 per cent, 94 per cent and 53 per cent. Grade 3 or 4 skin and mucosal reactions occurred in 30 and 34 per cent of patients, respectively. Only one patient developed greater than Grade 2 myelosuppression and he died of overwhelming sepsis. A second patient died of malnutrition four months after treatment

giving a five per cent incidence of treatment-related mortality. Nine per cent of patients developed significant late complications of treatment. CONCLUSION: Despite the morbidity observed, the treatment outcome is not obviously superior to that reported for radiotherapy as a single modality of treatment. Author.

Radiation therapy for squamous cell carcinoma of the nasal vestibule. Poulsen, M., Turner, S. Queensland Radium Institute Mater Hospital, Brisbane, QLD, Australia. *International Journal of Radiation, Oncology, Biology and Physics* (1993) September 30, Vol. 27 (2), pp. 267–72.
PURPOSE: A retrospective review of carcinomas of the nasal vestibule seen at the Queensland Radium Institute over a 30-year period was undertaken. METHODS AND MATERIALS: Twenty-nine patients with squamous cell carcinoma of the nasal vestibule who were treated with curative intent between 1960 and 1989 were analyzed. The five-year actuarial survival and disease-free survival were 64 and 61 per cent, respectively. RESULTS: Seven patients were treated with combined modality treatment using surgery and post-operative radiotherapy and 22 were treated with radiation alone. The ultimate local control for those treated with combined modality treatment was 66 per cent and for those treated with radiation alone was 68 per cent. The five-year actuarial survival was 57 and 67 per cent, respectively. CONCLUSION: In view of the similar local control rates and five-year survival in the two groups, we suggest that combined modality treatment may not be warranted in the initial treatment of patients with these tumours. Radiation treatment alone with salvage surgery would appear to be the treatment of choice. Author.

Place of Iridium 192 implantation in definitive irradiation of faucial arch squamous cell carcinomas. Mazeron, J. J., Belkacemi, Y., Simon, J. M., Le Pechoux, C., Martin, M., Haddad, E., Piedbois, P., Calitchi, E., Strunski, W., Peynegre, R., *et al.* Department Interhospitalier de Cancerologie, Hopital Henri Mondor, Creteil, France. *International Journal of Radiation, Oncology, Biology and Physics* (1993) September 30, Vol. 27 (2) pp. 251–7.
PURPOSE: We have reviewed the results of 165 T_1 and T_2 squamous cell carcinomas of the faucial arch treated by definitive irradiation including or not Iridium 192 brachytherapy to ascertain whether a significant relationship existed between Iridium implantation, local control, complications, and survival. METHODS AND MATERIALS: From March 1971 to November 1990, 58 T_1 and 107 T_2 (N_0: 107/165; N_1: 30/165; N_2: 9/165; N_3: 19/165) biopsy proven squamous cell carcinomas of the tonsillar region (104/165) and the soft palate and uvula (61/165) were treated in Henri Mondor Hospital by definitive irradiation with curative intent. From 1971 to 1981 (period 1), only guide gutter technique was available, so that implants were reserved for small tumours: patients were either managed by definitive telecobaltherapy to tumour site and neck node areas (Group 1; n = 48; mean dose: 70 Gy; confidence interval: ± 5.5; five fractions of 1.8 Gy per week) or by exclusive Iridium implant (Group 2; n = 11; all T_1N_0; 64 Gy ± 4.8) or by a combination of external beam radiation therapy to tumour site and neck nodes areas and Iridium implant (Group 3; n = 40). In 1981 (Period 2), was new plastic tube technique, which enables implantation of larger areas, was introduced in the department and all patients (Group 4; n = 66) were then managed by external radiation therapy Group 3 + 4; 47 Gy ± 4.3) followed by an Iridium implant (31 Gy ± 10.5). Clinically positive neck nodes either received additional external dose with electrons or were excised. RESULTS: Overall five-year survival (Kaplan Meier) was 21, 50.5 and 60 per cent in groups 1, 2, and 3 and 4, respectively ($P<0.001$, log rank). Five-year local control was 58, 100 and 91 per cent, respectively ($P<0.001$). Five-year necrosis rate was 4.5 per cent, 20.5 per cent and 18 per cent, respectively (NS). Comparison of results between the two periods of the study (Groups 1 and 2 and 3 vs. Group 4) show that these two groups are statistically comparable according to site and size of tumour and N status and that both local control (77 per cent vs. 94 per cent at five years; $P<0.01$) and disease-free survival (56 per cent vs. 71 per cent; $P = 0.03$) were improved after 1980, while there was a trend to an increase in overall survival (42 per cent vs. 53 per cent at five years; $P = 0.08$); nodal control (86 per cent vs. 95 per cent at five years), and necrosis rate (11 per cent vs. 20 per cent at five years) were not modified. Multivariate analysis showed that both local control ($P<0.0001$) and overall survival ($P<0.0001$) were improved when tumour was implanted. CONCLUSION: We recommend then to treat T_1 and T_2 squamous cell carcinomas of the faucial arch by external radiation therapy to tumour site and neck areas (45 Gy/25 fractions/ five weeks) followed by a 30 Gy Iridium implant and, for patients with clinically positive nodes, either a further 25–30 Gy electron beam irradiation to the nodes or neck node dissection. Author.

Mitomycin C as an adjunct to postoperative radiation therapy in squamous cell carcinoma of the head and neck: results from two randomized clinical trials (see comments). Haffty, B. G., Son, Y. H., Sasaki, C. T., Papac, R., Fischer, D., Rockwell, S., Sartorelli, A., Fischer, J. J. Department of Therapeutic Radiology, Yale Comprehensive Cancer Centre, Yale University School of Medicine, New Haven, CT 06510. *International Journal of Radiation, Oncology, Biology and Physics* (1993) September 30, Vol. 27 (2), pp. 241–50. Comment in: *International Journal of Radiation, Oncology, Biology and Physics* (1993) September 30, 27 (2), pp. 481–2.
PURPOSE: This study was undertaken to assess the benefit of mitomycin C as an adjunct to postoperative radiation therapy in patients with operable squamous cell carcinoma of the head and neck. METHODS AND MATERIALS: Between May 1980 and May 1991, 182 patients have been enrolled in two consecutive randomized clinical trials testing mitomycin C as an adjunct to radiation therapy in squamous cell carcinoma of the head and neck. In both trials, patients were stratified by stage, disease site and intent of therapy. This subset analysis includes 113 patients entered into these two randomized trials treated with surgery and postoperative radiation therapy. In the first trial, patients were randomized to receive standard postoperative radiation therapy alone compared with postoperative radiation therapy with concomitant mitomycin C. In the second trial, patients were randomized to postoperative radiation therapy or postoperative radiation therapy with concomitant mitomycin C plus dicoumarol. RESULTS: As of November 1991, the 113 patients treated with surgery and postoperative radiation therapy in both trials had a median follow-up of 93 months. There have been a total of 12 local recurrences in the radiation therapy alone arm compared to 0 local recurrences in the radiation therapy/mitomycin C arm. There were eight regional recurrences in the radiation therapy alone arm compared with five regional recurrences in the mitomycin C arm. Patients in the mitomycin C arm experienced a superior five-year actuarial local regional control rate (87 per cent vs. 67 per cent, $P<0.015$) and a statistically significant disease-free survival benefit (67 per cent vs. 44 per cent, $P<0.03$). Overall survival difference between the two arms (56 per cent vs. 41 per cent) has not reached statistical significance. CONCLUSIONS: We conclude from these prospectively designed randomized clinical trials that in patients with operable head and neck cancer treated with surgery and postoperative radiation therapy, concomitant administration of mitomycin C with radiation therapy will result in a statistically significant disease-free survival and local regional control benefit. We are currently investigating the value of other bioreductive alkylating agents as adjuncts to radiation therapy in patients with squamous cell carcinoma of the head and neck. Author.

Measuring human cochlear travelling wave delay using distortion product emission phase responses. Kimberley, B. P., Brown, D. K., Eggermont, J. J. Department of Surgery, University of Calgary, Alberta, Canada. *Journal of the Acoustical Society of America* (1993) September, Vol. 94 (3 Pt. 1), pp. 1343–50.
A method is presented here in which cochlear travelling wave delays are estimated through the measurement of distortion product emission phase (DPE) responses. This method assumes that the site of generation of DPEs is at the f2 place. Eighteen adult female and 18 adult male human ears, all with normal hearing, underwent DPE testing. For each ear, DPE phase responses were computed for eight values of f2 varying from 10 to 0.78 kHz. Linear DPE phase versus DPE frequency relationships were found. Estimates of travelling wave delay from the ear canal to the f2 place varied from about 1 ms for the 10 kHz place to 3.5 ms for the 0.78 kHz place. These estimates agree well with previous travelling wave delay estimates using electrocochleography. Test-retest comparisons of delay estimates were generally within 0.25 ms. In addition, within-subject interaural delay differences were smaller than between-subject interaural differences. Within-subject interaural delay differences were generally less than 0.5 ms. Male ears, when grouped together, had significantly longer delays (eight per cent) to the 0.78 kHz place in comparison to female ears. The effect of DPE stimulus level on delay is presented for stimulus levels between 15 and 60 dB SPL. These data support the use of DPE phase responses as estimates of cochlear travelling wave delay. In comparison with electrophysi-

ological and psychophysical techniques this method is purely cochlear-based and has the advantage of being rapid and noninvasive. Author.

Two-stage correction of depressed glabella and nasal root scar contracture utilizing subcutaneous tissue advancement flaps and a layered soft tissue/procerus muscle transposition flap. Field, L. M. Department of Dermatology, University of California, San Francisco. *Journal of Dermatologic Surgery and Oncology* (1993) October, Vol. 19 (10), pp. 962–6.
BACKGROUND: A postoperative nasal root and glabellar forehead deformity comprised both vertical and horizontal elements, with scar contracture and fixation across the left medial nose base, extending into the adjacent superior canthal region. METHODS. A two-stage reconstruction was performed, initially correcting the vertical centrally placed forehead depression by dual subcutaneous flaps advanced centrally and joined. The horizontal nasal root contracture was repaired at a second stage utilizing a procerus muscle transposition flap elevated on the ipsilateral deep contracture side, imbricated in serpentine fashion on itself and sutured into the depression over the scar base. RESULT. Significant improvement followed. CONCLUSION. The careful and precise placement of subcutaneous tissue and muscle can serve to assist in filling certain deep defects and in elevating scar lines. Author.

Unreliability of contemporary neurodiagnostic imaging in evaluating suspected adult supratentorial (low-grade) astrocytoma. Kondziolka, D., Lunsford, L. D., Martinez, A. J. Department of Neurological Surgery, University of Pittsburgh, Pennsylvania. *Journal of Neurosurgery* (1993) October, Vol. 79 (4), pp. 533–6.
Many physicians rely upon neuroimaging studies alone to select therapy for adult patients suspected of having a glial neoplasm, in the belief that certain imaging features accurately characterize the histological diagnosis of low-grade astrocytoma. During a four-year interval when both computerized tomography and magnetic resonance imaging were available, the authors performed stereotactic biopsies on 20 consecutive adult patients who were suspected of having an astrocytoma. The patients were generally young (mean age 37 years), had seizures (17 cases), and had lobar lesions. An accurate histological diagnosis was obtained, without morbidity, in all 20 patients. Only 10 (50 per cent) in fact had low-grade astrocytomas, whereas nine (45 per cent) had anaplastic astrocytomas and one (five per cent) had encephalitis. The results of this study indicate that modern high-resolution neuroimaging alone cannot be used as a reliable tool to predict the histological diagnosis of astrocytoma (50 per cent false-positive rate). All patients with supratentorial mass lesions that exhibit the 'typical' imaging features of astrocytoma should undergo stereotactic biopsy for confirmation in order that appropriate management may be planned. Author.

An alternate elective neck incision. Zide, M. F., Epker, B. N. Department of Oral and Maxillofacial Surgery, John Peter Smith Hospital, Fort Worth, TX. *Journal of Oral and Maxillofacial Surgery* (1993) October, Vol. 51 (10), pp. 1071–5.
The classic submandibular incision parallels the inferior border of the mandible and does not follow the resting skin tension lines of the neck. A modified approach is described that initially follows these lines but, as the midbody region is approached, a zigzag incision with legs of 1 to 3 cm and tip angles of approximately 70° to 90° is made. This zigzag skin incision is adjusted for the intended surgery. Subjectively, the results are much more esthetic. Author.

A comparative evaluation of cefaclor and amoxicillin in the treatment of acute otitis media. Mandel, E. M., Kardatzke, D., Bluestone, C. D., Rockette, H. E. Department of Paediatric Otolaryngology, Children's Hospital of Pittsburgh, PA 15213-2583. *Paediatric Infectious Diseases* (1993) September, Vol. 12 (9), pp. 726–32.
In an earlier study of 214 children with acute otitis media (AOM) randomly assigned to a 14-day course of either cefaclor or amoxicillin, 55.7 per cent of cefaclor-treated subjects were effusion-free compared with 41.2 per cent of amoxicillin-treated subjects at the end of treatment. The present study was conducted to determine whether, in a one-year period, subjects treated with cefaclor for each episode would have middle ear effusion for significantly less time than those treated with amoxicillin for each episode. One hundred fifty-seven subjects with AOM were enrolled. No statistically significant differences were found between the cefaclor-treated and amoxicillin-treated groups in number of subjects effusion-free immediately after first treatment (47.9 per cent vs. 42.3 per cent, respectively), average per cent of time with effusion (22.2 per cent vs. 23.4 per cent, respectively), or in rate of new episodes of AOM (3.05 vs. 3.26, respectively). We conclude that there is no clinically significant advantage to the use of cefaclor rather than amoxicillin as the routine first line drug in the treatment of AOM. Author.

Neonatal hyperbilirubinemia and long-term outcome: another look at the Collaborative Perinatal Project. Newman, T. B., Klebanoff, M. A. Department of Laboratory Medicine, School of Medicine, University of California, San Francisco 94143-0626. *Pediatrics* (1993) November, Vol. 92 (5), pp. 651–7.
OBJECTIVE. To examine the association between neonatal bilirubin levels and subsequent neurodevelopmental outcome. DESIGN: Prospective cohort study. SETTING. 12 U.S. medical centres from 1959 (first births) to 1974 (last follow-up). PARTICIPANTS. 41,324 singleton white or black infants with birth weight > or = 2500 g who had neonatal bilirubin measurements recorded and survived at least one year. MAIN OUTCOME MEASURES. Wechsler Intelligence Scale for Children Intelligence Quotient (IQ) at age seven years, blinded neurologic examination at age seven years, and sensorineural hearing loss at age eight years. RESULTS. There was no association between IQ and bilirubin. For example, comparing children who had maximum bilirubin levels > or = 342 mumol/l (20 mg/dl) with those who had lower bilirubin levels, adjusted mean IQs were 105.0 and 103.4 in whites (difference +1.6; 95 per cent confidence interval (CI): −0.4 to +3.5) and 91.0 and 93.3 in blacks (difference −2.3; 95% CI: −4.8 to +0.2). Abnormal neurologic examination results were reported in 12 of 268 children (4.5 per cent) with bilirubin > or = 342 mumol/l (20 mg/dl) compared with 1249 of 33,004 children (3.8 per cent) with lower levels (relative risk (RR) = 1.2; 95 per cent CI: 0.7 to 2.1). The frequency of abnormal or suspicious neurlogic examination results increased in a stepwise fashion with increasing bilirubin level ($P<0.001$), from 4346/29,258 (14.9 per cent) of those with bilirubin levels <171 mumol/l (10 mg/dl) to 60/268 (22.4 per cent) of those with bilirubin levels. > or = 342 mumol/l (20 mg/dl), apparently due to increasing minor motor abnormalities at higher bilirubin levels. Sensorineural hearing loss was not associated with high bilirubin levels (RR = 1.0; 95 per cent CI; 0.3 to 3.0). CONCLUSIONS. Neonatal bilirubin levels seem to have little effect on IQ, definite neurologic abnormalities, or hearing loss. Higher bilirubin levels are associated with minor motor abnormalities, but the clinical importance of this finding is limited by the weakness of the association, the mild nature of the abnormalities, and the lack of evidence that they are prevented by treatment. Author.

Fluticasone propionate aqueous nasal spray is safe and effective for children with seasonal allergic rhinitis. Grossman, J., Banov, C., Bronsky, E. A., Nathan, R. A., Pearlman, D., Winder, J. A., Ratner, P. H., Mendelson, L., Findlay, S. R., Kral, K. M. *et al.* Allergy Care Consultants Ltd, Tucson, AZ 85716. *Pediatrics* (1993) October, Vol. 92 (4), pp. 594–9.
INTRODUCTION. Fluticasone propionate aqueous nasal spray, a new topical corticosteroid preparation, is effective when given as 200 micrograms once daily in patients (> 12 years of age) with seasonal allergic rhinitis. STUDY OBJECTIVE. To evaluate the efficacy and safety of fluticasone proprionate aqueous nasal spray in children aged four to 11 years with seasonal allergic rhinitis. STUDY DESIGN. Multicentre, randomized, double-blind, placebo-controlled, parallel-group. PATIENTS. Two hundred and fifty children aged four to 11 years with moderate-to-severe nasal symptoms, a positive skin test reaction to a late-summer or autumn allergen, a history of seasonal allergic rhinitis, and documentation of an unsatisfactory response to conventional treatment. INTERVENTIONS. Children were randomly assigned to receive fluticasone propionate, either 100 micrograms or 200 micrograms, or placebo, given by intranasal spray once daily in the morning for 14 days. MEASUREMENTS AND RESULTS. Severity of nasal symptoms (obstruction, rhinorrhoea, itching, and sneezing) was recorded on visual analog scales by investigators at weekly visits and by patients (or adult guardian) daily in the evening. According to investigator and patient ratings, both fluticasone propionate 100 micrograms/d and 200 micrograms/d lowered total nasal symptom scores when compared with placebo. Both dosages of fluticasone propionate were more effective than placebo on the basis of investigator-rated overall clinical evaluation of efficacy at the end of treatment, with significant improvement (as opposed to moderate or mild improvement, no change or worsening) noted in 21 per cent to 29 per cent of the

active-treatment groups vs. nine per cent in the placebo group. There were no significant differences between the two fluticasone propionate dosages in any efficacy measurement. Morning plasma cortisol concentrations and frequency of drug-related adverse events were similar in the fluticasone propionate and placebo groups. CONCLUSION. In children as young as four years, 100 micrograms of fluticasone propionate aqueous nasal spray given once daily is as effective as 200 micrograms given once daily, the usual adult dose for the treatment of seasonal allergic rhinitis. Both fluticasone propionate dosages were well tolerated and neither dosage appears to interfere with the hypothalamic-pituitary-adrenal axis in children. Author.

Laryngeal carcinoma: sclerotic appearance of the cricoid and arytenoid cartilage—CT—pathologic correlation. Munoz, A., Ramos, A., Ferrando, J., Gomez, B., Escudero, L., Relea, F., Garcia-Prats, D., Rodriguez, F. Department of Radiology, Hospital Universitario 12 de Octubre, Madrid, Spain. *Radiology* (1993) November, Vol. 189 (2), pp. 433–7.
PURPOSE: To assess the significance of sclerotic-appearing cricoid and arytenoid cartilage with computed tomography (CT) in patients with laryngeal carcinoma. MATERIALS AND METHODS: CT scans obtained in 75 patients with laryngeal carcinoma were prospectively studied; laryngeal CT studies obtained in 50 patients without laryngeal carcinoma were retrospectively reviewed. RESULTS: Twenty-four of the 75 patients (32 per cent) with laryngeal carcinoma had sclerotic cartilage. Evaluation of pathologic specimens obtained in 12 of these 24 patients showed 11 cases of sclerotic arytenoid cartilage and two cases of sclerotic cricoid cartilage. Tumour infiltration was demonstrated in six of these cases but not in the seven others. In 11 of the 12 cases with pathologic proof, however, tumour was adjacent to the perichondrium. In the 12 cases without pathologic proof, the proportion was similar. The positive predictive value of this sign for cartilaginous invasion was 46 per cent. CONCLUSION: Although it is not a reliable sign of cartilaginous invasion, sclerotic-appearing cricoid and arytenoid cartilage in patients with laryngeal carcinoma is predictive of the tumour to this cartilage. Author.

Accessory cardiac bronchus: CT features and clinical significance. McGuinness, G., Naidich, D. P., Garay, S. M., Davis, A. L., Boyd, A. D., Mizrachi, H. H. Department of Radiology, New York University Medical Centre/Bellevue Hospital, NY. *Radiology* (1993) November, Vol. 189 (2), pp. 563–6.
PURPOSE: The accessory cardiac bronchus is a rare congenital anomaly of the tracheobronchial tree that arises from the medial wall of the bronchus intermedius. This report documents the computed tomographic (CT) appearance of this anomaly. MATERIALS AND METHODS: Six patients with this anomaly were identified. All six underwent CT; three underwent correlative bronchscopy, and one had both bronchoscopic and surgical confirmation. RESULTS: In all six cases, a distinct airway could be identified originating from the medial wall of the bronchus intermedius. Associated lung parenchymal tissue was identified in four cases, while in three cases a discrete soft-tissue mass was seen, presumably representing vascularized bronchial or vestigial parenchymal tissue. In two cases, the lumen of the airway was filled with debris. CONCLUSION: Recognition of this anomaly is important, as associated clinical complications, including recurrent episodes of both infection and hemoptysis, may be anticipated in a small percentage of patients. Author.

Human papillomavirus DNA in aerodigestive squamous carcinomas demonstrated by means of in situ hybridization. van Rensburg, E. J., Venter, E. H., Simson, I. W. Department of Medical Virology, University of Pretoria. *South African Medical Journal* (1993) July, Vol. 83 (7), pp. 516–8.
A series of 10 oesophageal and 10 laryngeal squamous carcinomas was examined by means of immunocytochemistry and in situ DNA hybridization to demonstrate human papillomavirus (HPV) infection. Changes in the epithelium adjacent to the carcinoma were found in five of 10 oesophageal and seven of 10 laryngeal carcinomas. Viral antigens could not be detected with immunocytochemistry in any of the specimens. HPV 6, 11 and 16 were detected in three oesophageal specimens. In one of these, HPV 16 was detected in normal as well as malignant cells. HPV 7 was detected for the first time in a laryngeal carcinoma. Our results confirm previous reports of possible HPV involvement in the pathogenesis of aerodigestive carcinomas. Author.

Kaposi's sarcoma after alpha-interferon treatment for HIV-negative T-cell lymphoma. Ariad, S., Lewis, D., Bezwoda, W. R. Haematology/Oncology Unit, University of the Witwatersrand, Johannesburg. *South African Medical Journal* (1993) June, Vol. 83 (6), pp. 430–1.
A 54-year-old HIV-negative patient suffering from T-cell lymphoma of Lennert's lymphoma (Lel) type was treated for 13 months with interferon alpha-2b. While on treatment with interferon the patient demonstrated suppression of total and CD4+ lymphocytes to levels <0.5 and 0.2×10^9/l, respectively. Although interferon was successful in controlling the lymphoma the clinical course was complicated by the rapid development of aggressive, fatal Kaposi's sarcoma shortly after cessation of interferon treatment. It is suggested that the immunosuppression effect of interferon therapy (or the T-cell lymphoma or both) may have played a role in the development of Kaposi's sarcoma as a second malignancy. Author.

An audiological survey of officers at an infantry regiment. Christiansson, B. A., Wintzell, K. A. Occupational Health centre Statshalsan, Ling, Vaxjo, Sweden. *Scandinavian Audiology* (1993), Vol. 22 (3), pp.147–52.
We carried out an audiological survey of 204 officers at an infantry regiment in southern Sweden. The officers were exposed to impulse noise from firearms with peak levels up to 185 dB (SPL). The audiological measurement results were summarized in four age groups, all of which showed significant hearing loss compared to ISO 1999 (1990) database A of a non-noise-exposed male population. Even officers who claimed regular use of hearing protectors during their entire military career showed these significant hearing losses. In the survey we also studied the association of the hearing thresholds with subjective exposure to heavy detonations and the annoyance of tinnitus. We found a significant relation between exposure to heavy detonations and tinnitus. Author.

The effect of hearing loss on ABR interpretation: use of a correction factor. Cashman, M. Z., Stanton, S. G., Sagle, C., Barber, H. O. Department of Otolaryngology, University of Toronto, London, Ontario, Canada. *Scandinavian Audiology* (1993), Vol. 22 (3), pp. 153–8.
Patients suspected of retrocochlear disorders often have abnormal ABRs in the presence of high-frequency hearing loss, making clinical decisions difficult. In a retrospective study of the ABR test results of 1,539 patients, the false-positive and false-negative rates for ABR are presented as a function of hearing loss at 4,000 hz, both before and after using Selters and Brackmann's correction factor for hearing loss. For patients with more than 50 db HL at 4,000 Hz the false-positive and false-negative rates, uncorrected for hearing loss, were 25 per cent and 2.9 per cent respectively, and when the correction factor was used were 12.5 per cent and 5.8 per cent. When hearing loss at 4,000 Hz was over 90 dB the ABR was abnormal in 75 per cent of nontumour patients. Conclusions are that a correction factor for hearing loss is helpful with reservations, and that ABR is not a useful test when 4,000 Hz hearing loss is greater than 90 dB HL and 2,000 Hz is greater than 75 dB HL. Author.

Effects of contralateral acoustic stimulation on otoacoustic emissions following vestibular neurectomy. Williams, E. A., Brookes, G. B., Prasher, D.K. Department of Neuro-otology, National Hospital for Neurology and Neurosurgery, London, UK. *Scandinavian Audiology* (1993), Vol. 22 (3), pp. 197–203.
This study demonstrates that, following unilateral vestibular neurectomy, the inhibitory effect of contralateral acoustic stimulation on evoked otoacoustic emissions is absent. The patient acts as her own control in that the unoperated side shows normal suppression of otoacoustic emission amplitude with contralateral acoustic stimulation. The lack of interaural suppression of otoacoustic emissions on the sectioned side, in the presence of normal acoustic reflex threshold levels, provides evidence that observed phenomena are not merely a function of middle ear reflex activity. It is concluded that the lack of inhibition in the operated ear is due to the sectioning of the olivocochlear bundle within the inferior vestibular nerve, removing the efferent control of the receptor cells. Otoacoustic emissions recorded during contralateral acoustic stimulation may thus provide a rapid, non-invasive means of investigating the function of the efferent auditory system. Author.

Platelet dysfunction associated with clozapine therapy. Durst, R., Dorevitch, A., Fraenkel, Y. Talbieh Mental Health Centre, Jerusalem, Israel. *Southern Medical Journal* (1993) October, Vol. 86 (10). pp. 1170–2.

Clozapine, an atypical antipsychotic agent used in cases of treatment-resistant schizophrenia, is known for its relative absence of extrapyramidal side effects and its potential hazardous effect on white blood cell function. We have described a case of clozapine-associated epistaxis and reduction of the platelet count. Discontinuance of clozapine therapy resulted in cessation of epistaxis followed by normalization of the platelet count. We suggest routine monitoring of platelet count and function in patients treated with clozapine. Author.

Metastatic lesions of the cervical spine. A retrospective analysis of 20 cases. Atanasiu, J. P., Badatcheff, F., Pidhorz, L. Service d'Orthopdie et traumatologie, Centre Hospitalier et Universitaire d'Angers, France. *Spine* (1993) August, Vol. 18 (10), pp. 1279–84.
Twenty patients were surgically treated for metastatic lesions of the cervical spine. The primary cancer was known in 14 patients, breast cancer being the most prevalent. In six patients, the cervical metastasis was revelatory of cancer. Fourteen patients showed neurologic deficit. For the upper cervical spine, a posterior approach was employed. From C3 to C7, an anterior surgical approach was preferred. Since 1986, the authors have performed, after a corpectomy of one or more vertebrae, an acrylic corpoplasty reinforced with an anterior plate. Two cases of neurologic deterioration and one instability in lesions involving the lower cervical spine were encountered. The survival period for 17 patients was, on average, 11 months (ranging from eight days to 46 months). Nineteen patients had pain relief. Of 14 patients with neurologic deficit, nine experienced partial or total improvement. Three patients showed no neural recovery, whereas surgery worsened the conditions of two patients. For lower cervical lesions, the anterior approach is recommended even for C_3 (retropharyngeal approach) or for cervicothoracic lesions. Author.

A case of coronary stenosis developing after successful aortic valve repair in Cogan's syndrome. Cremer, J., Laas, J., Heublein, B. Department of Cardiovascular and Thoracic Surgery, Hannover Medical School, Germany. *Thoracic and Cardiovascular Surgery* (1993) August, Vol. 41 (4), pp. 255–7.
Cogan's syndrome has been described as entity of progressive deafness and interstitial keratitis with variable cardiovascular involvement leading to aortic insufficiency or orificial stenosis of coronary or aortic arch vessels. So far, aortic valve replacement either with mechanical or biological prosthesis was favoured for correction of the valvular lesion. A patient with primary successful aortic valve repair followed by coronary revascularization for left coronary ostial stenosis occurring after the first operation is presented. Author.