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# Abstract Selection

**Postoperative radiotherapy of squamous cell carcinoma of the tonsil. Factors influencing survival and time to recurrence.** Kajanti, M. J., Holsti, L. R., Mantyla, M. M. Department of Radiotherapy and Oncology, Helsinki University Central Hospital, Finland. *Acta Oncologica* (1992), Vol. 31 (1), pp. 49–52.
From 1970 to 1988, 40 patients with squamous cell carcinoma of the tonsillar region were treated with surgery and postoperative split-course radiotherapy. The five-year survival rate for all the patients was 52.5 per cent; the corresponding figure was 100 per cent in stage I, 75 per cent in stage II, 63 per cent in stage III and 15 per cent in stage IV. The local control rate was 100 per cent in stage I, 89 per cent in stage II, 87 per cent in stage III and 38 per cent in stage IV. In the proportional hazards regression analysis T- and N-category and pretreatment Karnofsky index had the strongest association to survival, whereas T- and N-category and total radiation dose were most strongly associated to time to recurrence. Author.

**Cervical and craniocervical posture as predictors of craniofacial growth.** Solow, B., Siersbaek-Nielsen, S. Institute of Orthodontics, Royal Dental College, Copenhagen, Denmark. *American Journal of Orthodontics and Dentofacial Orthopedics* (1992) May, Vol. 101 (5), pp. 449–58.
The present study aimed to determine whether growth changes in craniofacial structure could be predicted by variables expressing the postural relations of the head and the cervical column. The sample comprised 34 children, 16 girls and 18 boys. Cephalometric radiographs obtained in natural head position (mirror position) were taken on two occasions before orthodontic treatment. Mean age was 9.9 years at time 1 and 12.7 years at time 2. Selection of the sample was based on skeletal maturity at time 2 indicating peak activity in pubertal growth. Forty-one reference points and four fiducial points were digitized on each film. Individual growth changes in craniofacial structure were determined by computerized structural superimposition of the digitized sets of points. Correlation coefficients were calculated between eleven postural variables at the first observation and the subsequent growth rate in 36 structural variables. Uniform fields of low to moderate correlation coefficients significant at the 5 per cent, 1 per cent and 0.1 per cent levels (0.3 to 0.6) were found for eight structural variables, indicating that a small craniocervical angle and a backward-inclined upper cervical column at time 1 was associated with horizontal facial development characterized by reduced backward displacement of the temporomandibular joint (TMJ), large maxillary growth in length, increased facial prognathism, and larger than average true forward rotation of the mandible; whereas, a large craniocervical angle and an upright position of the upper cervical column at time 1 was associated with vertical facial development characterized by large backward displacement of the TMJ, reduced growth in length of the maxilla, reduced facial prognathism, and less than average true forward rotation of the mandible. The findings are in agreement with a theoretical model for the developmental interaction between head posture and facial structure. Author.

**Effects of histamine on guinea pig nasal mucosal secretion.** Gawin, A. Z., Baraniuk, J. N., Kaliner, M. Allergic Diseases Section, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland 20892. *American Journal of Physiology* (1992) May, Vol. 262 (5 pt 1), pp. L590–9.
A guinea pig model of nasal secretory responses was developed to assess the contributions of vascular permeability and glandular secretion in the production of nasal secretions. The secretory responses to saline, histamine, chlorpheniramine (H1-antagonist), cimetidine (H2 antagonist), and atropine (muscarinic antagonist) on ipsilateral and contralateral (reflex) secretory responses were analyzed by measurement of total protein (Lowry method), 125I-labelled bovine serum albumin (1251-BSA; administered intravenously) and guinea pig albumin (measured by enzyme-linked immunoabsorbent assay) in nasal secretions. Significant, dose-dependent secretion of total protein, 125I-BSA, and albumin occurred after histamine provocation on the ipsilateral challenged nostril and at several doses on the contralateral (unchallenged) nostril. Histamine-induced total protein and albumin secretion were blocked by chlorpheniramine but not cimetidine. Atropine pretreatment partially reduced total protein secretion. Guinea pig albumin immunoreactive material was detected by immunohistochemistry in superficial vessels, interstitial areas, the epithelium, between glandular cells of submucosal glands, and in gland lumens. Approximately 10 per cent of submucosal gland cells contained albumin immunoreactive material in their cytoplasm. Autoradiography demonstrated that intravenously injected 125I-BSA moved quickly into extracellular areas and then to the epithelium and glands. These observations suggest that histamine stimulates vascular permeability, glandular secretion, and sensory nerve stimulation and that the ipsilateral and contralateral glandular secretion was at least partly due to an atropine-inhibitable cholinergic reflex. Author.

**Use of Tranilast (N-(3,4-dimethoxycinnamoyl) anthranilic acid) in secretory otitis media.** Ogino, S., Harada, T., Matsunaga, T., Tominaga, Y. Department of Otolaryngology, Osaka University Medical School, Japan. *Annals of Allergy* (1992) May, Vol. 68 (5), pp. 407–12.
Treatment with Tranilast of 45 patients (87 ears) with secretory otitis media was studied. Tranilast was administered orally for at least one month. The evaluation of its effectiveness was based on changes in subjective symptoms, tympanic membrane findings, hearing level, and tympanometry. Subjects were divided into three groups; allergy group (group I), nonallergy group (group II) and deformity-disorder group (group III). The respective percentages of Tranilast efficacy for these three groups were 46.2 per cent, 42.1 per cent and 10 per cent, respectively. Equivalent effectiveness was demonstrated whether or not allergies were present. After Tranilast administration, the drug and its metabolites were found in MEE samples from all the patients. Anaphylatoxin (C3a, C5a) activities in the MEE were shown to decrease gradually after Tranilast administration. Tranilast may be effective for treating secretory otitis media because it directly suppresses anaphylatoxin present in middle ear effusion. Author.

**Spectral analysis of the rapid eye movement sleep electroencephalogram in right and left temporal regions: a biological marker of Alzheimer's disease.** Petit, D., Montplaisir, J., Lorrain, D., Gauthier, S. Centre d'etude du sommeil, Hopital du Sacre-Coeur, Montreal, Canada. *Annals of Neurology* (1992) August, Vol. 32 (2), pp. 172–6.
Spectral analysis of electroencephalograms (EEGs) for both wakefulness and rapid eye movement (REM) sleep was performed over the temporal regions in eight patients with mild to moderate Alzheimer's disease and in eight age-matched control subjects. EEG slowing in Alzheimer patients was found to be much more prominent during REM sleep than during wakefulness. In addition, asymmetry on the awake EEG of Alzheimer patients was found to be even more prominent than on the REM sleep EEG. When EEG values of the most impaired hemisphere during REM sleep were examined, no

overlap was found between the two groups either for the ratio of slow to fast frequencies or for percent power of each of the frequency bands. This was not the case for the awake EEG. These results suggest that diagnostically meaningful cutoff values for discriminating patients with mild to moderate Alzheimer's disease from age-matched control subjects can be derived from the REM sleep EEG of the temporal lobe. Author.

**Tumour growth rates in squamous carcinoma of the head and neck measured by in vivo bromodeoxyuridine incorporation and flow cytometry.** Forster, G., Cooke, T. G., Cooke, L. D., Stanton, P. D., Bowie, G., Stell, P. M. University Department of Surgery, Glasgow Royal Infirmary, U.K. *British Journal of Cancer* (1992) May, Vol. 65 (5), pp. 698–702.
The cell kinetics of 82 squamous cell carcinomas of the head and neck were studied by in vivo administration of the thymidine analogue, bromodeoxyuridine (BrdUrd). Ploidy, BrdUrd labelling index (LI), duration of S-phase (Ts), potential doubling time (Tpot) and S-phase fraction (SPF) were measured by flow cytometry on 50 microns paraffin embedded sections. The range of values obtained compared well with other in vivo cell kinetic studies of head and neck cancer. Aneuploid tumours had a significantly higher BrdUrd labelling index and SPF, and a short Tpot than diploid tumours. To validate the use of 50 microns sections for measuring cell kinetic parameters by flow cytometry a comparison of values obtained by 50 microns sections and small blocks of tissue was made. No significant difference was found between the two methods. Reproducibility of values between two consecutive thick sections was also good. We conclude that reproducible cell kinetic measurements can be made in tumour samples using 50 microns sections of BrdUrd labelled tissue. Author.

**Osteomyelitis of the mandible: a complication of routine dental extractions in alcoholics.** Davies, H. T., Carr, R. J. Odstock Hospital, Salisbury and Ashford Hospital, Middlesex. *British Journal of Oral and Maxillofacial Surgery* (1990) June, Vol. 28 (3), pp. 185–8.
Osteomyelitis is a rare sequel to a dental extraction. Three cases are described where osteomyelitis followed routine dental extractions in patients with a history of alcoholism. It is suggested that depression of the host's defences, due to alcoholism, modified the response to and the spread of this serious infection. Such patients represent a high risk group and should be identified prior to treatment to avoid unnecessary complications. Author.

**Accidental full thickness burn of the ear lobe following division of the great auricular nerve at parotidectomy.** Brown, A. M., Wake, M. J. Department of Oral Surgery, Queen Elizabeth Hospital, Edgbaston, Birmingham. *British Journal of Oral and Maxillofacial Surgery* (1990) June, Vol. 28 (3), pp. 178–9.
Division of the great auricular nerve is commonly performed during superficial parotidectomy and leads to anaesthesia of the ear lobe. In the case presented here, this gave rise to an accidental self-inflicted thermal burn of the ear lobe. This might have been avoided had the posterior branch of the nerve been preserved. Author.

**Metastatic renal clear cell carcinoma of the jaws. Two cases illustrating clinical and pathological diagnostic problems.** Jones, G. M., Telfer, M. R., Eveson, J. W. University Department of Oral Medicine, Surgery and Pathology, Bristol Dental Hospital and School. *British Journal of Oral Maxillofacial Surgery* (1990) June, Vol. 28 (3), pp. 172–5.
Two cases of metastatic renal clear cell carcinomas of the mandible are presented in which the jaw symptoms preceded the discovery of the primary lesions. Their presentation mimicked vascular abnormalities both clinically and on special investigations and both required biopsy, one of which was a major excision, for diagnosis. The histological differential diagnosis of metastatic renal clear cell carcinoma from other clear cell tumours arising in the orofacial tissues can also be difficult, often requiring specialized knowledge and techniques. These points illustrate that the differential diagnosis of a pulsatile soft tissue jaw tumour developing below intact mucosa and eroding bone, should include metastatic tumour as well as vascular anomaly, vasoformative tumour, extra nodal lymphoma and primary bone tumour. Author.

**The investigation of osteoradionecrosis of the mandible by near infra red spectroscopy.** Hutchison, I. L., Cope, M., Delpy, D. T., Richardson, C. E., Harris, M. Eastman Dental & University College Hospitals, London. *British Journal Oral and Maxillofacial Surgery* (1990) June, Vol. 28 (3), pp. 150–4.
The results of near infrared spectroscopy in eight patients with osteoradionecrosis of the mandible are presented. These suggest that sites of osteoradionecrosis may be marked by decreased amounts of deoxygenated haemoglobin. The advantages and potential of near infrared spectroscopy are discussed but the technique requires further redefinement. Author.

**The investigation of osteoradionecrosis of the mandible by 99mTc-methylene diphosphonate radionuclide bone scans.** Hutchison, I. L., Cullum, I. D., Langford, J. A., Jarritt, P. H., Ell, P. J., Harris, M. Eastman Dental & University College Hospitals, London. *British Journal of Oral and Maxillofacial Surgery* (1990) June, Vol. 28 (3), pp. 143–9.
The need for a reliable non-invasive investigation in osteoradionecrosis (ORN) of the mandible is discussed. The results of 99mTc-methylene diphosphonate bone scans using single photon emission tomography, and measuring dynamic uptake in 13 patients are presented. These suggest that sites of osteoradionecrosis may be defined by a paradoxically increased uptake of 99mTc-methylene diphosphonate. Author.

**Quantification of the effects of long-term unilateral naris closure on the olfactory bulbs of adult mice.** Henegar, J. R., Maruniak, J. A. Biological Sciences, University of Missouri, Columbia 65211. *Brain Research* (1991) December 24, Vol. 568 (1–2), pp. 230–4.
The effects of unilateral naris closure on the olfactory bulbs of adult mice were assessed quantitatively by measuring four parameters. Naris closures were performed when animals were at least five months of age and lasted for four to eight months. The first parameter measured was mitral cell number, which revealed that there was no significant effect of closure on numbers of these cells. The next parameter measured was the area of the external plexiform layer (EPL). The area of the EPL was 41 per cent smaller in the closed-side olfactory bulbs than in the open-side olfactory bulbs ($P$ less than 0.01). Comparisons of the areas of the granule cell layers (GCL) showed that the closed-side GCL was 25 per cent smaller than the open-side GCL ($P$ less than 0.01). Finally, the number of cells in the open- and closed-side GCLs were compared. The number of cells in the closed-side GCL was 30 per cent lower than the number of cells in the open-side GCL ($P$ less than 0.01). These data show that the shrinkage of closed-side olfactory bulb after naris closure in adult mice is due, at least in part, to the loss of granule cells and not to the loss of the main output neurons, the mitral cells. Author.

**Functional upper airway obstruction. Psychogenic pharyngeal constriction.** Nagai, A., Yamaguchi, E., Sakamoto, K., Takahashi, E. Department of Respiratory Medicine, Ohara Medical Centre, Tokyo Women's Medical College, Japan. *Chest* (1992) May, Vol. 101 (5), pp. 1460–1.
A 15-year-old boy, known to have asthma, developed acute inspiratory airway obstruction with marked stridor. Spirometry indicated extrathoracic airway obstruction and a bronchofiberoptic examination disclosed narrowing in the hypopharynx. After administration of sedatives, the stridor suddenly disappeared. Psychotherapy decreased the frequency of subsequent stridor attacks. It is suggested that psychogenic pharyngeal constriction may have caused the upper airway obstruction with respiratory distress. Author.

**Topical vasoconstrictor (oxymetazoline) does not affect histamine-induced mucosal exudation of plasma in human nasal airways (see comments).** Svensson, C., Pipkorn, U., Alkner, U., Baumgarten, C. R., Persson, C. G. Department of Oto-Rhino-Laryngology, University, Lund, Sweden. *Clinical and Experimental Allergy* (1992) March, Vol. 22 (3), pp. 411–6.
Comment in: *Clinical and Experimental Allergy* (1992) March, 2293: 319–20.
Mucosal exudation of almost unfiltered plasma proteins, plasma-derived mediators and fluid has recently been advanced as a major respiratory defence mechanism. Oxymetazoline chloride is a com-

monly used decongestant agent. By reducing blood flow it may reduce mucosal exudation and thus compromise the mucosal defence capacity. This study examines the effect of topically applied oxymetazoline on histamine-induced plasma exudation into human nasal airways. Twelve normal volunteers participated in a double-blind, randomized, cross-over and placebo-controlled study with pretreatment with a single dose oxymetazoline chloride (5 micrograms or 50 micrograms; a dose previously known to reduce nasal mucosal blood flow by almost 50 per cent) prior to the histamine challenge sequence. Nasal lavages were performed every 10 min for 140 min, and three histamine challenges were performed at 30-min intervals during this period. The concentrations of two exudative indices, N-alpha-tosyl-L-arginine methyl ester (TAME)-esterase activity and albumin, were measured in the nasal lavage fluids. Nasal symptoms (sneezing, nasal secretion and blockage) were assessed by a scoring technique. Histamine induced all three symptoms with correlatively raised levels of the biochemical markers for plasma exudation. Oxymetazoline chloride caused a significant decrease in nasal stuffiness, but did not influence the other nasal symptoms or the histamine-induced plasma exudation. It is concluded that histamine-induced plasma exudation is not influenced by topical oxymetazoline. Thus, an important airway defence reaction such as plasma exudation may be little affected by topical alpha-adrenoreceptor-mediated vasoconstriction. It is further suggested that the antiblockage effect of oxymetazoline can be utilized in nasal research without interfering with the exudative indices which appear on the mucosal surface as a quantitative reflection of the airway tissue involvement in inflammatory processes. Author.

**Mechanisms and patient compliance of dust-mite avoidance regimens in dwellings of mite-allergic rhinitis patients (see comments).** Kniest, F. M., Wolfs, B. J., Vos, H., Ducheine, B. O., van Schayk-Bakker, M. J., de-Lange, P. J., Vos, E. M., van Bronswijk, J. E. Interuniversity Task Group Home and Health, Utrecht, The Netherlands. *Clinical and Experimental Allergy* (1992) July, Vol. 22 (7), pp. 681–9.
Comment in: *Clinical and Experimental Allergy* (1992) July, 22(7): 657–8.
We report on the mechanisms, the environmental changes and patient compliance with regard to conventional and new dust and mite avoidance measures to prevent allergic symptoms caused by mite allergens, taking into account both allergen contamination and the developmental success of pyroglyphid Acari. Twenty patients with persisting rhinitic complaints were selected and matched. Although the patients had performed some conventional dust and mite avoidance measures (patient compliance was 90 per cent), the dwellings proved to be a stimulus for mite development. Moisture problems due to faulty construction and excessive moisture production were common. Since humidity conditions could not be changed at short notice, the 20 homes were subjected to the new variants of mite allergen avoidance based on intensive cleaning without (control) and with an acaricide incorporated (acaricidal cleaner (Acarosan)). After the carrying out of conventional avoidance measures, these patients still had allergic symptoms, and dust from only 23 to 52 per cent of their textile objects was under the proposed guanine (mite faeces indicator) risk level. Only the araricidal cleaner was able to decrease the allergenic mite load (and the burden of the patients) significantly in this 12 month period. With respect to mite-extermination, acaricidal cleaning was 88 per cent better than intensive cleaning. Reduction of guanine was 38 per cent better in the Acarosan treatment group. Clinical results have been reported elsewhere. A significant difference in favour of the acaricidal cleaning was seen in both subjective (as regards symptoms) and in objective data (total IgE). Another 50 patients were questioned. About 90% were willing to spend two weekends (70%), or at the most one weekend (20%) per years sanitizing the dwelling by cleaning it with the whole family. The authors of this report consider acaricidal cleaning to be a significant improvement in the management of mite-allergic diseases, such as rhinitis. Compared with the replacement of home textiles, the treatment is less expensive and more effective. Patient compliance is acceptable, but depends on acceptance by physicians and the initial motivation and consequent burden on the patient. Author.

**Acute gonococcal flexor tenosynovitis in an adolescent male with pharyngitis. A case report and literature review.** Schaefer, R. A., Enzenauer, R. J., Pruitt, A., Corpe, R. S. Department of Surgery, Fitzsimons Army Medical Centre, Aurora, Colorado 80045. *Clinical Orthopedics and Related Research* (1992) August (281), pp. 212–5.
A 15-year-old boy had acute gonococcal flexor tenosynovitis of the middle finger associated with symptomatic gonococcal pharyngitis. The patient had a history of blunt trauma to the hand. The need for a careful history in any sexually active adolescent is emphasized. Acute flexor tenosynovitis may be the only manifestation of disseminated gonococcal infection. Author.

**Imaging of the pharynx and esophagus.** Halvorsen, R. A. University of California, San Francisco. *Current Opinions in Radiology* (1992) June, Vol. 4 (3), pp. 18–25.
The year 1991 was a year of innovation, with interesting papers published in the imaging as well as the medical and surgical literature. Several reports described novel techniques using transcutaneous ultrasound to evaluate the swallowing mechanism; another used CT and ultrasound of the neck for staging esophageal carcinoma. The new field of endoscopic ultrasound was again a subject of much investigation and was compared with CT in the staging of esophageal cancer. One study suggested that endoscopic ultrasound was superior to CT in staging esophageal cancer whereas another found that endoscopic ultrasound had an accuracy rate of only 59 per cent in detecting local invasion. MR imaging and CT were reevaluated for staging esophageal carcinoma using criteria that were modified slightly from previous techniques. These new criteria simplified the detection of aortic and pericardial invasion and staged esophageal carcinoma accurately. The definition of 'normal' was refined this year. For instance, in a study of swallowing in asymptomatic and presumably normal elderly individuals, a number of findings were encountered that are considered abnormal in the younger patient. Another study documents normal swallowing patterns in the infant. Other papers provided refinements in radiographic examination techniques as well as excellent reviews of anomalies, esophagitis, and the management of esophageal foreign bodies. The review is divided into two sections that discuss the pharynx and the esophagus. Author.

**Low levels of ras p21 oncogene expression correlates with clinical outcome in head and neck squamous cell carcinoma.** Field, J. K., Yiagnisis, M., Spandidos, D. A., Gosney, J. R., Papadimitriou, K., Vaughan, E. D., Stell, P. M. Department of Clinical Dental Sciences, School of Dentistry, University of Liverpool, UK. *European Journal of Surgical Oncology* (1992) April, Vol. 18(2), pp. 168–76.
We have previously demonstrated that the Ha-ras and the Ki-ras oncogenes are overexpressed in squamous cell carcinoma of the head and neck. In this study we have used the Y13-259 monoclonal antibody to p21 ras to determine if expression of the ras oncoprotein correlates with any of the clinico-pathological parameters or with survival in 69 patients with squamous cell carcinoma of the head and neck. Forty-four specimens were from patients with previously untreated tumours and 25 from patients with previously treated disease. We have found a correlation between low levels of ras expression and the disease-free survival period in patients with previously untreated tumours. Three per cent of the patients with ras negative staining were alive 60 months after diagnosis, whereas 54 per cent of the patients with positive staining were still alive after the same time period ($P$ less than 0.05). Author.

**Electrical acustimulation relieves vection-induced motion sickness.** Hu, S., Stern, R. M., Koch, K. L. Department of Psychology, Pennsylvania State University, University Park. *Gastroenterology* (1992) June, Vol. 102 (6), pp. 1854–8.
The aim of this study was to examine the effects of electrical acustimulation on gastric myoelectric activity and severity of symptoms of motion sickness. In experiment 1, 16 Chinese subjects received electrical acustimulation in one of two sessions. In experiment 2, 45 white and black American subjects were randomly divided into three groups: acustimulation, sham acustimulation, and control. Each subject sat in an optokinetic drum for 15 mins baseline and 15 mins of drum rotation. Subjects' electrogastrograms and subjective symptoms of motion sickness were obtained. In experiment 1, the mean symptom score and tachyarrhythmia during acustimulation sessions were significantly lower than during no-acustimulation sessions. In experiment 2, the mean symptom score of the acustimulation group was significantly lower than that of the sham-stimulation group and

the control group; tachyarrhythmia in the acustimulation group was significantly less than that of the control group but not the sham-stimulation group. In conclusion, electrical acustimulation reduces the severity of symptoms of motion sickness and appears to decrease gastric tachyarrhythmia. Author.

**Retrospective analysis of 5,037 patients with nasopharyngeal carcinoma treated during 1976–1985: overall survival and patterns of failure.** Lee, A. W., Poon, Y. F., Foo, W., Law, S. C., Cheung, F. K., Chan, D. K., Tung, S. Y., Thaw, M., Ho, J. H. Institute of Radiology and Oncology, Queen Elizabeth Hospital, Kowloon, Hong Kong. *International Journal of Radiation Oncology, Biology and Physics* (1992), Vol. 23 (2), pp. 261–70.
This is a retrospective analysis of 5,037 patients with squamous cell carcinoma of the nasopharynx treated during the years 1976–1985. The stage distribution according to Ho's classification was 9 per cent Stage I, 13 per cent II, 50 per cent III, 22 per cent IV, and 6 per cent Stage V. Only 4,488 (89 per cent) patients had a full course of megavoltage radiation therapy. The median equivalent dose to the nasopharyngeal region was 65 Gy and cervical region in node-positive patients 53 Gy. Seventy per cent (906/1290) of the node-negative patients had no prophylactic neck irradiation. The overall actuarial 10-year survival rate was 43 per cent, and the corresponding failure-free survival 34 per cent. Altogether, 4,157 (83 per cent) patients achieved complete remission lasting more than six months, but 53 per cent (2205/4157) of them relapsed after a median interval of 1.4 years. The 10-year actuarial local, regional, and distant failure-free rates were 61 per cent, 64 per cent and 59 per cent, respectively. Thirty-eight per cent (338/891) of all patients with local recurrence achieved second local remission. The local complete remission rate with aggressive re-irradiation alone was 47 per cent (333/706). But 37 per cent (124/338) of the responders recurred the second time. The incidence of distant failure correlated significantly with both the N-stage and the T-stage, with the highest (57%) occurring in patients with N3 disease. The incidence of nodal relapse in node-negative patients was 11% (44/384) among those given prophylactic neck irradiation, but 40% (362/906) among those without. Therapeutic irradiation achieved a complete regional remission rate of 90% (306/339). However, despite successful salvage, these patients had a significantly higher distant failure rate than those without nodal relapse, even if they remained local-failure-free (21% vs 6%). Patients treated during 1981–1985 achieved significantly better treatment results than those treated during 1976–1980, especially in terms of the overall survival (57% vs 47% at 5-year), the overall failure-free survival (42% vs 35% at 5-year), and the local failure-free rate (70% vs 63% at 5-year). The possible contributing factors are discussed.

**Lack of association between otoacoustic emissions and hearing difficulty in subjects with normal hearing thresholds.** Lutman, M. E., Saunders, G. H. MRC Institute of Hearing Research, University of Nottingham, University Park, United Kingdom. *Journal of the Acoustical Society of America* (1992) August, Vol. 92 (2 (Pt 1)), pp. 1184–5.
Evoked otoacoustic emissions (EOAE) are a sensitive indicator of subtle cochlear damage and hence might explain why some people complain of excessive difficulty understanding speech in a background of noise, despite having normal hearing thresholds. This phenomenon has been termed 'Obscure Auditory Dysfunction' (OAD). Recorded EOAE waveforms from a group of 50 OAD patients were compared with those from a group of 50 matched controls. No significant difference could be found between the two groups across a range of objective and subjective descriptors of the EOAEs. Any cochlear component of OAD does not appear to affect the function of the outer hair cells sufficiently to modify EOAEs materially. Author.

**Topical glucocorticoids inhibit activation by allergen in the upper respiratory tract.** Lozewicz, S., Wang, J., Duddle, J., Thomas, K., Chalstrey, S., Reilly, G., Devalia, J. L., Davies, R. J. Department of Respiratory Medicine, St Bartholomew's Hospital, London, England. *Journal of Allergy and Clinical Immunology* (1992) May, Vol. 89 (5), pp. 951–7.
We have studied the effect of a topically administered glucocorticoid, fluticasone propionate (FP), on infiltration and activation of eosinophils in the nasal mucosa after provocation with allergen. Forty-four patients with seasonal allergic rhinitis entered a double-blind, crossover study in which they underwent treatment with either FP (200 micrograms once daily) or identical placebo for two weeks. Patients then underwent nasal-allergen provocation followed by nasal lavage and biopsy at one of several time points between 0 and 8 hours. Patients subsequently received the alternate treatment for two weeks before repeat allergen provocation, nasal lavage, and biopsy, as before. Biopsy specimens of nasal mucosa obtained during the immediate allergic response demonstrated an influx of eosinophils (stained by monoclonal antibody EG1) of similar magnitude during both FP and placebo treatment. Significantly, fewer eosinophils in these biopsy specimens were activated (stained by monoclonal antibody EG2) after treatment with FP compared with that after placebo treatment (median values, 8.8 and 36. 6 cells per square millimeter, respectively; $P$ less than 0.02). The concentration of eosinophil cationic protein in nasal lavage fluid was significantly elevated above baseline from two to eight hours after allergen, and this increase was abolished by treatment with FP. These results suggest that topical glucocorticoids inhibit allergen-induced activation of eosinophils in allergic rhinitis. Author.

**Ibuprofen augments bradykinin-induced glycoconjugate secretion by human nasal mucosa in vivo.** Baraniuk, J. N., Silver, P. B., Kaliner, M. A., Barnes, P. J. Department of Thoracic Medicine, National Heart and Lung Institute, London, England. *Journal of Allergy and Clinical Immunology* (1992) May, Vol. 89 (5), pp. 1032–9.
Bradykinin (BK) stimulates vascular permeability and glycoconjugate secretion in human nasal mucosa. Since some of the effects of BK may be mediated by autocrine generation of arachidonic acid metabolites, the influence of ibuprofen, a cyclooxygenase inhibitor, on BK-induced nasal secretion was studied. Six normal male subjects had nasal provocations with 0, 10, 100 and 1000 nmol of BK before and after treatment with 400 mg of ibuprofen. Secretions were collected by nasal lavage. Total protein (marker of protein secretion), glycoconjugate (mucous cell marker), lysozyme (serous cell marker), and albumin (marker of vascular permeability) were measured. Basal glycoconjugate secretion was higher after ibuprofen (219 $\pm$ 32 micrograms/ml) than before (81 $\pm$ 56 micrograms/ml; $P$ less than 0.05 by analysis of variance). BK stimulated significant, dose-dependent albumin, total protein, and glycoconjugate secretion. Lysozyme secretion was not stimulated. BK (1000 nmol) significantly increased total protein secretion, 10-fold to 20-fold, and albumin secretion by 40-fold to 60-fold. Ibuprofen did not alter BK-induced total protein or albumin secretion. Glycoconjugate secretion after ibuprofen treatment was significantly higher than normal at 10 nmol ($P$ less than 0.05), 100 nmol ($P$ less than 0.02), and 1000 nmol of BK (519 micrograms/ml $\pm$ 74 versus 213 $\pm$ 15 micrograms/ml; $P$ less than 0.05). Therefore, BK induces vascular permeability and exocytosis from glycoconjugate-containing cells but does not stimulate serous cells. Ibuprofen increases baseline secretion of glycoconjugate and enhances BK-induced glycoconjugate secretion. Ibuprofen does not alter BK-induced vascular permeability. Author.

**Ipratropium bromide aqueous nasal spray for patients with perennial allergic rhinitis: a study of its effect on their symptoms, quality of life, and nasal cytology.** Meltzer, E. O., Orgel, H. A., Bronsky, E. A., Findlay, S. R., Georgitis, J. W., Grossman, J., Ratner, P., Wood, C. C. Allergy and Asthma Medical Group and Research Centre, San Diego, CA. *Journal of Allergy and Clinical Immunology* (1992) August, Vol. 90 (2), pp. 242–9.
Ipratropium bromide is an anticholinergic agent with topical activity that has been studied as a freon-propelled aerosol spray for therapy of nonallergic rhinitis. This is the first report of its use both as an aqueous nasal spray and in perennial allergic rhinitis. In this study 123 patients who had symptoms of perennial allergic rhinitis were randomized to receive ipratropium bromide 21 micrograms or 42 micrograms or placebo, one spray per nostril three times a day for four weeks. Patients maintained daily diaries of duration and severity of nasal symptoms and were evaluated weekly. Mean duration and severity or rhinorrhea was decreased in both ipratropium bromide treatment groups by comparison with placebo, with consistently greatest improvement in the group treated with ipratropium bromide 42 micrograms per nostril three times a day. No statistically significant differences occurred among treatment groups in duration or severity of postnasal drip, congestion, or sneezing. Seventy per cent of patients treated with 42 micrograms of ipratropium bromide

thought it had good or excellent effect on rhinorrhea (*P* less than 0.05 vs placebo); significantly more patients thought that it had improved the quality of life ($p \approx 0.02$). No changes occurred in nasal cytology, and no significant local or systemic adverse events occurred. These data indicate that ipratropium bromide significantly decreases the rhinorrhea of perennial allergic rhinitis. Author.

**Development of a polymerase chain reaction-probe test for identification of Alloiococcus otitis.** Aguirre, M., Collins, M. D. Department of Microbiology, Agriculture and Food Research Council Institute of Food Research, Reading Laboratory, United Kingdom. *Journal of Clinical Microbiology* (1992) August, Vol. 30 (8), pp. 2177–80.
A rapid polymerase chain reaction test was developed for specific identification of the human middle ear pathogen Alloiococcus otitis. Primers for the enzymatic amplification reaction were designed from highly specific sequences within the 16S rRNA gene. In addition, a confirmatory test based on hybridization of the polymerase chain reaction products to a specific internal probe was developed. Author.

**Humoral immune response patterns of human mucosae: induction and relation to bacterial respiratory tract infections.** Brandtzaeg, P. Laboratory for Immunohistochemistry and Immunopathology, University of Oslo, National Hospital, Rikshospitalet, Norway. *Journal of Infectious Diseases* (1992) June, Vol. 165 Suppl 1, pp. S167–76.
Immunoglobulin-producing cells in mucosal tissues, quantitatively the body's most important humoral immune system, synthesize mainly dimers and larger polymers of IgA (poly-IgA) with incorporated J (joining) chain. Poly-IgA is actively transported to exocrine secretions by a transmembrane epithelial glycoprotein called secretory component. Enhancing secretory immunity by oral vaccination is an interesting possibility, but mucosal antigen uptake and local immune regulation are complex and only partly understood. Immunoglobulin isotype response patterns in the upper respiratory mucosa and distal gut are strikingly different. The preferential production of IgA1 in nasal and bronchial mucosae is intriguing in view of the frequent synthesis of IgA1-specific proteases by Haemophilus influenzae, Streptococcus pneumoniae, and Neisseria meningitidis. A relationship of proneness to produce invasive disease and enzymatically induced deterioration of secretory immunity has been proposed. Differences in mucosal immune response patterns among patients with selective IgA deficiency or IgG subclass deficiencies also suggest that local humoral immunity is an important variable in resistance to infections. Author.

**Hereditary motor and sensory neuropathy with deafness, mental retardation and absence of large myelinated fibres.** Mancardi, G. L., Di Rocco, M., Schenone, A., Veneselli, E., Doria, M., Abbruzzese, M., Tabaton, M., Borrone, C. Institute of Neurology, University of Genova, Italy. *Journal of Neurological Science* (1992) Vol. 110 (1–2), pp. 121–30.
Two brothers with a presumably hereditary motor and sensory polyneuropathy (HMSN), sensory-neural hearing loss and mental retardation had clinical features and neuropathological changes in the sural nerve which may set the disorder apart from previously described types of HMSN. Consecutive sural nerve biopsies from one case showed absence of large myelinated fibres and a normal complement of small fibres. We infer from our findings that a developmental abnormality with faulty growth and subsequent axonal atrophy may be responsible. Author.

**Current results of the retrosigmoid approach to acoustic neurinoma (see comments).** Ebersold, M. J., Harner, S. G., Beatty, C. W., Harper, C. M. Jr., Quast, L. M. Department of Neurologic Surgery, Mayo Cli nic, Rochester, Minnesota. *Journal of Neurosurgery* (1992) June, Vol. 76 (6), pp. 901–9.
Comment in: *Journal of Neurosurgery* (1992) June, 76(6): 897–900.
Since 1984 when cranial nerve monitoring became routinely performed at the Mayo Clinic, 255 patients have undergone 256 procedures using the retrosigmoid approach for the removal of acoustic neurinomas. Of these, 221 patients had some hearing before surgery and 52 maintained hearing following surgery. The anatomical continuity of the facial nerve was preserved in 237 of these 256 procedures. It was possible to perform a primary end-to-end anastomosis in seven of the remaining 19 patients, and one patient had a cable graft inserted. Thus, 95.7 per cent of these patients were believed to have potential for spontaneous facial nerve function. Of the 11 patients in whom this was not possible, seven underwent early spinal accessory facial anastomosis, in two hypoglossal-facial anastomosis was performed, and two had no facial nerve procedures and have paralysis of the facial nerve. There were two deaths from a pulmonary embolus in the early postoperative period, both four days following otherwise uneventful surgery. The most common postoperative complication was cerebrospinal fluid leakage, which has not resulted in significant permanent morbidity although early repair for this problem is now routinely recommended. Other complications were quite rare and have generally not resulted in any major change in patient lifestyle or activity level. This review reconfirms that the retrosigmoid surgical treatment of acoustic tumours continues to be an acceptable treatment option. Author.

**Hearing preservation in acoustic neurinoma surgery (see comments).** Fischer, G., Fischer, C., Remond, J. Department of Neurosurgery, Hopital Neurologique Pierre Wertheimer, Lyon, France. *Journal of Neurosurgery* (1992) June, Vol. 76 (6), pp. 901–7.
Comment in: *Journal of Neurosurgery* (1992) June; **76 (6):** 897–900.
The authors have reviewed hearing results obtained in 99 patients operated on via the suboccipital approach for acoustic neurinoma, who were not deaf prior to surgery (pure tone average less than 70 dB). Tumour size was less than 10 mm in four cases, 10 to 19 mm in 26 cases, 20 to 29 mm in 39 cases, and 30 mm or greater in 30 cases. Removal was macroscopically complete in 92 cases and incomplete in seven, including four cases with bilateral acoustic neurofibromatosis. Hearing was preserved in 29 patients (29.3 per cent), of whom 23 had neurinomas smaller than 30 mm and six had tumours exceeding 30 mm in size. Postoperative hearing was good in eight cases (four with neurinomas less than 20 mm and four with neurinomas greater than 20 mm), serviceable in four cases (three with neurinomas less than 20 mm and one with a tumour greater than 30 mm), and poor in 17 cases (eight with neurinomas less than 20 mm and nine with tumours greater than 20 mm). Fifty-seven patients underwent intraoperative brain-stem auditory evoked potential monitoring: the rate of hearing preservation was found to be higher in this group than in the 42 without monitoring (*P* less than 0.05). A statistical study using stepwise regression analysis showed that the two preoperative factors most significantly associated with postoperative hearing preservation are a good auditory level for low frequencies measured by pure tone audiometry and a small-sized tumour. Overall results indicate that, even if hearing is more easily preserved when the neurinoma is small and the preoperative auditory condition is good, the surgeon should try to save hearing in all patients who have preserved hearing before surgery. Author.

**Simultaneous otoplasty and temporomandibular arthroplasty.** Donlon, W. C., Truta, M. P. *Journal of Oral and Maxillofacial Surgery* (1992) September, Vol. 50 (9), pp. 951–5.
By altering the standard postauricular incision for access to the temporomandibular joint (TMJ), a standard otoplasty can be performed simultaneously with TMJ arthroplasty. The procedure is described and results are presented. In six patients with at least a two-year follow-up, the esthetic results have been stable. There has been no morbidity as a result of such simultaneous surgery. Author.

**Temporomandibular joint arthroscopy: a six-year multicentre retrospective study of 4,831 joints.** McCain, J. P., Sanders, B., Koslin, M. G., Quinn, J. D., Peters, P. B., Indresano, A. T. Department of Oral and Maxillofacial Surgery, University of Miami School of Medicine, FL. *Journal of Oral and Maxillofacial Surgery* (1992) September, Vol. 50 (9), pp. 926–30.
Four health outcomes (range of motion, pain, diet, and disability) were measured in six diagnostic categories (internal derangement with closed lock, internal derangement with painful click, osteoarthritis, hypermobility, fibrous ankylosis, and arthralgia) in a six-year retrospective multicentre study of 4,831 temporomandibular joints having undergone arthroscopic surgery. After arthroscopic surgery, 91.6 per cent of all patients had good or excellent motion; 91.3 per cent had good or excellent pain reduction; 90.6 per cent had good or excellent ability to maintain a normal diet; and 92 per cent had a

good or excellent reduction in disability. These health outcomes compare favourably with all other known treatments for these conditions. Also, the surgical technique was relatively free of complications (4.4 per cent). Author.

**Silicone nasal radiation carriers.** Arksornnukit, M., McKinstry, R. E., Cwynar, R. B. University of Pittsburgh, School of Dental Medicine, Pa. *Journal of Prosthetic Dentistry* (1992) April, Vol. 67(4), pp. 516–8.
A technique for fabrication of a flexible shielded afterloaded silicone nasal radiation carrier is described. The technique uses a rubber base impression of the nasal cavity from which a silicone radiation carrier is made. Plastic tubes for afterloading of the radioactive sources and a lead shield were incorporated into the carrier. The carrier permitted accurate location of the radioactive sources in the nasal cavity and reduced the radiation exposure. Author.

**Transmaxillary-transnasal approach to the anterior clivus: a microsurgical anatomical model.** Rabadan, A., Conesa, H. Instituto de Neurocirugia y Neurologia, University of Buenos Aires, Argentina. *Neurosurgery* (1992) April, Vol. 30 (4), pp. 473–81; discussion 482.
Numerous procedures to expose the anterior clival region have been described, including the transoral, transcervical, transseptal-transspheonoidal, transantral, transnasal, bilateral Le Fort I maxillotomy, transbasal, transpalatal, and modifications of the Caldwell-Luc approach. Despite the large number of surgical options available, it may be necessary to have wider access to the midline skull base than these approaches provide. We have developed a microsurgical transmaxillary-transnasal approach to the anterior clivus that has been studied in both dry skull and cadaveric preparations and used clinically. The surgical technique has four stages : 1) antromaxillary; 2) nasal; 3) sphenoidal; and 4) clival. The wider access of this approach is achieved mainly by an osteotomy of the frontal process of the maxilla, which transforms the nasal cavity and the antrum into a single cavity while preserving the functional anatomy of the nose. Cosmesis is preserved by replacement of the cartilaginous nasal septum and the frontal process at the end of the procedure. The technique provides the good cosmetic results of the sublabial approaches and prevents vascular and neural injury in the same way that other anterior approaches do. This transmaxillary-transnasal technique may be used in combination with other approaches for extensive tumours. Author.

**Postoperative death of a patient in apparent remission of malignant lymphoma after dissection for squamous cell carcinoma.** Noguchi, I., Hasegawa, J., Seto, K., Amemiya, Y. Department of Dental Anesthesiology, School of Dental Medicine, Tsurumi University, Yokohama, Japan. *Oral Surgery, Oral Medicine, Oral Pathology* (1992) July, Vol. 74 (1), pp. 24–7.
A 67-year-old man in apparent remission of malignant lymphoma had squamous cell carcinoma of the left buccal mucosa. The patient underwent partial resection of the mandible, including the excision of the tumour. During the fourth postoperative night the patient suddenly became febrile and had a spiking fever for the next five days. His general condition deteriorated afterward, and acute aggravation of malignant lymphoma was suspected. On day 16 disseminated intravascular coagulation was indicated by a decreased platelet count of $3.8 \times 10(4)$, a tendency toward bleeding, and multiple organ failure. The patient died 18 days postoperatively. We alert anesthesiologists and surgeons that surgically treating patients with malignant lymphoma who are receiving immunosuppressive drugs is precarious even though their disease is considered to be in apparent remission. Author.

**Prevention of malodor from intraoral gauze tamponade with the topical use of clindamycin.** Ogura, T., Urade, M., Matsuya, T. First Department of Oral and Maxillofacial Surgery, Osaka University Faculty of Dentistry, Japan. *Oral Surgery, Oral Medicine, Oral Pathology* (1992) July, Vol. 74 (1), pp. 58–62.
Azulene ointment with a small dose of clindamycin was used topically in eight patients with maxillary cancer with the intent to inhibit the malodor that originates from a gauze tamponade applied to the postoperative maxillary bony defect. The malodor was either markedly decreased or eliminated in all cases. Concurrent with the decrease or elimination of the malodor, anaerobic microorganisms such as bacteroides and peptostreptococcus, which are considered to be involved in the generation of malodor, also became undetectable. Author.

**Interstitial thermal radiation therapy: five-year experience with head and neck tumours.** Seegenschmiedt, M. H., Sauer, R., Fietkau, R., Iro, H., Chalal, J. A., Brady, L. W. Department of Therapeutic Radiology, Universitat Erlangen-Nurnberg, Germany. *Radiology* (1992) September, Vol. 184 (3), pp. 795–804.
Sixty-two patients with 24 primary advanced, six persistent, 28 locally recurrent, and four metastatic tumours of the head and neck were treated with combined interstitial low-dose iridium-192 radiation therapy, interstitial 915-MHz microwave hyperthermia (IHT), and external-beam radiation therapy. Diagnoses were squamous cell carcinoma in 56, adenocarcinoma in three, and soft-tissue sarcoma in three lesions. IHT was applied immediately before Ir-192 was placed and after its removal for 45–60 mins at 41–44° C. At three months, complete remission had occurred in 39 lesions; partial remission, in 18; and no change or progressive disease, in five. At 12-month follow-up, local control was achieved in 29 of 50 patients; seven other patients had slow ongoing tumour regression with an unclear residual mass at computed tomography or magnetic resonance imaging. Lesion type, tumour volume, total radiation dose, and thermal parameters with 'good quality of heating' at high minimum tumour temperature were identified as statistically significant ($P$ less than 0.05) prognostic factors influencing initial and long-term tumour response. There was no prognostic factor for acute or late thermal damage. Author.

**Daily impedance audiometric screening of children. Validity of impedance tympanoscope ZS331 compared with impedance audiometer AZ7.** Moller, H., Tos, M. ENT Department, Copenhagen University Hospital Gentofte, Hellerup, Denmark. *Scandinavian Audiology* (1992), Vol. 21 (1), pp. 9–14.
The purpose of the present study was to test a fully automated screening impedance tympanoscope against a clinical impedance audiometer. Previous studies have indicated a relatively high incidence of type B tympanograms when using the tympanoscope and in addition shown a surprisingly large number of type B curves of one day's duration. The present study was based on 51 otherwise healthy children attending kindergartens (100 ears) who underwent daily tympanometric screening with both the impedance tympanoscope ZS331 and the impedance audiometer AZ7. The tympanoscope indicated a significantly larger number of type B tympanograms, and in 16 cases the type B curves could be demonstrated on only one day, resulting in significantly higher point and period prevalences of type B tympanograms. The difference is mainly attributable to the different ways in which a type B typanogram is defined by the two instruments. On the basis of the present study we conclude that the impedance tympanoscope is not well suited for this type of study. Author.

**Lateralization of phonetic and pitch discrimination in speech processing.** Zatorre, R. J., Evans, A. C., Meyer, E., Gjedde, A. McConnell Brain Imaging Centre, Montreal Neurological Institute, McGill University, Quebec, Canada. *Science* (1992) May 8, Vol. 256 (5058), pp. 846–9.
Cerebral activation was measured with positron emission tomography in ten human volunteers. The primary auditory cortex showed increased activity in response to noise bursts, whereas acoustically matched speech syllables activated secondary auditory cortices bilaterally. Instructions to make judgments about different attributes of the same speech signal resulted in activation of specific lateralized neural systems. Discrimination of phonetic structure led to increased activity in part of Broca's area of the left hemisphere, suggesting a role for articulatory recoding in phonetic perception. Processing changes in pitch produced activation of the right prefrontal cortex, consistent with the importance of right-hemisphere mechanisms in pitch perception. Author.