

## Abstract Selection

**Psychometric, validation of the EORTC Core Quality of Life Questionnaire, 30-item version and a diagnosis-specific module for head and neck cancer patients.** Bjordal, K., Kaasa, S. Department of Oncologica, Norwegian Radium Hospital, Oslo. *Acta Oncologica* (1992), Vol. 31 (3), pp. 311–21.

A cancer-specific self-reporting quality of life questionnaire has been validated. The questionnaire is designed to assess physical functioning, role functioning, cognitive functioning, emotional functioning, social functioning, pain, fatigue, emesis and quality of life by means of multi-item scales, and other disease- and treatment-related symptoms by means of single items. The questionnaire was completed by 126 head and neck cancer patients with a mean age of 67 years. The internal consistency (scale reliability) was satisfactory for all scales but one. Correlations between scales and items assessing the same underlying dimension were also satisfactory. The questionnaire discriminates between patient subgroups and between acute, subacute and late toxicity. Patient compliance was high. The questionnaire provided valuable information, and most of the scales/items functioned well. A few problems were found, especially with the modified visual analogue scales, and minor modifications will be made. Author.

**Squamous cell carcinoma of the oropharynx. Results of primary radiotherapy.** Lindelov, B., Monberg, J., Sand, H. Department of Oncology, Rigshospitalet, Copenhagen, Denmark. *Acta Oncologica* (1992), Vol. 31 (3), pp. 341–5.

During the six-year period in 1979 through 1985, 226 patients (67 females and 159 males) with squamous cell carcinoma of the oropharynx were treated at the Finsen Institute in Copenhagen. Ages ranged from 35 to 86 years with an average of 64 years for females and 61 years for males. The primary tumour was most often situated in the lateral wall (55 per cent) and the anterior wall (25 per cent). Thirty-nine per cent of the tumours were in stage III and 40 per cent in stage IV. The primary treatment was radiotherapy, in this period given with three different treatment schedules, one continuous and two split-course. The 5-year crude survival rate in the total material was 36 per cent and the corrected 5-year survival rate 45 per cent. Females had a higher loco-regional control rate than males, but there was no significant differences between the sexes concerning survival. The tumour stage (IUC, 1978) was an important prognostic factor for both loco-regional control and survival. No significant differences could be found between the three treatment schedules concerning loco-regional control or survival. Author.

**Acute colonic diverticular perforation presenting as left ear pain and facial swelling due to cervical subcutaneous emphysema in a patient administered corticosteroids.** Cappell, M. S., Marks, M. Department of Medicine, UMDNJ—Robert Wood Johnson Medical School, New Brunswick, New Jersey. *American Journal of Gastroenterology* (1992) Jul, Vol. 87 (7), pp. 899–902. A 56-year-old white female administered corticosteroids presented with left ear pain and facial swelling due to cervical subcutaneous emphysema from a diverticular perforation of the sigmoid colon. This case demonstrates that localized signs of a bowel perforation may be absent in patients administered corticosteroids, that these patients may present with unusual, remote findings, and that bowel perforation can produce cervical subcutaneous emphysema. Author.

**Microdeletions in patients with gusher-associated, X-linked mixed deafness (DFN3).** Bach, I., Brunner, H. G., Beighton, P., Ruvalcaba, R. H., Reardon, W., Pembrey, M. E., van der Velde Visser, S. D., Bruns, G. A., Cremers, C. W., Cremers, F. P., et al. Department of Human Genetics, University Hospital Nijmegen, The Netherlands. *American Journal of Human Genetics* (1992) Jul, Vol. 51 (1), pp. 38–44.

Employing various probes from the proximal part of the Xq21

region, which is known to harbour the DFN3 gene, we have investigated 13 unrelated male probands with X-linked deafness, to detect possible deletions. For two of these patients, microdeletions could be detected by using probe pHU16 (DXS26). One of these deletions also encompasses locus DXS169, indicating that it extends farther toward the centromere. The presence of normal hybridization patterns in the DNA of 25 unrelated control males suggests that these deletions are the primary cause of progressive mixed deafness in these patients. If so, their molecular characterization may pave the way for the identification and isolation of the corresponding gene. Author.

**Acute bacterial maxillary sinusitis: results of U.S. and European comparative therapy trials.** Nielsen, R. W. Ear, Nose and Throat Center of Salt Lake City, Utah. *American Journal of Medicine* (1992) Jun 22, Vol. 92 (6A), pp. 70S–73S.

Loracarbef, which is the first agent of the carbacephem class of beta-lactam antibiotics to be developed, provides good activity against a broad spectrum of bacteria. A single-blinded, randomized, parallel clinical trial in 10 centers in the United States compared the efficacy and safety of loracarbef with that of amoxicillin/clavulanate potassium in the treatment of acute bacterial maxillary sinusitis. A 7–10 day regimen of loracarbef (400 mg twice daily) was as effective as amoxicillin/clavulanate (500/125 mg three times a day) and resulted in somewhat fewer side effects. The results of a European trial in Sweden, Finland, and Iceland showed that loracarbef was clinically more effective than doxycycline in the treatment of acute bacterial maxillary sinusitis. Author.

**Loracarbef versus penicillin VK in the treatment of streptococcal pharyngitis and tonsillitis in an adult population.** McCarty, J. California Medical Research Group, Fresno 93726. *American Journal of Medicine* (1992) Jun 22, Vol. 92 (6A), pp. 74S–79S.

Loracarbef, a member of the carbacephem class of beta-lactam antibiotics, is a potent anti-bacterial agent. In a double-blind, randomized clinical trial to assess the efficacy and safety of loracarbef in the treatment of streptococcal pharyngitis and tonsillitis, 107 adult patients were treated with loracarbef (200 mg capsules twice a day or 15 mg/kg/day suspension) and 111 patients were treated with penicillin VK (250 mg capsules four times a day or 20 mg/kg/day suspension) for 10 days. In the loracarbef treatment group, 96.6 per cent of the evaluable patients had a favourable clinical response 3–5 days after therapy, a result that compared favourably with the 93.9 per cent response rate achieved in the penicillin group. The clinical failure/relapse rates were 3.4 per cent for loracarbef-treated patients and 6.1 per cent for patients receiving penicillin. Bacteriologic response data approximated the clinical results, with a successful response in 89.9 per cent of the loracarbef-treated patients and 91.5 per cent of the penicillin recipients. Two (1.9 per cent) loracarbef-treated patients with rash and one (0.9 per cent) penicillin-treated patient with diarrhea discontinued the study early because of these adverse events. The incidence of adverse events was comparable in the two treatment groups except for increased cough, which was reported by 3.7 per cent of the loracarbef-treated patients and none of the penicillin recipients. These data support the conclusion that loracarbef is comparable to penicillin VK in the treatment of streptococcal pharyngitis and tonsillitis in adults. Author.

**Cervical spine in the Apert syndrome.** Kreiborg, S., Barr, M. Jr., Cohen, M. M. Jr. Department of Pediatric Dentistry, Royal Dental College, Copenhagen, Denmark. *American Journal of Medical Genetics* (1992) Jul 1, Vol. 43 (4), pp. 704–8.

Radiographs of the cervical spine—in many cases longitudinal—were available for study in 68 cases of Apert syndrome. Autopsy material was available in one of these cases, and a 3-dimensional reconstruction from a CT scan was also studied in one case. Variable

degrees of fusion were observed, involving the articular facets, the neural arch or transverse processes, or block fusion of the vertebral bodies. Ossification may not always be evident in some early radiographs. However, early radiographic signs of impending fusion may be irregularity in vertical orientation of the vertebral bodies and narrowing of the involved intervertebral spaces. Cervical fusions occurred in 68 per cent, single fusions being found in 37 per cent, and multiple fusions in 31 per cent, C5–C6 fusion was most common, alone or in combination with other fusions. In contrast, cervical fusions are known to occur in 25 per cent of Crouzon patients, most commonly involving C2–C3 only. It appears that when fusions are present, C5–C6 involvement in the Apert syndrome and C2–C3 involvement in the Crouzon syndrome separate the two conditions in most cases. Because cervical anomalies may complicate an already compromised airway in any form of acrocephalosyndactyly, it is imperative to initiate radiographic study of the cervical spine before undertaking anesthesia for surgery. Author.

**Peripheral airways resistance in smokers.** Wagner, E. M., Blecker, E. R., Permutt, S., Liu, M. C. Department of Medicine, Johns Hopkins University, Baltimore, Maryland. *American Review of Respiratory Diseases* (1992) Jul, Vol. 146 (1), pp. 92–5.

To determine peripheral airways resistance ( $R_p$ ) in asymptomatic smokers, we used a wedged bronchoscope technique to study 19 volunteers (18 to 44 years of age) who actively smoked for 2 to 28 pack-years. A fiberoptic bronchoscope was wedged in a subsegmental bronchus of the right upper lobe. Using a double lumen catheter inserted through the working channel of the bronchoscope, we infused 5 per cent CO<sub>2</sub> in air through one lumen and measured pressure through the second lumen.  $R_p$  was determined as the average of the peripheral resistance measured at three or more flow rates. This resistance ranged from 0.003 to 0.075 cm H<sub>2</sub>O/ml/min in the 19 subjects. We have previously shown normal subjects to have an average  $R_p$  of  $0.009 \pm 0.002$  cm H<sub>2</sub>O/ml/min (mean  $\pm$  SE) and asthmatic subjects an average of  $0.069 \pm 0.017$  cm H<sub>2</sub>O/ml/min. Thus, despite normal pulmonary function as assessed by spirometry, these asymptomatic smokers demonstrated a wide range of  $R_p$  values from normal to that observed in asthmatic subjects. These findings are consistent with a mechanism that considers the high resistance to result from inflammatory changes in the small airways. Author.

**Instrumental bronchial tears.** Conacher, I. D. Department of Anaesthetics, Freeman Hospital, Newcastle upon Tyne. *Anaesthesia* (1992) Jul, Vol. 47 (7), pp. 589–90.

Two case reports of bronchial tears following airway instrumentation are presented, one of which resulted in death. Both patients developed pneumothoraces and other complications after attempts had been made under general anaesthesia to insert bronchial stents. It appeared that bronchial tears were made during instrumentation with the stent introducer and these cases demonstrate that great care should be taken when rigid materials, such as plastic guides and bougies, are used blindly in the airway. Author.

**Fibreoptic intubation in cicatricial membranes of the pharynx.** Divatia, J. V., Upadhye, S. M., Sareen, R. Department of Anaesthesia, Tata Memorial Hospital, Bombay, India. *Anaesthesia* (1992) Jun, Vol. 47 (6), pp. 486–9.

Two patients presented with almost total obliteration of the pharynx. In one, a membrane developed after corrosive poisoning; in the other, the oropharynx was filled with a dense cicatrix in the sclerosing phase of rhinoscleroma. In both patients, a single opening in the membrane provided access to both the larynx and oesophagus. Fibreoptic intubation allowed both a thorough assessment of the pathology and subsequently the passage of a cuffed tracheal tube to secure the airway. To overcome the problem of respiratory obstruction while the fibroscope passed through the opening in the membrane, either rapid intubation, or a technique using pre-oxygenation and voluntary hyperventilation followed by breath-holding during bronchoscopy, was used. The thin calibre and manoeuvrability of the flexible fibreoptic bronchoscope makes fibreoptic intubation an excellent technique of airway management in cicatricial membranes of the pharynx. Author.

**Double-blind study of intranasal ipratropium bromide in non-allergic perennial rhinitis.** Druce, H. M., Spector, S. L., Fireman, P., Kaiser, H., Meltzer, E. O., Boggs, P., Wood, C. C., Paluch, E. P. Department of Internal Medicine, St. Louis University School of Medicine, Missouri. *Annals of Allergy* (1992) Jul, Vol. 69 (1), pp. 53–60.

We undertook this trial to determine whether ipratropium bromide nasal spray 0.03 per cent (IB) reduced the nasal hypersecretion associated with nonallergic perennial rhinitis (NAPR) without causing excessive dryness or irritation of the nasal mucosa. We compared two drug doses of IB (21 micrograms and 42 micrograms per nostril) to a placebo, administered as two sprays to each nostril twice daily. The study design consisted of a one-week screening period without treatment, a one-week single-blind placebo period, a four-week double-blind treatment comparison period, and a one-week follow-up period without medication to evaluate nasal rebound. One hundred fifty-two patients were entered and 140 completed the trial. Both doses of IB reduced the severity and duration of rhinorrhea compared with placebo ( $p = 0.05$  and  $0.03$ , respectively). Treatment differences were noticeable during the first week of therapy, continued to widen during the second week, and then remained stable throughout the next two weeks. There was no evidence of nasal rebound observed during the week after treatment. The drug was well tolerated with side effects limited to infrequent nasal adverse events of nasal dryness, blood-tinged mucus, and epistaxis occurring in 2 to 6 per cent of patients. We conclude that IB is a safe and effective therapy for control of rhinorrhea associated with NAPR. Author.

**Pseudoephedrine for the prevention of barotitis media: a controlled clinical trial in underwater divers.** Brown, M., Jones, J., Krohmer, J. Emergency Medicine Residency Program, Butterworth Hospital, Grand Rapids. *Annals of Emergency Medicine* (1992) Jul, Vol. 21 (7), pp. 849–52.

**STUDY OBJECTIVE:** To determine the efficacy and safety of decongestant prophylaxis among first-time underwater divers in the prevention of barotitis media (middle ear squeeze). **DESIGN:** Randomized, double-blind, prospective clinical trial. **SETTING:** Recreational diving schools in Panama City, Florida. **TYPE OF PARTICIPANTS:** 120 volunteer scuba divers under the supervision of certified instructors. **INTERVENTIONS:** After randomization, each subject received a 60 mg tablet of pseudoephedrine or placebo 30 mins before diving. Prospective data were collected, including subject demographics, signs and symptoms of middle ear squeeze during the dive, and possible drug side effects. The otoscopic appearance of the tympanic membrane was graded according to the amount of hemorrhage in the eardrum, with Teed scores ranging from 0 (normal) to 5 (gross hemorrhage and rupture).  $\chi^2$  and  $t$ -tests were applied with significance set at  $p$  less than 0.05). The Mantel-Haenszel test was used to test the null hypothesis that the mean Teed scores of the two treatment groups were equal. **RESULTS:** A total of 116 subjects met the inclusion criteria and completed the study; 60 received 60 mg pseudoephedrine, and 56 received placebo. The treatment groups were similar with regard to age, sex, medical history, and depth of the first dive ( $p$  greater than 0.5). Ear discomfort and blockage during the dive were present in 8 per cent (five of 60) of those receiving pseudoephedrine versus 32 per cent (18 of 56) of the control group ( $p = 0.001$ ). Similarly, the pseudoephedrine group had similar Teed scores after diving than did the control subjects ( $p = 0.003$ ). Adverse effects were minimal; two patients experienced dizziness and nausea. **CONCLUSION:** These results suggest that the use of an oral decongestant before diving decreases the incidence and severity of middle ear squeeze in novice divers. Author.

**Klippel-Feil syndrome.** Smith, B. A., Griffin, C. Department of Emergency Medicine, Wilford Hall Medical Center, Lackland Air Force Base, Texas. *Annals of Emergency Medicine*, (1992) Jul, Vol. 21 (7), pp. 876–9.

Klippel-Feil syndrome is characterized by congenital fusion of two or more cervical vertebrae and may be associated with other organ system anomalies. Although many congenital anomalies are of little clinical importance to the emergency physician, Klippel-Feil syndrome is associated with both spontaneous and progressive neurologic sequelae as well as a predisposition for serious neurologic injury after relatively minor neck trauma. Such patterns of skeletal abnormalities as an unstable fusion pattern, craniocervical anomalies, and associated spinal stenosis are associated with a higher risk of neurologic sequelae. We report the case of a patient with a previously undiagnosed type II Klippel-Feil syndrome who presented after neck trauma to illustrate how further diagnostic imaging modalities may be required to elucidate the presence or absence of acute injury. Key considerations in the emergency management of such patients include radiographic evaluation for hypermobile cervical segments, the anticipation of difficult tracheal intubation, and proper follow-up and referral because of the associated other organ system anomalies and progression of the skeletal pathology. Author.

**Ophthalmotoxicity and ototoxicity of the new quinolone antibacterial agent levofloxacin in Long Evans rats.** Nomura, M., Yamada, M., Yamamura, H., Kajimura, T., Takayama, S. Drug Safety Research Center, Daichi Pharmaceutical Co. Ltd., Tokyo, Japan. *Arzneimittelforschung* (1992) Mar, Vol. 43 (3A), pp. 398–403.

An ophthalmologic and ototoxicity study of a new quinolone antibacterial agent, (-)-(S)-9-fluoro-2, 3-dihydro-3-methyl-10-(4-methyl-1-piperazinyl)-7-oxo-7H-pyrido(1, 2, 3-de) (1, 4)benzoxazine-6-carboxylic acid hemihydrate (levofloxacin, DR-3355, CAS 100986-85-4) was investigated in Long Evans rats. The rats were orally administered 100 mg/kg of DR-3355, ciprofloxacin (CPFX), norfloxacin (NFLX) or nalidixic acid (NA) for two weeks, and the effects on visual and auditory functions were examined. Examination of electroretinograms (ERGs) revealed a decrease in the amplitudes of the a- and b-waves, a prolongation of the latency and diminution or disappearance of oscillatory potential waves in NA treated rats. Similar but milder changes were also noted in the NFLX treated rats. ERGs from DR-3355 or CPFX treated rats were normal. Histopathological examination revealed no changes suggestive of ophthalmotoxicity or ototoxicity in the rats treated with DR-3355, CPFX or NFLX. On the other hand, NA treated rats showed partial loss of the outer hair cells of the organ of Corti in the cochlea, suggesting that NA had slight ototoxicity. DR-3355 did not show any deleterious visual or auditory effects at the dose used in this study. Author.

**Psychophysical studies using a multiple-electrode cochlear implant in patients who were deafened early in life.** Busby, P. A., Tong, Y. C., Clark, G. M. Department of Otolaryngology, University of Melbourne, Victoria, Australia. *Audiology* (1992), Vol. 31 (2), pp. 95–111.

Psychophysical studies were conducted on 10 cochlear implant patients, between 5 and 23 years of age at the time of surgery, who were deafened prior to 4 years of age. The multiple-electrode prosthesis manufactured by Cochlear Ltd was used. Identification studies, the recognition of 2–4 stimuli after some training, were conducted on three of the 10 patients. For current level and repetition rate identification, performance was comparable to that observed for postlingual adult patients. For electrode position identification, however, performance was much poorer than that observed for postlingual adults. In general, the difference limens for current level, repetition rate and duration, and the gap detection thresholds were similar to those observed for postlingual adults. For three patients whose etiology was Usher's syndrome, the repetition rate limens at higher rates were larger than those of the other patients. The limens for electrode position, measured in a discrimination task, were 1–3 electrodes for most patients. However, for three patients, limens of 6–10 electrodes were recorded. For numerosity judgements, the counting of stimuli in a temporal series as a function of the rate of presentation, the patients were less successful at counting for rates of 3–8/s than for lower rates (1–2/s). Author.

**Tumour proliferation assessed by combined histological and flow cytometric analysis: implications for therapy in squamous cell carcinoma in the head and neck.** Bennett, M. H., Wilson, G. D., Dische, S., Saunders, M. I., Martindale, C. A., Robinson, B. M., O'Halloran, A. E., Leslie, M. D., Laing, J. H. Histopathology Department, Mount Vernon Hospital, Northwood, UK. *British Journal of Cancer* (1992) Jun, Vol. 65 (6), pp. 870–8.

The two techniques of flow cytometry analysis (FCM) and immunohistochemical localization of bromodeoxyuridine (BrdUrd) incorporation after *in vivo* administration, were combined to study proliferation in squamous cell carcinoma of the head and neck region. Care was taken in this study to ensure that similar material was processed using both techniques such that comparisons could be made. FCM underestimated the labelling index (LI) in tumours classified as diploid compared to the histological evaluation of the tumour cells within those tumours (4.6 vs 17.1 per cent). However, in aneuploid tumours, the FCM LI (10.7 per cent) was similar to that obtained from histology (13.5 per cent). Indeed, proliferation assessed by the combination of histology LI and FCM duration of S-phase (Ts) indicated that diploid tumours had a shorter median potential doubling time (Tpot) of 2.1 days compared to aneuploid (2.8 days). Despite the heterogeneity of proliferation evident histologically within the specimens, there was not a wide variation in the results of FCM analysis when multiple samples from resections were studied. Using FCM data alone, 46 per cent of the tumours showed a Tpot of less than five days. When the Ts from the FCM data

was combined with the average histological LI, 84 per cent were less than five days and with the maximum LI, 99 per cent were within this time interval. Compared with previous estimates, the proportion of tumours possessing proliferative characteristics which may indicate the need for acceleration of treatment seems to be much larger. Author.

**MRI screening of kindred at risk of developing paragangliomas: support for genomic imprinting in hereditary glomus tumours.** van Gils, A. P., van der Mey, A. G., Hoogma, R. P., Sandkuijl, L. A., Maaswinkel-Mooy, P. D., Falke, T. H., Pauwels, E. K. Department of Diagnostic Radiology (Divisions of Nuclear Medicine and Magnetic Resonance Imaging), University Hospital Leiden, The Netherlands. *British Journal of Cancer* (1992) Jun, Vol. 65 (6), pp. 903–7. Paragangliomas of the head and neck (glomus tumours) can occur in an hereditary pattern and may be hormonally active as well as being associated with paragangliomas elsewhere. A number of these tumours may be present without symptoms. To detect the presence of subclinical paragangliomas we screened 83 members of a family at risk of developing hereditary paragangliomas using whole body MRI and urinary catecholamine testing. In eight previously diagnosed members, eight known glomus tumours of which one functioning, and two unknown glomus tumours and one unknown pheochromocytoma were present. Six unsuspected members showed ten glomus tumours and one pheochromocytoma. It has been suggested that the manifestation of hereditary glomus tumours is determined by the sex of the transmitting parent. There were no tumours in the descendants of female gene carriers. Comparing the likelihood of inheritance with genomic imprinting versus inheritance without genomic imprinting we found an odds ratio of 23375 in favour of genomic imprinting. Author.

**Second primary tumors in patients with oral cancer.** Day, G. L., Blot, W. J. Epidemiology and Biostatistics Program, National Cancer Institute, Bethesda, Maryland 20892. *Cancer* (1992) Jul 1, Vol. 70 (1), pp. 14–9.

**BACKGROUND:** Patients with cancer of the oral cavity and pharynx have been described to be particularly susceptible to the development of new cancers. **METHODS:** Using data collected during 1973–1987 by nine population-based cancer registries in the United States, the authors evaluated risks of second primary cancers among 21,371 patients in whom oral and pharyngeal cancers were diagnosed. **RESULTS:** The rate of development of second tumors was 3.7 per cent per year. The risk of a second primary cancer was 2.8 times greater than expected, with 20-fold excesses of second oral or esophageal cancers and four-fold to seven-fold increases of respiratory cancers. Increased risks persisted unabated for cancers diagnosed five or more years after oral cancer, suggesting that the second cancers were new primary tumors and not misdiagnosed metastases. The increased risk of second primary tumors were found among both men and women and black and white patients; they were most prominent among patients who were 60 years or younger. **CONCLUSIONS:** The exceptionally high rate of cancer recurrence among patients with oral cancer (exceeding that for all other cancers) points to the need for close medical surveillance. Special emphasis should be placed on advising patients to avoid or limit consumption of tobacco and alcohol, the main risk factors for oral and most second cancers. Author.

**Sarcomas of the head and neck. Prognostic factors and treatment strategies.** Tran, L. M., Mark, R., Meier, R., Calcaterra, T. C., Parker, R. G. Department of Radiation, Therapy, Veterans Administration Wadsworth Medical Center, Los Angeles, CA 90073. *Cancer* (1992) Jul 1, Vol. 70 (1), pp. 169–77.

The authors reviewed 164 cases of head and neck sarcoma from adult patients seen at the University of California, Los Angeles (UCLA), between 1955 and 1988. The median follow-up was 70 months. Multivariate analysis demonstrated that tumor grade, size, and surgical margin status were the most important independent prognostic factors. Thirty-one per cent (27 of 85) of patients with high-grade lesions were free of disease versus 81 per cent (44 of 55) with low-grade lesions at last follow-up. Sixty-seven per cent (50 of 76) of patients with lesions smaller than 5 cm were free of disease versus 38 per cent (33 of 88) with lesions larger than 5 cm. In 16 patients, low-grade lesions, measuring less than 5 cm and with negative margins histologically, were controlled with surgery alone. For the 94 patients whose primary tumors were treated at UCLA, local control was achieved in 52 per cent (26 of 50) of patients treated with surgery alone and 90 per cent (20 of 22) with combined

therapy (surgery and radiation therapy (RT) with or without chemotherapy). Seventy five per cent (six of eight) of patients with positive surgical margins treated with postoperative RT achieved local control versus 26 per cent (five of 19) of patients receiving no additional treatment. In conclusion, surgery alone appears to be adequate treatment for small, low-grade tumors and negative surgical margins. Patients with incomplete resection or high-grade tumors should receive aggressive treatment—surgery and RT. Author.

**Types and causes of pain in cancer of the head and neck.** Vecht, C. J., Hoff, A. M., Kansen, P. J., de Boer, M. F., Bosch, D. A. Department of Neurology, Dr Daniel den Hoed Cancer Center, Rotterdam, The Netherlands. *Cancer* (1992) Jul 1, Vol. 70 (1), pp. 178–84.

In a series of 25 patients with head and neck cancer who had severe pain, the type and cause of the pain were analyzed. There were two types of pain: nociceptive and non-nociceptive. Nineteen (76 per cent) patients had nociceptive pain that could be subdivided into actual nociceptive pain (nine patients), nociceptive nerve pain (eight patients), or referred pain (two patients). The cause of nociceptive pain was secondary to tumor recurrence in 16 patients and secondary to benign inflammation in three patients. Of the six (23 per cent) cases of non-nociceptive pain, all were diagnosed as neuropathic pain secondary to the sequels of neck dissection. World Health Organization guidelines were applied for the treatment of symptomatic pain of nociceptive pain; if necessary, nerve blocks were used after this treatment. Non-nociceptive pain was usually treated with amitriptyline or carbamazepine. If tumor recurrence was the cause of the pain, antitumor-directed therapy was applied, when possible. Relief was achieved in 52 per cent of the patients after two attempts to treat pain, in 64 per cent after three attempts, and in up to 72 per cent after four attempts. Pain could not be controlled in 28 per cent of the patients. Patients with tumor recurrence had a short median survival time of three months, regardless of pain control. Patients with neuropathic pain had a survival time of 16 months or more (median not reached). The authors conclude that the type and cause of the pain in cancer of the head and neck can be determined; this can lead to the administration of proper symptomatic therapy or treatment directed at the underlying cause. In most cases, several successive attempts to treat pain were made before relief was achieved. Author.

**DNA content and histologic growth pattern correlate with prognosis in patients with advanced squamous cell carcinoma of the larynx. The Department of Veterans Affairs Cooperative Laryngeal Cancer Study Group.** Truelson, J. M., Fisher, S. G., Beals, T. E., McClatchey, K. D., Wolf, G. T. Department of Otolaryngology, University of Michigan, Ann Arbor. *Cancer* (1992) Jul 1, Vol. 70 (1), pp. 56–62.

**BACKGROUND:** Alterations in DNA content, nuclear morphologic characteristics, and histologic grading have been associated with prognosis in several types of solid malignant neoplasms. **METHODS.** To determine the potential usefulness of these factors in predicting tumor behavior in patients with laryngeal squamous cell carcinoma, tumor specimens from 88 previously untreated patients with Stage III or IV cancers were studied. The DNA content and nuclear area (NA) were measured for individual nuclei of each tumor with the use of Azure A-stained frozen sections. An adjusted DNA index (aDI) for each patient was calculated from the slope of the linear regression analysis of nuclear DNA index on NA. Hematoxylin and eosin-stained sections were examined and graded systematically for histologic growth pattern. All patients were enrolled in a prospective clinical trial and had laryngectomy and postoperative radiation therapy. **RESULTS.** The disease-free survival length was longer and the relapse rates were lower in patients with a low aDI ( $p$  less than 0.005) and with tumors exhibiting low-grade growth patterns ( $p$  less than 0.001). **CONCLUSIONS.** These parameters were independent of staging variables and were better predictors of tumor relapse than traditional clinical staging classifications. Author.

**Hand-rolled cigarette smoking and risk of cancer of the mouth, pharynx, and larynx.** De Stefani, E., Oreggia, F., Rivero, S., Fierro, L. Department of Epidemiology, Instituto de Oncologia, Montevideo, Uruguay. *Cancer* (1992) Aug 1, Vol. 70 (3), pp. 679–82.

A case-control study, involving 205 patients with cancer of the mouth, pharynx, and larynx and 273 control subjects with conditions considered not related to tobacco or alcohol consumption, was performed in Montevideo, Uruguay, between January 1988 and December 1990. Smokers of hand-rolled cigarettes showed an increased risk of cancer of the mouth and pharynx (odds ratio (OR) = 2.5; 95 per cent confidence limit = 1.2–5.2) when compared with

smokers of manufactured cigarettes. Also, the risk of laryngeal cancer was greater among smokers of hand-rolled cigarettes (OR = 2.7; 95 per cent confidence limit = 1.3–5.7) as compared with smokers of commercial cigarettes. Author.

**The association of perennial rhinitis with Trichophyton infection.** Kivity, S., Schwarz, Y., Fireman, E. Allergy Unit, Tel-Aviv Sourasky Medical Center, Sackler Faculty of Medicine, Tel-Aviv University, Israel. *Clinical and Experimental Allergy* (1992) April, Vol. 22 (4), pp. 498–500.

Trichophyton was recently reported to be the cause of respiratory allergy in patients with severe bronchial asthma. We describe eight patients with perennial rhinitis in combination with skin or toe-nail infection, in whom Type I hypersensitivity reaction to Trichophyton was confirmed by skin test, RAST and nasal provocation. When treated with oral fungicidal therapy, there was significant improvement in both their skin and nasal symptoms. Local therapy produced only a mild, transient improvement. We emphasize the need for thorough evaluations in patients with respiratory allergies and negative routine skin tests. Author.

**Oilseed rape—a new allergen?** Fell, P. J., Soulsby, S., Blight, M. M., Brostoff, J. Allergy Clinic, Deddington Health Centre, Oxon, U.K. *Clinical and Experimental Allergy* (1992) Apr, Vol. 22 (4), pp. 501–5.

Oilseed rape (*Brassica napus*) is a commonly grown crop in Europe and it has been suggested that its pollen may be a potent new allergen. The prevalence of sensitization in a normal exposed population and an objective study of those patients found to be allergic to the rape pollen is described. The results show a low prevalence of allergy to oilseed rape pollen (less than 0.2 per cent) unless the subjects were occupationally exposed. Those affected, with one exception, were already atopic and allergic to other pollens. The role of volatile materials given off by the plant remains to be elucidated. Author.

**A syndrome of progressive sensorineural deafness and cataract inherited as an autosomal dominant trait.** Guala, A., Germinetti, V., Sebastiani, F., Silengo, M. C. Istituto di Discipline Pediatriche Università di Torino, Italy. *Clinical Genetics* (1992) Jun, Vol. 41 (6), pp. 293–5.

In 1982, Nadol and Burgess reported a new syndrome of cataract and progressive sensorineural hearing loss, inherited in an autosomal dominant fashion. Extensive histopathologic studies of the inner ear of the proband revealed severe cochleosaccular degeneration. No other sporadic or familial cases of such a genetic syndrome have subsequently been described. We report here a second family in which the syndrome of cataract and progressive sensorineural deafness is observed in eight members, and is inherited according to an autosomal dominant pattern. Author.

**Cervicogenic headache: the controversial headache.** Sjaastad, O. Department of Neurology, Regionsykehuset i Trondheim, Trondheim University Hospital, Norway. *Clinical Neurology and Neurosurgery* (1992), Vol. 94 Suppl, pp. S147–9.

Cervicogenic headache is characterized by unilaterality without sideshift, and the pain attack starts in the neck, in contradistinction to what is the case in common migraine. Signs of neck involvement (e.g. reduction of the range of motion; mechanical precipitation of attacks; ipsilateral, diffuse arm/shoulder pain) are typical in cervicogenic headache but not in common migraine. These and many other features aid in distinguishing these two headaches. Author.

**Case report: clinical and radiological features of Cogan's syndrome—non-syphilitic interstitial keratitis, audiovestibular symptoms and systemic manifestations.** Thomas, H. G. Department of Diagnostic Radiology, John Radcliffe Hospital, Oxford. *Clinical Radiology* (1992) Jun, Vol. 45 (6), pp. 418–21.

The case is presented of a 23-year-old man with Cogan's syndrome, who died from spontaneous rupture of a renal artery two years after developing symptoms, despite treatment with corticosteroids and azathioprine. The typical clinical features, investigations and radiological findings of this rare disease are described, particularly the systemic vasculitis and its angiographic and ultrasound appearances. Author.

**Allergic contact dermatitis from the earmolds of hearing aids.** Meding, B., Ringdahl, A. Department of Dermatology, Sahlgrenska Sjukhuset, Goteborg, Sweden. *Ear and Hearing* (1992) Apr, Vol. 13 (2), pp. 122–4.

Hearing aid users with longstanding and severe dermatitis in the ear canal were examined by a dermatologist and patch tested. In six of 22 (27 per cent) patients, contact allergy to the earmold material was found. Four of the six had a positive test reaction to methyl methacrylate and two also to triethyleneglycol dimethacrylate and urethane dimethacrylate. Positive patch test reactions to substances used for topical treatment were found as well. Routines including liberal patch testing for this group of patients are suggested. Author.

**HLA haplotype segregation and ultrastructural study in familial immotile-cilia syndrome.** Bianchi, E., Savasta, S., Calligaro, A., Beluffi, G., Poggi, P., Tinelli, M., Mevio, E., Martinetti, M. Paediatric Clinic, University of Pavia, Italy. *Human Genetics* (1992) May, Vol. 89 (3), pp. 270–4.

The immotile-cilia syndrome (ICS) is a congenital disorder characterized by dysmotility or even complete immotility of the cilia in the ciliated epithelia. The most frequent consequences include recurrent airway infections from early childhood. Neonatal asphyxia often occurs. Males are usually sterile, whereas females may be fertile or infertile. The disease is inherited as an autosomal recessive trait, but previous attempts to localize the CIS susceptibility gene have so far been unsuccessful. Here, we present the case of two sib pairs affected by ICS from two unrelated families. The electron microscopic investigation of nasal biopsies showed structural anomalies of the cilia, characterized by single microtubules or doublets, arranged randomly in the axoneme. Histocompatibility antigen (HLA)-genotyping of all family members revealed; 1) a significant association of ICS with the HLA-DR7; DQW2 haplotype, which is shared by all the affected sibs ( $p = 0.0099$ ;  $RR = 25.94$ ); 2) a possible linkage of the ICS susceptibility gene with HLA, both the affected sibs being HLA-identical, the healthy brother in family B being HLA-different (sib-pair analysis:  $p$  less than 0.001). Author.

**Pathological review of melanotic neuroectodermal tumour of infancy in India.** Aryya, N. C., Rastogi, B. L., Gangopadhyay, A. N. Department of Pathology, Banaras Hindu University, Varanas. *Indian Journal of Pathology and Microbiology* (1991) Jul, Vol. 34 (3), pp. 181–5.

Melanotic neuroectodermal tumour of infancy (MNETI) is a rare occurrence. Review of literature indicated 14 cases of MNETI encountered in India. The reported cases were observed in infants below one year of age. Males were affected more than the females. Except for one in the orbit, all the lesions were located in the maxilla. Histologically, lesions have been reported to be classical and benign in nature. Morphology of the tumours have been presented and discussed. Author.

**Recurrent locally advanced nasopharyngeal carcinoma treated with heavy charged particle irradiation.** Feehan, P. E., Castro, J. R., Phillips, T. L., Petti, P., Collier, J. M., Daftari, I., Fu, K. Department of Radiation Oncology, University of California, San Francisco 94143. *International Journal of Radiation, Oncology, Biology and Physics* (1992) Vol. 23 (4), pp. 881–4.

Between June 1981 and May 1990, 11 patients with recurrent locally advanced nasopharyngeal carcinoma were treated with heavy charged particle radiation at Lawrence Berkeley Laboratory. All patients had previously undergone full course radiotherapy to a median dose of 70.2 Gy (range 61–81 Gy). Median time to recurrence was 18.2 months. At the time of heavy charged particle radiotherapy treatment, all had evidence of invasion of the base of skull and seven of 11 had cranial nerve deficits. None of the patients were candidates for brachytherapy because of tumor extent or poor geometry. The tumor histology was squamous cell carcinoma in 10 patients and lymphoepithelioma in one patient. Ten of the 11 patients had received chemotherapy prior to re-irradiation. The heavy charged particle tumor dose delivered ranged from 31.80 GyE to 62.30 GyE (average 50.25 GyE, median 50 GyE). Local control was achieved in 45 per cent. Median survival was 42 months. Actuarial survival was 59 per cent at three years and 31 per cent at five years (Kaplan-Meier). There were no fatal complications. The results in treating locally advanced recurrent nasopharyngeal carcinoma with heavy charged particles appear superior to those reported by others using photon therapy. Author.

**Cervical nodal metastasis of squamous cell carcinoma of unknown origin: indications for withholding radiation therapy.** Coster, J. R., Foote, R. L., Olsen, K. D., Jack, S. M., Schaid, D. J., DeSanto, L. W. Mayo Clinic, Rochester, MN 55905. *International Journal of Radiation, Oncology, Biology and Physics* (1992), Vol. 23 (4), pp. 743–9.

The records of patients with pathologically confirmed metastatic squamous cell carcinoma involving cervical lymph nodes who were treated at the Mayo Clinic between January 1965 and December 1987 were reviewed. In 117 patients a primary tumor could not be discovered. Of these, 24 patients underwent curative resection of all gross disease by neck dissection or excisional biopsy. All 24 patients presented with unilateral adenopathy. Their median age was 63 years. Eighteen patients were men. Fourteen patients were in clinical stage N1; six, N2a; three, N2b; and one, N3. Six patients had grade 1 or 2 nodal metastases; 14, grade 3; and four, grade 4. Gross or microscopic evidence of extracapsular tumor extension was noted in eight patients. All patients were followed until death or for a median of 8.5 years (range, 3.3–20.4 years). A squamous cell carcinoma of the upper aerodigestive tract subsequently developed in only one patient (4 per cent) within five years of operation. In six patients (25 per cent), a recurrence developed in the dissected neck a median of three months (2.4 months–6.6 years) after operation. Five of these patients had extracapsular extension, and four had pathologic Stage N2a or higher neck disease. Both patients with pathologic Stage N1 disease who had recurrences in the dissected neck had extracapsular extension. Delayed, contralateral neck metastases in an undissected neck developed in two patients. The five-year overall and cause-specific survivals for all 24 patients were 66 per cent and 74 per cent, respectively. Extracapsular extension was a predictor of neck recurrence, control of disease above the clavicles, cause-specific survival, and overall survival. Patients with pathologic Stage N1 neck disease with no extracapsular extension can be managed by surgery alone. Patients with pathologic Stage N2 or higher neck disease or extracapsular extension should be considered for postoperative, adjuvant radiation therapy. Author.

**Stage T3 squamous cell carcinoma of the glottic larynx: a comparison of laryngectomy and irradiation.** Mendenhall, W. M., Parsons, J. T., Stringer, S. P., Cassisi, N. J., Million, R. R. Department of Radiation, Oncology, University of Florida, College of Medicine, Gainesville. *International Journal of Radiation, Oncology, Biology and Physics* (1992), Vol. 23 (4), pp. 725–32.

One-hundred eighteen patients with previously untreated T3 squamous cell carcinoma of the glottic larynx were treated with curative intent between March 1965 and November 1988 at the University of Florida. All patients were observed for at least two years and 83 per cent were observed for five or more years. Fifty-three patients were treated with irradiation alone and 65 patients were treated with surgery alone (32) or combined with irradiation (33). Thirty-two patients treated with irradiation alone had twice-daily fractionation and the remainder had once-daily fractionation. The local-regional control rates, including patients successfully salvaged after a local-regional recurrence, were 81 per cent after irradiation alone and 81 per cent after surgery alone or combined with adjuvant irradiation. The local control rates for patients treated with irradiation alone were 53 per cent after once-daily fractionation and 71 per cent after twice-daily fractionation. There was no relationship between vocal cord mobility at 5000 cGy, at the end of radiotherapy, or at one month after treatment and subsequent local control. The five-year cause-specific survival rates were 74 per cent for patients treated with irradiation alone and 63 per cent for patients treated surgically. The incidence of severe complications, including those associated with salvage procedures, was 15 per cent for both treatment groups. The rates of laryngeal voice preservation were 66 per cent after irradiation alone and 2 per cent after surgery. Irradiation alone for selected patients with T3 glottic cancer resulted in similar rates of local-regional control, survival and severe complications, with a significantly higher likelihood of voice preservation, compared with surgery. Author.

**A new portable sound processor for the University of Melbourne/Nucleus Limited multielectrode cochlear implant.** McDermott, H. J., McKay, C. M., Vandali, A. E. Department of Otolaryngology, University of Melbourne, Parkville, Victoria, Australia. *Journal of the Acoustical Society of America* (1992) Jun, Vol. 91 (6), pp. 3367–71.

A new processor, called the spectral maxima sound processor (SMSP), has been developed for the University of Melbourne/Nucleus Limited multielectrode cochlear implant. The SMSP analyses sound signals by means of a bandpass filterbank having 16 channels which are allocated tonotopically to the implanted electrodes. Every 4 mins, typically, the six channels with the largest amplitudes are selected, and six corresponding electrodes are activated. In an ongoing study the performance of the SMSP is being

compared with that of the Mini Speech Processor (MSP). Some results of speech perception tests from the first two SMSPP users are presented, in which scores for the recognition of vowels, consonants, and words all showed significant increases over the corresponding MSP scores. Author.

**Characterization and autoradiographic localization of histamine H1 receptors in human nasal turbinates.** Okayama, M., Baraniuk, J. N., Hausfeld, J. N., Merida, M., Kaliner, M. A. Allergic Disease Section, National Institute of Allergy and Infectious Diseases, Bethesda, Md. 20891. *Journal of Allergy and Clinical Immunology* (1992) Jun, Vol. 89 (6), pp. 1144–50.

To examine the localization of histamine H1 receptors (H1R) in human nasal mucosa, the autoradiographic distribution of H1R was studied in human nasal inferior turbinates. Cryostat sections were incubated with various concentration of (3H)pyrilamine in saturation-binding studies and with 1 nmol/l of (3H)pyrilamine for autoradiography. Nonspecific binding was determined by adding 2 μmol/l of pyrilamine. Scatchard analysis demonstrated high-affinity binding sites with a maximum binding capacity of H1R of  $193 \pm 46$  fmol/mg of protein, and dissociation constant was  $0.6 \pm 0.1$  nmol/l. Autoradiograms indicated H1R exist exclusively on the endothelium of vessels. No specific labelling could be observed in the submucosal glands or epithelium. These results extend and support our previous finding that histamine directly causes vascular permeability through H1R and stimulates nasal glandular secretion indirectly through reflexes. Author.

**Ipratropium bromide (Atrovent nasal spray) reduces the nasal response to methacholine.** Baroody, F. M., Majchel, A. M., Roecker, M. M., Roszko, P. J., Zegarelli, E. C., Wood, C. C., Naclerio, R. M. Johns Hopkins University School of Medicine, Department of Otolaryngology—Head and Neck Surgery, Baltimore, Md. *Journal of Allergy and Clinical Immunology* (1992) Jun, Vol. 89 (6), pp. 1065–75.

We investigated the efficacy of local ipratropium bromide on methacholine-induced nasal secretions in a double-blind, placebo-controlled experiment. Twenty subjects with perennial rhinitis received a total intranasal dose of 21, 42, 84, and 168 micrograms of ipratropium bromide or placebo in each nostril. One hour later, filter paper disks were used to deliver increasing doses of methacholine and to collect secretions from the left septum. Concomitantly, symptoms of rhinorrhea and nasal congestion were scored. Compared with doses of placebo, all doses of ipratropium bromide significantly reduced the methacholine-induced increase in nasal secretion weights and symptoms of rhinorrhea ( $p$  less than 0.01). The highest dose was significantly more effective than the lower doses in reducing secretion weights ( $p = 0.01$ ). We speculate that ipratropium bromide may prove beneficial for the treatment of rhinorrhea in perennial rhinitis. Furthermore, increasing the delivered dose to 168 micrograms may increase efficacy without augmenting side effects. Author.

**Dizziness in older people.** Baloh, R. W. Department of Neurology, Reed Neurological Research Center, Los Angeles, CA 90024-1769. *Journal of the American Geriatric Society* (1992) July, Vol. 40 (7), pp. 713–21.

Patients use the term dizziness to describe a sensation of altered orientation in space. Because visual, proprioceptive, somatosensory and vestibular signals provide the main information about the position of the head and body in space, damage to any of these systems can lead to a complaint of dizziness. Changes in the brain centers that integrate these orienting signals can also result in a sensation of dizziness. This review focuses on the pathophysiology, diagnosis, and management of the common causes of dizziness in older people. Author.

**Neurofibromatosis of the cervical spine. A report of eight cases.** Craig, J. B., Govender, S. Department of Orthopaedic Surgery, University of the Witwatersrand Medical School, Parktown, Johannesburg, Republic of South Africa. *Journal of Bone Joint Surgery (Br)* (1992) Jul, Vol. 74 (4), pp. 575–8.

Eight patients with neurofibromatosis presented with symptoms of cervical spine involvement over a period of 17 years, five of them within the second decade of life. The symptoms included neurological deficit in five, a neck mass in four, and deformity in three; only two complained of pain. Osteolysis of vertebral bodies with kyphosis of more than 90 degrees was the most common radiological feature. Posterior fusion failed in the one patient in whom it was performed. Good results were achieved by anterior fusion, alone, or

combined with posterior fusion. Surgical complications included one death in a patient with a malignant neurofibroma, and one case of transient neurological deterioration. Author.

**Sensorineural deafness inherited as a tissue specific mitochondrial disorder.** Jaber, L., Shohat, M., Bu, X., Fischel-Ghodsian, N., Yang, H. Y., Wang, S. J., Rotter, J. I. Department of Pediatrics, Felsenstein Research Institute, Beilinson Medical Centre, Sackler School of Medicine, Tel Aviv University, Israel. *Journal of Medical Genetics* (1992) Feb, Vol. 29 (2), pp. 86–90.

We present here a large Israeli-Arab kindred with hereditary deafness. In this family 55 deaf subjects (29M, 26F), who are otherwise healthy, have been identified and traced back five generations to one common female ancestor. The deafness is progressive in nature, usually presenting in infancy and childhood. Audiometry on six deaf and seven unaffected subjects was consistent with severe to profound sensorineural hearing loss. Based on formal family segregation analysis, the inheritance of deafness in this family closely fits the expectation of a two locus model owing to the simultaneous mutation of a mitochondrial gene and an autosomal recessive gene. Thus, this disorder appears to have the unusual features of being an inherited tissue specific mitochondrial disease and apparently requiring the homozygous presence of a nuclear gene for clinical expression. Most importantly, this disorder presents a unique opportunity to investigate the molecular basis of hereditary non-syndromic deafness and normal hearing. Author.

**Detection of EBV DNA in post-nasal space biopsy tissue from asymptomatic EBV-seropositive individuals.** Lees, J. F., Good-eve, A. C., Arrand, J. E., Ghosh, A. K., Jones, P. H., Arrand, J. R. Paterson Institute for Cancer Research, Christie Hospital, Manchester, United Kingdom. *Journal of Medical Virology* (1992) May, Vol. 37 (1), pp. 30–8.

The association between EBV and nasopharyngeal carcinoma (NPC) has been well documented although the precise role of the virus in the genesis of the tumour is not understood. We undertook this study to examine the prevalence of EBV infection in nasopharyngeal tissue obtained from 33 healthy individuals not considered to be at risk of developing NPC. Using polymerase chain amplification (PCR) and *in situ* hybridization we have identified EBV DNA in 70 per cent (23/33) of the tissues examined. Our data demonstrate that EBV is present at the site of tumour development in the low-risk population and by inference that the virus is also present before the onset of disease in the high-risk group. This survey supports the concept of NPC pathogenesis as a multifactorial process. Author.

**A case of neurofibromatosis 2 presenting with a mononeuritis multiplex.** Kilpatrick, T. J., Hjorth, R. J., Gonzales, M. F. Department of Neurology, Royal Melbourne Hospital, Victoria, Australia. *Journal of Neurology, Neurosurgery and Psychiatry* (1992) May, Vol. 55 (5), pp. 391–3.

A patient with neurofibromatosis 2 had an asymmetrical peripheral neuropathy. A nerve biopsy specimen revealed neurofibromatous changes, and the neuropathy may have been a direct consequence of neurofibromatosis. An apparent clinical response to immunosuppressive treatment and plasma exchange is also reported. Author.

**Psychiatric morbidity in patients with peripheral vestibular disorder: a clinical and neuro-otological study.** Eagger, S., Luxon, L. M., Davies, R. A., Coelho, A., Ron, M. A. National Hospital for Neurology and Neurosurgery, Queen Square, London, UK. *Journal of Neurology, Neurosurgery and Psychiatry* (1992) May, Vol. 55 (5), pp. 383–7.

This study reports the psychiatric morbidity in 54 patients with objective evidence of peripheral vestibular disorder seen three to five years after their original referral. A third of the patients were free from vestibular symptoms at follow up and a further third had experienced some improvement. Two thirds of the patients had experienced psychiatric symptoms during this period, although only 50 per cent were rated above the cut off point for significant psychiatric disturbance when interviewed. Panic disorder with or without agoraphobia and major depression were the commonest psychiatric diagnoses. Patients with classical 'labyrinthine' symptoms had a more severe canal paresis than the rest, but the degree of the abnormalities in the neuro-otological tests was unrelated to outcome or to psychiatric morbidity. On the other hand, there was a significant correlation between the presence of vestibular symptoms and psychiatric morbidity, which in turn correlated with measures of anxiety, perceived stress and previous psychiatric illness. Author.

**A potential new technique for awake fiberoptic bronchoscopy—use of the laryngeal mask airway.** Brimacombe, J., Newell, S., Swainston, R., Thompson, J. Department of Anaesthetics and Intensive Care, Cairns Base Hospital, Cairns, Qld. *Medical Journal of Australia* (1992) June 15, Vol. 156 (12), pp. 876–7.

**OBJECTIVE:** To assess the potential use of the laryngeal mask airway (LMA) for awake diagnostic fiberoptic bronchoscopy. **DESIGN:** A prospective study of 50 patients presenting for awake diagnostic bronchoscopy. All patients were premedicated with pethidine and atropine. The LMA was inserted under topical anaesthesia with sedation and the quality of the subsequent laryngoscopy and bronchoscopy was assessed for both patient and bronchoscopist. **SETTING AND PATIENTS:** All patients over the age of 18 years who presented to Cairns Base Hospital for diagnostic bronchoscopy were asked to participate in the study. **MAIN OUTCOME MEASURES:** The main factors determining the suitability of the technique were insertion rate, ease of the laryngoscopy and bronchoscopy, oxygen saturation and patient acceptance. **RESULTS:** The LMA was inserted successfully in all patients and the bronchoscopy subsequently performed. The first time insertion rate was 72 per cent. The mean oxygen saturation during the procedure was 98 per cent and patients tolerated the technique. **CONCLUSIONS:** The potential advantages of the LMA are that it is simple to insert, avoids nasal trauma and facilitates direct laryngoscopy. It allows respiration to be monitored and oxygen to be administered. The technique may have a role to play in patients whose respiratory function is in a critical condition, but confirmation of this awaits comparative trials. A period of training is recommended in anaesthetized patients before the LMA is used for awake diagnostic bronchoscopy. Author.

**Cerebral and cerebellar glial tumors in the same individual.** Kotwica, Z., Papierz, W. Department of Neurosurgery, Medical Academy of Lodz, Poland. *Neurosurgery* (1992) Mar, Vol. 30 (3), pp. 439–41.

We report histologically different gliomas occurring simultaneously in both the cerebrum and cerebellum in a 53-year-old woman. One tumor was a cerebellar astrocytoma, and the second was a temporal glioblastoma multiforme. Two months after the removal of both tumors, the third lesion, located in the basal ganglia, was found on a computed tomographic examination, but it was not verified histologically. We recommend a biopsy of one tumor when a diagnosis of multiple brain tumors is established based on a computed tomographic examination, in order to avoid the misdiagnosis of multicentric gliomas as brain metastases. Author.

**The radiological differentiation of acoustic neurinoma and meningioma occurring together in the cerebellopontine angle.** Wilms, G., Plets, C., Goossens, L., Goffin, J., Vanwambeke, K. Department of Radiology, University Hospitals K.U. Leuven, Belgium. *Neurosurgery* (1992) Mar, Vol. 30 (3), pp. 443–5; discussion 445–6.

A patient with right hearing loss, in whom computed tomographic scanning demonstrated a mass in the right cerebellopontine angle with widening of and extension into the internal auditory canal, but with important posterior extension and broad implantation on the surface of the petrous bone, is reported. On both T2-weighted and gadolinium-enhanced T1-weighted magnetic resonance images, there were clearly two separate tumoral lesions: an acoustic neurinoma extending into the internal auditory canal and a meningioma with broad implantation on the petrous apex. These findings were confirmed at surgery. Author.

**Prevalence of osseous changes in the temporomandibular joint of asymptomatic persons without internal derangement.** Brooks, S. L., Westesson, P. L., Eriksson, L., Hansson, L. G., Barsotti, J. B. University of Michigan School of Dentistry, Ann Arbor. *Oral Surgery, Oral Medicine, Oral Pathology* (1992) Jan, Vol. 73 (1), pp. 118–22.

There is a controversy in the literature regarding the prevalence of osseous changes in the temporomandibular joint (TMJ) of asymptomatic persons. Using cephalometrically corrected tomograms, we assessed one TMJ of each of 34 asymptomatic persons who had no arthrographic or magnetic resonance imaging evidence of internal derangement. Minimal flattening of the condyle or articular eminence was seen in 12 joints (35 per cent). More advanced osseous

changes such as erosion, osteophytosis, or sclerosis were not seen in any joint. The findings suggest that generally no osseous changes occur in the TMJ in asymptomatic persons without internal derangement. When osseous changes occur, they are confined to minimal flattenings. Minimal flattening is probably of no clinical significance because the persons were asymptomatic, and arthrography and magnetic resonance imaging showed no evidence of abnormalities in the soft tissues. Author.

**Adenoid cystic carcinoma of the head and neck: evaluation with MR imaging and clinical-pathologic correlation in 27 patients.** Sigal, R., Monnet, O., de Baere, T., Micheau, C., Shapeero, L. G., Julieron, M., Bosq, J., Vanel, D., Piekarski, J. D., Luboinski, B., et al. Department of Radiology, Institut Gustave Roussy, Villejuif, France. *Radiology* (1992) July, Vol. 184 (1), pp. 95–101.

Twenty-seven adenoid cystic carcinomas (ACCs) of the head and neck in 27 patients were evaluated in a retrospective study based on findings at magnetic resonance (MR) imaging and pathologic and clinical examination. Clinical follow-up was obtained over a mean period of 6.3 years (range of follow-up, three months to 17 years); all patients underwent one to seven MR examinations. On T2-weighted images, lesions with low signal intensity corresponded to highly cellular tumors (solid subtype) with a poor prognosis; lesions with high signal intensity corresponded to less cellular tumors (cribriform or tubular subtype) with a better prognosis. MR images were not specific in differentiation of ACCs from other types of tumors; this result underscores the need for biopsy to ensure correct diagnosis. Local, intracranial, osseous, and perineural invasion was depicted, but because of its lack of specificity, MR imaging caused overdiagnosis of tumor extension, particularly perineural spread and bone abnormalities. Author.

**Tracheal and bronchial cartilaginous rings: warfarin sodium-induced calcification.** Moncada, R. M., Venta, L. A., Venta, E. R., Fareed, J., Walenga, J. M., Messmore, H. L. Department of Radiology, Loyola University Medical Center, Maywood, IL 60153. *Radiology* (1992) August, Vol. 184 (2), pp. 437–9.

Progressive calcification of the cartilaginous rings (CCR) of the trachea and bronchi has been observed in patients undergoing prolonged prophylactic anticoagulant therapy with warfarin sodium. The purpose of this study was to validate the relationship of warfarin sodium and CCR, as well as to present the appearance and sex and age distribution of the normal degenerative CCR seen in the elderly. Chest radiographs were scrutinized for evidence of CCR in 92 patients who underwent warfarin sodium therapy and in 105 patients used as a control group. CCR was classified as not present (scored as 0), subtle (scored as 1), and extensive (scored as 2). In the warfarin sodium study group, 47 per cent of patients (43 of 92) exhibited level 1 or level 2 CCR. This proportion was 19 per cent (20 of 105) in the control group. The difference was statistically significant ( $p$  less than 0.001). A significant positive correlation ( $p$  less than 0.001) was also present between the duration of warfarin sodium therapy and increased levels of CCR. Author.

**Chemoreceptor control of the airways.** Widdicombe, J. G. Department of Physiology, St George's Hospital Medical School, London, U.K. *Respiratory Physiology* (1992) March, Vol. 87 (3), pp. 373–81.

The peripheral chemoreceptors act reflexly not only on respiration, but also on many motor systems in the respiratory tract. They cause a reflex bronchoconstriction, although this may be modified or even reversed by secondary dilator reflexes such as that from pulmonary stretch receptors. They promote a reflex secretion of mucus from submucosal glands in the trachea, and possibly other parts of the airways. They cause systemic reflex vasoconstriction both in nose (with reduction in airflow resistance) and trachea, and probably in the bronchi. There is also a reflex pulmonary vasoconstriction, although the strength of this has not been determined. The larynx dilates during peripheral chemoreceptor stimulation, as does the oropharynx. All these changes affect airway calibre, most components increasing it but some having the opposite effect. In turn these airway responses will affect lung ventilation and blood-gas tensions. The whole respiratory tract seems to be an important target organ for reflexes from the peripheral chemoreceptors. Author.