

Abstract Selection

Induction chemotherapy (cisplatin + 5-fluorouracil) and radiotherapy in advanced squamous cell carcinoma of the head and neck.

Tennvall, J., Albertsson, M., Biorklund, A., Wennerberg, J., Anderson, H., Andersson, T., Elnér, A., Mercke, C. Department of Oncology, University Hospital, Lund, Sweden. *Acta Oncologica* (1991), Vol. 30 (1), pp. 27–32.

A phase II study was made of 58 consecutive patients with previously untreated locally advanced squamous cell carcinomas of the head and neck. The induction chemotherapy consisted of three courses of cisplatin (100 mg/m²) and a subsequent 120-h infusion of 5-fluorouracil (1,000 mg/m²/24 h) repeated every three weeks. It was followed by radiotherapy to a median target dose of 66 Gy and surgery for residual tumour. A total of 91 per cent received all three courses of chemotherapy, which was well tolerated. Complete response (CR) was obtained in 20 patients (35 per cent) after chemotherapy and in 40 patients (69 per cent) after subsequent radiotherapy. The median observation time was 28 months (range 15–57). The actuarial survival at two years for complete responders to chemotherapy was 83 per cent, implying a prolonged survival ($P = 0.002$) compared to those with less than CR. Complete responders after chemotherapy had also a significantly longer recurrence-free survival, though 19 out of 20 did not undergo surgery. Complete response after this induction therapy is thus an important prognostic predictor. Author.

Epidermoid carcinoma of the pharynx. Therapeutic results in a series of 221 patients.

Johansen, J., Christensen, P. H., Jørgensen, K., Andersen, J. E. Department of Oncology, Odense University Hospital, Denmark. *Acta Oncologica* (1991), Vol. 30 (1), pp. 33–7. Two hundred and twenty-one cases of epidermoid carcinoma of the pharynx diagnosed between 1965 and 1984 were analysed. Fifty-seven per cent of the carcinomas were poorly differentiated and 57 per cent of the patients had stage IV disease; 65 per cent had lymph node metastases at the time of diagnosis. Radiotherapy was the primary treatment. Between 1977 and 1979, preirradiation chemotherapy was used and from 1979 the effect of the radiosensitizer misonidazole was investigated in split-course radiotherapy. Local failure occurred in 60 per cent after primary treatment. No changes in treatment results were observed during four consecutive five-year periods. The five-year corrected actuarial survival rate in the whole series was 33 per cent. It is concluded that the treatment results are still unsatisfactory, and that chemotherapy, optimized radiotherapy, and radiosensitizers as used in the present series did not seem to improve the results. Alcohol and tobacco restriction is emphasized for prevention. Author.

Poorly differentiated naso- and oropharyngeal carcinoma. A retrospective comparison between the results of radiotherapy alone and radiotherapy plus adjuvant methotrexate.

Reinfuss, M., Skolyszewski, J., Radkowski, A. Department of Radiation Therapy, Instytut im. M. Skłodowskiej-Curie, Krakow, Poland. *Acta Oncologica* (1991), Vol. 30 (1), pp. 39–43. One hundred and forty-one patients with poorly differentiated naso- and oropharyngeal carcinoma were treated at the Center of Oncology in Krakow 1970–1985. Ninety-eight patients, treated from 1970 to 1980, received radiation therapy alone and 43 patients, treated from 1981 to 1985, received adjuvant monotherapy with methotrexate 60 mg/m² i.v. administered every six weeks, starting six weeks after completion of radiotherapy. The two groups were comparable in patients' characteristics such as stage of the disease, sex, age, localization and histology. The three-year survival rate in the total group of 141 patients was 46.8 per cent. Important prognostic factors were: stage (UICC 1987), extent of local tumour and nodal involvement. Three-year survival rates according to stage were as follows: stage I, 100 per cent; stage II, 95 per cent; stage III, 75 per cent; stage IV, 4.4 per cent. There was no significant survival difference between the two groups, and the adjuvant methotrexate therapy did not alter the pattern of fail-

ures. The results do not support the hypothesis that adjuvant methotrexate treatment is beneficial in this type of patient. Author.

Influenza vaccination in the prevention of acute otitis media in children.

Heikkinen, T., Ruuskanen, O., Waris, M., Ziegler, T., Arola, M., Halonen, P. Department of Pediatrics, University of Turku, Finland. *American Journal of Diseases of Children* (1991) Apr, Vol. 145 (4), pp. 445–8.

We studied a new approach to the prevention of acute otitis media through the administration of influenza vaccine to 187 day-care center children aged one to three years before the influenza A epidemic of 1988–1989. The control group consisted of 187 unvaccinated children of similar age and background. During the six-week study period, influenza A infection was diagnosed in five (three per cent) of 187 vaccinees and in 29 (16 per cent) of 187 controls. Acute otitis media developed in three (60 per cent) of five vaccinees with an influenza A infection compared with 18 (67 per cent) of 27 controls (excluded were two children with a double viral infection). The incidence of acute otitis media associated with influenza A was reduced by 83 per cent in the vaccinees. The total number of children with acute otitis media in the vaccine group was 35, compared with 55 in the control group, disclosing a 36 per cent reduction among the vaccinees. We conclude that influenza vaccination decreases the incidence of acute otitis media in children during an influenza A epidemic, suggesting also that other vaccines against respiratory viruses may be an effective way to reduce the incidence of acute otitis media. Author.

Sensitivity and specificity of diagnostic tests for impaired nasal respiration.

Vig, P. S., Spalding, P. M., Lints, R. R. School of Dental Medicine, University of Pittsburgh, Pa. *American Journal of Orthodontics and Dentofacial Orthopedics* (1991) Apr, Vol. 99 (4), pp. 354–60.

Diagnostic tests are imperfect and vary in their sensitivity and specificity. The degree of imprecision may be calculated to yield probability estimates of accuracy for both the positive and negative predictions of tests under various conditions. Such information enables clinicians to decide whether to accept or reject test results or the tests themselves. Two pilot studies are reported to establish the diagnostic potential of cephalometric measurements and nasal resistance values for the identification of upper airway impairment. A linear estimate of adenoid size and an area index of adenoid encroachment in the nasopharynx were evaluated as diagnostic tests for increased nasal resistance. The sensitivity of the tests was 31.8 per cent and 18.2 per cent, while specificity was calculated at 83.3 per cent and 66.6 per cent, respectively. In the second study, nasal resistance was evaluated as a test to identify persons whose respiratory mode was equal to or less than 75 per cent nasal airflow. At a NRz value of 5.0 cm H₂O per liter per second, the sensitivity of this test was 41.2 per cent and the specificity was 84.0 per cent; with the critical value of NRz at 3.5 H₂O per liter per second, the sensitivity was 64.7 per cent and the specificity was reduced to 60.0 per cent. The results suggest that these tests are too imprecise for the reliable identification of either those who might benefit from treatment or those for whom treatment is unlikely to yield benefits. Author.

Nasal airway impairment: the oral response in cleft palate patients.

Warren, D. W., Hairfield, W. M., Dalston, E. T. Department of Dental Ecology, School of Dentistry, University of North Carolina, Chapel Hill. *American Journal of Orthodontics and Dentofacial Orthopedics* (1991) Apr, Vol. 99 (4), pp. 346–53.

The purpose of this study was to assess the oral response to severe nasal airway impairment in patients with cleft palate. Inductive plethysmography was used to measure the percent of nasal breathing, and the pressure-flow technique was used to estimate nasal area in 15 persons with severe nasal airway impairment. Mean nasal area was 0.17 cm², and the average percent of nasal breathing

was 20 per cent. Analysis revealed a strong correlation (0.87) between nasal size and percent of nasal breathing in this selected group. Modelling studies based on the mean values from the subjects' data indicated that the model 'mouth' would have to open 0.5 cm² to shunt 80 per cent of the airflow orally, an amount equivalent to the mean value of the subjects' respiratory mode. More important, the extrapolated data revealed that upper-airway resistance decreased in the model from 8.7 cm H₂O/L/sec to a level of 3.2 cm H₂O/L/sec, which is an average value for healthy adults. These data support the concept that the mouth acts as a variable resistor to maintain an optimal respiratory tract resistance when the nasal airway is impaired. Author.

A method to measure elicited contraction of laryngeal adductor muscles during anesthesia. Donati, F., Plaud, B., Meistelman, C. Service d'anesthésie, Institut Gustave-Roussy, Villejuif, France. *Anesthesiology* (1991) May, Vol. 74 (5), pp. 827-32.

The recurrent laryngeal nerve was stimulated with surface electrodes to produce vocal cord adduction, and the response was measured as pressure changes in the inflatable cuff of a tracheal tube positioned between the vocal cords. To test the linearity of the system, a model of the larynx consisting of a syringe barrel was constructed, and weights were applied to two bands of tissue simulating the vocal cords. Tests on Mallinckrodt size-7.5 tubes showed that the pressure increase produced by a given force was independent of baseline pressure in the range 10-30 mmHg. In addition, the pressure inside the inflatable cuff was linear with increasing weight (or force) for a baseline pressure of 10 mmHg. Thirty ASA physical status one or two adults were anesthetized with propofol and fentanyl. Tracheal intubation was performed in the absence of muscle relaxants, and the inflatable cuff of the tracheal tube was positioned between the vocal cords. Pressure inside the cuff was measured with an air-filled transducer. Stimulation was produced at different sites along the course of the recurrent laryngeal nerve. A surface electrode placed over the notch of the thyroid cartilage produced consistent adduction of the cords, measured as an increase of 8.9 ± 5.1 mmHg (mean ± standard deviation (SD)) in the cuff pressure. Neuromuscular blocking drugs produced train-of-four fade, and large doses abolished the response completely, ruling out direct muscle stimulation. It is concluded that this assembly can provide useful information on intrinsic laryngeal muscle function. Author.

Gastric emptying after gastric interposition for cancer of the esophagus or hypopharynx. Morton, K. A., Karwande, S. V., Davis, R. K., Datz, F. L., Lynch, R. E. Department of Surgery/Otolaryngology, Veterans Affairs Medical Center, Salt Lake City, UT 84148. *Annals of Thoracic Surgery* (1991) May, Vol. 51 (5), pp. 759-63.

Transhiatal esophagectomy with primary anastomosis to the stomach (gastric pull-up) is an attractive surgical alternative to colic interposition in patients with cancer of the esophagus and hypopharynx. However, the lack of intrinsic gastric peristalsis and complaints by patients of postprandial regurgitation prompted us to measure the effect of body posture on the rates of gastric emptying in these patients. The rates of solid and liquid gastric emptying were measured in 14 patients who had undergone gastric interposition for esophageal and hypopharyngeal carcinoma. Rates of emptying were measured in both the supine and upright position using a dual-isotope radiolabelling technique. In these patients, the rate of gastric emptying of both solids and liquids was significantly slower in the supine position than in the upright position. Emptying in supine patients was also prolonged when compared with supine normal volunteers. Conversely, the upright rate of solid and liquid emptying in the patients was accelerated when compared with published values for upright normal volunteers. We conclude that gastric emptying after gastric interposition is dependent on upright posture after meals. Author.

Caffeine as an analgesic adjuvant. A double-blind study comparing aspirin with caffeine to aspirin and placebo in patients with sore throat. Schachtel, B. P., Fillingim, J. M., Lane, A. C., Thoden, W. R., Baybutt, R. I. Medical Department, Whitehall Laboratories, New York, NY 10017-4076. *Archives of Internal Medicine* (1991) Apr, Vol. 151 (4), pp. 733-7.

Despite its frequent clinical use in analgesic agents, caffeine has not been accepted unequivocally as an analgesic adjuvant. To evaluate this activity of caffeine, we used new study methods in a randomized controlled trial on patients with acute sore throat due to tonsil-

lopharyngitis. Patients were randomly assigned to receive a single dose of one of three treatments: 800 mg of aspirin with 64 mg of caffeine (n = 70), 800 mg of aspirin (n = 68), or placebo (n = 69). Under double-blind conditions, during a 2-hour evaluation period, patients used different rating scales to assess pain intensity, change in pain, relief, and two qualities of throat pain, how swollen the throat felt, and difficulty swallowing. Aspirin with caffeine and aspirin alone were significantly more effective than placebo for all efficacy measurements from 30 minutes through 2 hour and overall. The aspirin-caffeine combination also showed evidence of activity at 15 minutes on the relief scale. Aspirin with caffeine was more effective than aspirin alone after 30 minutes and over the entire study period. For patients with fever, both active treatments were equally effective antipyretic agents. We conclude, therefore, that 800 mg of aspirin, given alone or with 64 mg of caffeine, is an effective analgesic and antipyretic agent. Because the aspirin-caffeine combination is significantly more effective than aspirin alone as an analgesic, we also conclude that 64 mg of caffeine is an analgesic adjuvant. Author.

Decreased susceptibility to motion sickness during exposure to visual inversion in microgravity. Lackner, J. R., DiZio, P. Ashton Graybiel Spatial Orientation Laboratory, Brandeis University, Waltham, MA 02254-9110. *Aviation, Space and Environmental Medicine* (1991) Mar, Vol. 62 (3), pp. 206-11.

Head and body movements made in microgravity tend to bring on symptoms of motion sickness. Such head movements, relative to comparable ones made on Earth, are accompanied by unusual combinations of semicircular canal and otolith activity owing to the unloading of the otoliths in OG. Head movements also bring on symptoms of motion sickness during exposure to visual inversion (or reversal) on Earth because the vestibulo-ocular reflex is rendered anti-compensatory. Here, we present evidence that susceptibility to motion sickness during exposure to visual inversion is decreased in a OG relative to a IG force background. This difference in susceptibility appears related to the alteration on otolith function in OG. Some implications of this finding for the etiology of space motion sickness are described. Author.

Prediction of space motion sickness susceptibility by disconjugate eye torsion in parabolic flight. Diamond, S. G., Markham, C. H. Department of Neurology, UCLA School of Medicine 90024-1769. *Aviation, Space and Environmental Medicine* (1991) Mar, Vol. 62 (3), pp. 201-5.

The hypothesis of asymmetric otolith function asserts that physiological or anatomical differences in the two sides of the bilateral gravity-sensing otolith apparatus of the inner ear may be well compensated on Earth, but when exposed to novel gravitational states, the prior compensatory stratagems may be ineffective, leading to unstable vestibular responses and causing the phenomenon of space motion sickness. To investigate this hypothesis, spontaneous eye torsion, a reflex governed by the otolith organs, was examined in the upright position during the hypo- and hypergravity of parabolic flight abroad NASA's KC-135 aircraft in nine former astronauts whose history of space motion sickness was revealed after data analysis had been completed. Results showed that astronauts who had been sick in space had significantly higher scores of disconjugate eye torsion in parabolic flight, and that their responses were consistently different in 1.8 G relative to 0 G compared to astronauts who had not been sick in space. In 1 G, there were no differences in disconjugate eye torsion between the subjects. The results support the asymmetry hypothesis and offer a possible predictive test of space motion sickness. Author.

Final report on the second British Institute of Radiology fractionation study: short versus long overall treatment times for radiotherapy of carcinoma of the laryngo-pharynx. Wiernik, G., Alcock, C. J., Bates, T. D., Brindle, J. M., Fowler, J. F., Gajek, W. R., Goodman, S., Haybittle, J. L., Henk, J. M., Hopewell, J. W., et al. *British Journal of Radiology* (1991) Mar, Vol. 64 (759), pp. 232-41.

The second British Institute of Radiology trial of dose fractionation in radiotherapy compared two groups of prospectively randomized patients with squamous carcinoma of the laryngo-pharynx; one group was treated in a short (less than or equal to four weeks) and the other in a long (greater than four weeks) overall time. Treatment in any one centre could be given, with no planned gap in the course of treatment, either as a conventional, daily (five fractions per week regime) or as three fractions per week. A total of 611

patients were allocated to treatment, of whom nine have had to be excluded from the analysis for a lack of information. Patients were admitted to the trial from January 1976 to December 1985 and were followed up for a maximum of 10 years and a minimum of three years. A reduction in total dose was made for use in the short compared with the long treatment regime. This reduction in total dose varied between 18 per cent and 22 per cent depending on whether five fractions or three fractions per week regimes were used. Overall, no statistically significant differences have been found between the two arms of the trial. The patients treated with five fractions per week in a short overall treatment time showed fewer late normal tissue effects. An analysis based on stratification by age, stage and anatomical site gave a relative risk (short/long overall treatment time) for deaths of 1.23 with a 95 per cent confidence interval from 0.96 to 1.59. Analyses stratified for stage and site gave relative risks with 95 per cent confidence intervals of 1×10 (0.84–1.44) for local recurrences/tumour persistence, and 1.01 (0.70–1.45) for laryngectomies. Author.

Benign thyroid hyperplasia presenting as bilateral vocal cord paralysis. Complete remission following surgery. Godwin, J. E., Miller, K. S., Hoang, K. G., Sahn, S. A. Department of Medicine, Medical University of South Carolina, Charleston. *Chest* (1991) Apr, Vol. 99 (4), pp. 1029–30.

A 52-year-old woman developed respiratory arrest on two separate occasions that required mechanical ventilation. Fiberoptic bronchoscopy demonstrated bilateral vocal cord paralysis, and a CT scan of the neck demonstrated a right neck mass. On surgical exploration, the mass was found extending from the thyroid gland and was identified as benign thyroid tissue. Thyroid hyperplasia should be considered in the differential diagnosis of bilateral vocal cord paralysis. Author.

Topical nasal anesthesia for flexible bronchoscopy. A comparison of four methods in normal subjects and in patients undergoing transnasal bronchoscopy. Middleton, R. M., Shah, A., Kirkpatrick, M. B. Division of Pulmonary and Critical Care Medicine, University of South Alabama, Mobile. *Chest* (1991) May, Vol. 99(5), pp. 1093–6.

We evaluated nasal anesthesia regimens by comparing, in seven normal men, four drug regimens: 1) one per cent phenylephrine; 2) four per cent lidocaine; 3) one per cent phenylephrine + four per cent lidocaine; and 4) five per cent cocaine. After spraying each drug into the anterior nares, vasoconstriction, decongestion, and nasal anesthesia (measured as transnasal depth of nasogastric (NG) tube insertion before discomfort) were assessed. There were no significant differences in NG tube insertion depth between the regimens ($P = 0.54$). Insertion depth was significantly increased after 10 ml of two per cent viscous lidocaine were sniffed (p less than 0.004), but again, differences between regimens were not significant ($P = 0.051$). One hundred bronchoscoped patients received one of the following sprayed into the nose: 1) placebo (P); 2) one per cent phenylephrine + P; 3) one per cent phenylephrine + four per cent lidocaine; or 4) five per cent cocaine + P. Each patient then sniffed viscous lidocaine. There were no significant differences between regimens for any of the following: 1) nasal resistance to bronchoscope insertion, 2) patient's nasal discomfort, or 3) bronchoscopist's perception of patient discomfort. We conclude that sprayed anesthetics contribute little to nasal anesthesia and any regimen appears acceptable when viscous lidocaine is used. Author.

Spontaneous favorable outcome of tracheal laceration. Odemont, J. P., Pringot, J., Goncette, L., Goenen, M., Rodenstein, D. O. Pneumology Division, Cliniques Universitaires Saint-Luc, Brussels, Belgium. *Chest* (1991) May, Vol. 99 (5), pp. 1290–2.

We present the case of a 57-year-old woman with a huge tracheal laceration after intubation. With simple supportive therapy, the laceration healed in 10 days, and the patient made an uneventful recovery. At the three-month follow-up, no sequelae were observed. Author.

Changes in nasal metachromatic cells during allergen immunotherapy. Otsuka, H., Mezawa, A., Ohnishi, M., Okubo, K., Seki, H., Okuda, M. Department of Otorhinolaryngology, Nippon Medical School, Tokyo, Japan. *Clinical and Experimental Allergy* (1991) Jan, Vol. 21 (1), pp. 115–9.

We have investigated changes of nasal metachromatic cell number, nasal symptoms and nasal provocation at the third and sixth month

during allergen immunotherapy. Twenty-five subjects with perennial allergic rhinitis (house dust (23), Alternaria (2)) were divided into two groups: an immunotherapy-treated group ($n = 14$) and a control group ($n = 11$). At the first visit nasal symptom scores, nasal provocation reactions and the number of metachromatic cells in nasal mucosal epithelial scrapings were not significantly different between groups. At the third and sixth month after immunotherapy nasal symptom scores, nasal provocation and the metachromatic cells in epithelial scrapings were significantly reduced (P less than 0.05) compared with the pretreatment values in the immunotherapy group, but unchanged in the control group. These results suggest that the reduction in metachromatic cell number at the nasal mucosal surface may be one of the mechanisms which could explain the improvement of nasal allergic symptoms by immunotherapy. Author.

Development and testing of a new measure of health status for clinical trials in rhinoconjunctivitis. Juniper, E. F., Guyatt, G. H. Department of Clinical Epidemiology, McMaster University, Hamilton, Ontario, Canada. *Clinical and Experimental Allergy* (1991) Jan, Vol. 21 (1), pp. 77–83.

The objective of this study was to develop and test a health-related quality of life questionnaire for clinical trials in rhinoconjunctivitis. The Rhinoconjunctivitis Quality of Life Questionnaire (RQLQ) was developed by asking patients to identify areas of their lives affected by rhinoconjunctivitis. The resultant RQLQ was tested for reproducibility, responsiveness and validity in a randomized, double-blind trial of regular versus 'as required' aqueous beclomethasone dipropionate (BDP) nasal spray in ragweed pollen-induced rhinoconjunctivitis. Eighty-five patients from previous rhinoconjunctivitis studies participated in the developmental survey. Sixty ragweed-sensitive patients, from previous trials and media notices, were enrolled in the clinical trial. Aqueous BDP (800 micrograms) nasal spray was administered regularly or 'as required' throughout the ragweed pollen season. The survey revealed that, in addition to local symptoms of rhinoconjunctivitis, patients experienced impairment of quality of life through systemic symptoms, sleep disturbance, practical problems, activity limitations and emotional problems. The RQLQ includes 28 questions related to these dimensions. Repeated administration of the RQLQ demonstrated good reproducibility. During the clinical trial, the RQLQ proved responsive in its ability to distinguish between regular and 'as required' medication use. Validity was shown by moderate to strong relations between changes in symptom diary scores and changes in RQLQ scores. In conclusion the RQLQ is likely to prove useful as a measure of health-related quality of life in clinical trials in both rhinoconjunctivitis and rhinitis. Author.

Is it time to use evoked potentials to predict outcome in comatose children and adults? Goodwin, S. R., Friedman, W. A., Bellefleur, M. Department of Anesthesiology, University of Florida College of Medicine, Gainesville. *Critical Care Medicine* (1991) Apr, Vol. 19 (4), pp. 518–24.

Objective: To determine the value of multimodality-evoked potential recordings in predicting outcome in comatose children. Design: Prospective series and literature review. Setting: Pediatric ICU in a university hospital. Patients: Forty-one children with a Glasgow Coma Scale score of less than eight, who were admitted to the pediatric ICU between 1984 and 1989. Interventions: Forty-one patients underwent brainstem auditory-evoked potential testing within 72 hours of admission. Of these patients, 37 also had somatosensory-evoked potential testing at the same time. Four patients did not receive somatosensory-evoked potential testing for various non-medical reasons. Measurements and main results: Multimodality-evoked potential recordings were used to predict outcome in these comatose children. Outcomes were categorized as bad (death or chronic vegetative state) or good (all other outcomes). Survivor outcomes were determined at discharge and on subsequent follow-up visits from one to three years later. There were no false pessimistic predictions, and two false optimistic predictions in this series. A comprehensive literature review of coma outcome prediction, using multimodality-evoked potential recordings, revealed 20 series with 982 additional patients in whom the predictive errors of false optimism and false pessimism could be determined. Five cases of false pessimism and 99 cases of false optimism were identified in the 982 additional patients. If neonates are excluded, the false pessimism number is reduced to three. Conclusions: A bad outcome can be reliably predicted using multi-

modality-evoked potential recordings with little chance of a false pessimistic prediction. The acceptable error of chance of a false optimism occurs frequently, since patients often die of progressive neurologic and non-neurologic problems that may or may not be present at the time of the evoked potential recordings. Thus, in comatose children, multimodality-evoked potential recordings are a useful adjunct to clinical examination and other diagnostic aids in predicting outcome and in making decisions regarding the degree of intervention to offer. Author.

Effect of nasogastric tubes on the nose and maxillary sinus. Desmond, P., Raman, R., Idikula, J. Christian Medical College and Hospital, Vellore, India. *Critical Care Medicine* (1991) Apr, Vol. 19 (4), pp. 509–11.

Objective: To estimate the proportion of patients who develop radiologic evidence of maxillary sinus inflammation among those who are maintained on nasogastric (NG) tubes after major surgery. Design: Prospective case series. Setting: Patients were drawn from the general surgical and ear, nose and throat units of a tertiary care hospital. Method: All patients undergoing major surgery with or without a concurrent tracheostomy, in whom an NG tube was retained for greater than or equal to 48 hours, were examined clinically and radiologically for evidence of maxillary sinus inflammation. Results: Sixty-five patients were studied. Twenty patients had a concurrent tracheostomy and 45 patients were without tracheostomy. Only 10 per cent of the patients in the tracheostomy group developed radiologic evidence of sinus inflammation, as compared with 50 per cent in the nontracheostomy group (p less than 0.05). The proportion of patients who developed clinical evidence of rhinitis was about 75 per cent in either group. However, none of the patients in the study had clinical evidence of maxillary sinusitis. There was no correlation between the age of the patient, sex, use of broad-spectrum antibiotics, or duration of NG intubation with the onset of sinus inflammation. Conclusions: The presence of NG tubes predisposes to nasal and maxillary sinus inflammation. Sinonasal symptoms of clinical sinusitis may not be present even when radiologic evidence of inflammation is evident. In patients with tracheostomy, the frequency of maxillary sinus inflammation is significantly lower than in those patients without tracheostomy. Author.

Therapeutic role of carbogen in impaired hearing. Chaturvedi, R. C., Rai, R. M., Sharma, R. K. Defence Institute of Physiology & Allied Sciences, Delhi Cantt. *Indian Journal of Medical Research* (1990) Dec, Vol. 92, pp. 420–3.

The therapeutic role of carbogen was evaluated in subjects with sensorineural hearing loss by administering carbogen, a gas mixture of 95 per cent O_2 and five per cent CO_2 , for seven consecutive days (30 min/day) and monitoring puretone audiometry before and after the administration. Significant improvement was observed both in air and bone conduction threshold levels on seventh day, indicating that there was some recoverable portion in the hearing level of these subjects. The improvement in hearing may be due to action of CO_2 as an otic vasodilator coupled with supplementation of the O_2 requirement of degenerating hair cells. Carbogen thus appears to be useful in persons with impaired hearing, involving the inner ear. Author.

Endoscopic examination of the neonatal larynx at extubation: a prospective study of variables associated with laryngeal damage. Albert, D. M., Mills, R. P., Fysh, J., Gamsu, H., Thomas, J. N. ENT Department, Hospital for Sick Children, London, U.K. *International Journal of Pediatric Otorhinolaryngology* (1990) Dec, Vol. 20 (3), pp. 203–12.

Despite postmortem and clinical studies, the etiological factors that determine why only a proportion of intubated neonates develop subglottic stenosis remain unclear. This prospective study was initiated to identify factors that were associated with laryngeal abnormalities secondary to intubation. Thirty neonates were examined at extubation by two independent observers blinded to the neonate's ventilatory history. Thirty-six possible prognostic indicators were recorded for each neonate. After screening by univariate (chi 2) analysis, 10 indicators were selected for further analysis. Of these 10 selected only two indicators showed an association with the laryngeal appearance. Active neonates had significantly more abnormalities in the supraglottis ($P = 0.004$) than those who were quiescent. Younger neonates had more abnormalities in the glottis though the significance level was marginal ($P = 0.056$). Other prognostic indicators, including birthweight, gestational

age, duration of intubation and frequency of intubation, were not significantly related to laryngeal appearance. This study supports the hypothesis that the etiology of laryngotracheal stenosis is multifactorial, and has identified two possible etiological factors: age and neonatal activity. Neonatal activity has not been identified previously as an etiological factor. The contribution of individual factors may vary from one neonatal unit to another, as a result of variation in intubation, ventilation and extubation policy. This could explain the inconsistency in etiological factors identified by previous studies. It is therefore not yet possible to recommend a standard technique for the ventilation of premature neonates that would further reduce the incidence of laryngotracheal stenosis. Author.

Evaluation of a rapid method for diagnosing streptococcal pharyngitis in a rural community clinic. Hermoni, D., Bluzer, Z., Strulov, A., Ries, S. Kupat Holim Klalit Clinic, Misgav, Israel. *Israeli Journal of Medical Science* (1991) Apr, Vol. 27 (4), pp. 192–5.

Group A beta-hemolytic streptococcal pharyngitis is a common ailment whose accurate diagnosis is dependent on laboratory testing. Transport problems common to rural practices, for laboratory testing, could be resolved by a reliable rapid test. Laboratory evaluations of rapid streptococcal tests, performed mostly in research settings, indicate that the tests have acceptable specificity and sensitivity. This paper describes a comparison study of 248 consecutive throat swab specimens using a commercially available agglutination test with routine throat culturing. All agglutination testing was done by the office staff under actual working conditions, in a rural primary care clinic. The cultures were processed in the main regional microbiology laboratory. As a result of transportation delay, swabs were plated either within 6 h from collection or after 6 h. The test sensitivity (72 per cent) and specificity (88 per cent) compared well with that reported in the literature from microbiology laboratories, especially for swabs plated within six hours (80 per cent and 93 per cent respectively). The rapid test is an acceptable alternative to the standard culture technique in the family practice office under normal working conditions, provided that patients with negative results follow up with throat cultures. Author.

Cerebellar voice tremor: an acoustic analysis. Ackermann, H., Ziegler, W. Department of Neurology, University of Tübingen, FRG. *Journal of Neurology, Neurosurgery and Psychiatry* (1991) Jan, Vol. 54 (1), pp. 74–6.

Patients with cerebellar disease may exhibit tremulous phonation as part of their dysarthria. The results of an acoustic analysis of cerebellar voice tremor in a patient with hereditary ataxia and presenting with a purely cerebellar syndrome are reported. Analysis included computation of speech intensity contours, fundamental frequency contours, and spectral parameters from sustained productions of vowels and voiceless fricatives. Fundamental frequency contours during sustained phonation of vowels showed rhythmic oscillations at a rate of about 3 Hz. No concomitant periodicity could be detected for the parameters characterizing voiceless fricative production. The results indicate an impairment of phonatory control in relation to the maintenance of a constant isometric activity of the internal laryngeal muscles. Cerebellar voice tremor may therefore be classified as a form of postural tremor. Author.

The value of single versus multiple sections for detection of lymph node metastasis. Shingaki, S., Ohtake, K., Nomura, T., Nakajima, T. First Department of Oral and Maxillofacial Surgery, School of Dentistry, Niigata University, Japan. *Journal of Oral & Maxillofacial Surgery* (1991) May, Vol. 49 (5), pp. 461–3.

This study was undertaken to determine the value of serial sectioning of lymph nodes as an aid in optimally examining cervical specimens for metastasis. The presence or absence of lymph node metastasis in 802 lymph nodes obtained from 51 consecutive neck dissection specimens were initially determined by the routine method, examination of one section from each node. This examination revealed 40 lymph nodes with metastatic involvement. Further study of the 716 lymph nodes that were initially interpreted as free of tumor by serial sectioning added only two positive nodes. Thus, serial sectioning did not contribute significantly to the detection of lymph node metastasis. Author.

Nasal conformer to restore facial contour. Reisberg, D. J., Haba-kuk, S. W. Department of Pediatrics, University of Illinois, College of Medicine, Chicago. *Journal of Prosthetic Dentistry* (1990) Dec, Vol. 64 (6), pp. 699–701.

Surgical removal of the nose may have devastating psychological effects on the patient. This article describes the fabrication and use of a nasal conformer to restore facial contour until a definitive nasal prosthesis can be made. Author.

Acoustic schwannoma and epidermoid cyst occurring as a single cerebellopontine angle mass. Goodman, R. R., Torres, R. A., McMurtry, J. G. Department of Neurosurgery, Columbia-Presbyterian Medical Center, New York, New York. *Neurosurgery* (1991) Mar, Vol. 28 (3), pp. 433–6.

The case of a 66-year-old man with a three year progressive hearing loss and a homogeneous left cerebellopontine angle mass on magnetic resonance imaging scan is described. At surgery, the major portion of the mass was a typical encapsulated, solid, acoustic schwannoma, but the most rostral portion was a distinct, flaky, cystic mass without a well-defined capsule, typical of an epidermoid cyst. The radiographic and operative findings of this unique coexistence of two different benign cerebellopontine angle masses are presented. Author.

Delayed facial nerve palsy after temporal lobectomy for epilepsy: report of four cases and discussion of possible mechanisms. Anderson, J., Awad, I. A., Hahn, J. F. Department of Neurological Surgery, Cleveland Clinic Foundation, Ohio. *Neurosurgery* (1991) Mar, Vol. 28 (3), pp. 453–6.

Four cases of idiopathic peripheral facial nerve palsy were documented after 110 consecutive resections of the temporal lobe for intractable epilepsy. In three of the four cases, the palsy was ipsilateral to the side of the temporal lobectomy. The onset of facial weakness was delayed seven to 13 days after surgery (mean, 9.7 days). One patient underwent facial electroneurography, which documented 17 per cent of normal facial motor function at the height of his weakness and the absence of the acoustic stapedius reflex. All patients were treated with prednisone (60–80 mg per day by mouth for 10–14 days, tapering off throughout the subsequent week). Facial function recovered fully in all patients within six to eight weeks. Possible mechanisms are discussed, including heat and/or mechanical trauma to the facial nerve near the geniculate ganglion during resection of mesial temporal lobe structures. Author.

Malignant neoplasia of the paranasal sinuses associated with mucocele. Weaver, D. T., Bartley, G. B. Department of Ophthalmology, Mayo Clinic, Rochester, MN 55905. *Ophthalmology* (1991) Mar, Vol. 98 (3), pp. 342–6.

Paranasal sinus mucoceles are histologically benign and typically cause ophthalmic morbidity only after significant orbital extension. The authors describe seven patients who had both a mucocele and a malignant tumor in the same paranasal sinus and in whom the neoplasm was discovered incidentally during operation for mucocele. Although malignancy coexistent with paranasal sinus mucocele is uncommon, the association should be considered and appropriate biopsy specimens obtained if operation for mucocele is required. Author.

Herniation of the antral membrane through an extraction site. Report of a case. Shultz, R. E., Theisen, F. C., Dunlap, C. L. School of Dentistry, University of Missouri, Kansas City 64108. *Oral Surgery, Oral Medicine, Oral Pathology* (1991) Mar, Vol. 71 (3), pp. 280–2.

A case of herniation of the antral membrane through a recent extraction site is presented. The lesion was initially diagnosed as a tumor by the referring dentist. Oroantral fistulas are not an uncommon finding after dental extractions. It is rare, however, to see herniation of the antral membrane with large polyps extending through the fistula into the oral cavity. A search of the literature revealed only two other such cases. Surgical removal of the polyps and closure of the oroantral fistula by means of a buccal sliding flap technique is discussed. Author.

Amoxicillin or myringotomy or both for acute otitis media: results of a randomized clinical trial. Kalcida, P. H., Casselbrant, M. L., Rockette, H. E., Paradise, J. L., Bluestone, C. D., Blatter, M. M., Reisinger, K. S., Wald, E. R., Supance, J. S. Otitis Media Research Center, Children's Hospital of Pittsburgh, PA 15213–2583. *Pediatrics* (1991) Apr, Vol. 87 (4), pp. 466–74.

A total of 536 infants and children with acute otitis media were randomly assigned to one of six consistent year-long regimens involving the treatment of non-severe episodes with either amox-

icillin or placebo, and severe episodes with either amoxicillin, amoxicillin and myringotomy, or, in children aged two years or older, placebo and myringotomy. Non-severe episodes had more favorable outcomes in subjects assigned to treatment with amoxicillin than with placebo, as measured by the proportions that resulted in initial treatment failure (3.9 per cent vs 7.7 per cent, $P = 0.009$) and the proportions in which middle-ear effusion was present at two and six weeks after onset (46.9 per cent vs 62.5 per cent, P less than 0.001; and 45.9 per cent vs 51.5 per cent, $P = 0.09$, respectively). In subjects whose entry episode was non-severe, those assigned to amoxicillin treatment had less average time with effusion during the succeeding year than those assigned to placebo treatment (36.0 per cent vs 44.4 per cent, $P = 0.004$), but recurrence rates of acute otitis media in the two groups were similar. In the two-year and older age group, severe episodes resulted in more initial treatment failures in subjects assigned to receive myringotomy alone than in subjects assigned to receive amoxicillin with, or without, myringotomy (23.5 per cent vs 3.1 per cent vs 4.1 per cent, $P = 0.006$). In the study population as a whole, severe episodes in subjects assigned to receive amoxicillin alone, and amoxicillin with myringotomy, had comparable outcomes. It is concluded that children with acute otitis media should routinely be treated with amoxicillin (or an equivalent antimicrobial drug). The data provide no support for the routine use of myringotomy either alone or adjunctively. Author.

Impedance tympanometry and acoustic reflectometry at myringotomy. Babonis, T. R., Weir, M. R., Kelly, P. C. Department of Pediatrics, Madigan Army Medical Center, Tacoma, Washington. *Pediatrics* (1991) Apr, Vol. 87 (4), pp. 475–80.

A total of 220 ears undergoing myringotomy and pressure-equalizing tube placement were studied with impedance tympanometry and acoustic reflectometry in a direct comparison for detection of middle-ear effusion. Impedance tympanometry and acoustic reflectometry were equally accurate, detecting the presence or absence of middle-ear effusion in 73 per cent and 72 per cent of ears, respectively. The presence of effusion in ears with tympanographic patterns other than type A and type B was not consistently and reliably predicted. The higher sensitivity of impedance tympanometry (90 per cent) compared with that for acoustic reflectometry (58 per cent) contrasted with the opposite findings for specificities (54 per cent vs 88 per cent). It is concluded that impedance tympanometry and acoustic reflectometry measure different events at the tympanic membrane and their utility lies in the fact that they complement each other. These instruments can aid the experienced otoscopist in confirming a clinical impression and assist the less experienced clinician in validating or improving otoscopic skills. Author.

Community-wide outbreak of group G streptococcal pharyngitis. Gerber, M. A., Randolph, M. F., Martin, N. J., Rizkallah, M. F., Cleary, P. P., Kaplan, E. L., Ayoub, E. M. Department of Pediatrics, University of Connecticut School of Medicine, Farmington. *Pediatrics* (1991) May, Vol. 87 (5), pp. 598–603.

Although several outbreaks of group G beta-hemolytic streptococcal (GGBHS) pharyngitis have been described, doubt still remains regarding the etiologic role of GGBHS in acute pharyngitis beyond a limited number of situations. In the winter/spring of 1986/87, throat cultures were obtained from 222 consecutive children seen at a private pediatric office with acute pharyngitis and group A beta-hemolytic streptococci (GABHS) were recovered from 91 children (41 per cent) and GGBHS from 56 children (25 per cent). One patient had both GABHS and GGBHS isolated. This isolation rate of GGBHS was dramatically greater than in previous and subsequent years, and 67 per cent of the GGBHS isolates occurred during an eight week period. Results of DNA fingerprinting of the 57 isolates of GGBHS demonstrated that 43 (75 per cent) appeared to be the same strain. The patients with GGBHS were comparable to those with GABHS with respect to clinical findings, antistreptolysin-0 titer response, and clinical response to antibiotic therapy. However, patients with GGBHS were significantly older (P less than 0.05). This is the first well-documented, community-wide outbreak of GGBHS pharyngitis and the first respiratory outbreak of GGBHS pharyngitis in a pediatric population. GGBHS may be a more important cause of acute, treatable pharyngitis than had been previously recognized. Author.