

## Abstract Selection

**Acute-phase reactants and acute bacterial otitis media.** Del-Becaro, M. A., Mendelman, P. M., Inglis, A. F., Richardson, M. A., Duncan, N. O., Shugerman, R. P. Emergency Services, Children's Hospital and Medical Centre, Seattle, WA 98105. *American Journal of Diseases in Children* (1992) Sep, Vol. 146 (9), pp. 1037–9.

**OBJECTIVE:** To determine if the erythrocyte sedimentation rate and C-reactive protein level are elevated in uncomplicated acute bacterial otitis media. **DESIGN:** Investigator-blinded, antibiotic efficacy trial. **SETTING:** The emergency department of an urban regional children's hospital with 24,000 annual visits. **PARTICIPANTS:** Thirty-one children with symptoms of acute bacterial otitis media of 7 days' duration or less. **SELECTION PROCEDURE:** Volunteer sample. **INTERVENTIONS:** Tympanocentesis, oral antibiotics for 10 days and three follow-up visits in the next 30 days. **MEASUREMENT/RESULTS:** The erythrocyte sedimentation rate and C-reactive protein level were obtained at time of entry into the antibiotic study. Seventeen patients (55 per cent; 95 per cent confidence interval, 37 per cent to 72 per cent) had either an erythrocyte sedimentation rate above 20 mm/h or a C-reactive protein level above 8 mg/L. Eleven patients (35 per cent) had a recurrent episode of acute bacterial otitis media during the follow-up period. The relative risk of recurrence of otitis media given an elevated erythrocyte sedimentation rate or C-reactive protein level was 8.24 (95 per cent confidence interval, 1.20 to 56.74; Fisher's Exact Test ( $P = 0.007$ )). **CONCLUSIONS:** Clinicians who use elevated acute-phase reactants as possible indicators of invasive bacterial infections should be aware that an elevated erythrocyte sedimentation rate or C-reactive protein level is also consistent with acute bacterial otitis media. An elevated erythrocyte sedimentation rate or C-reactive protein level also appears to be associated with an increased risk of recurrence of acute bacterial otitis media. If these findings can be confirmed in a larger study, the erythrocyte sedimentation rate or C-reactive protein level could be used to assess the risk of recurrent otitis media. Author.

**Clinical comparison of cefuroxime axetil and amoxicillin/clavulanate in the treatment of patients with acute bacterial maxillary sinusitis.** Camacho, A. E., Cobo, R., Otte, J., Spector, S. L., Lerner, C. J., Garrison, N. A., Miniti, A., Mydlow, P. K., Giguere, G. C., Collins, J. J. Universidad del Valle, Cali, Colombia. *American Journal of Medicine* (1992) Sep, Vol. 93 (3), pp. 271–6.

**PURPOSE:** This multicentre study compared the clinical and bacteriologic efficacy of two oral antibiotics, cefuroxime axetil and amoxicillin/clavulanate, in the treatment of acute bacterial maxillary sinusitis. **PATIENTS AND METHODS:** Three hundred and seventeen patients with clinical and radiographic evidence of acute maxillary sinusitis were enrolled at nine centres and were randomly assigned to receive 10 days of treatment with cefuroxime axetil 250 mg twice daily ( $n = 157$ ) or amoxicillin/clavulanate 500 mg three times daily ( $n = 160$ ). Patients were assessed for both clinical and bacteriologic responses once during treatment (five to seven days) and twice after treatment (one to three days and four weeks). Bacteriologic assessments were based on needle aspirates of the maxillary sinus obtained pretreatment and, when possible, at the first post-treatment visit. **RESULTS:** Organisms were isolated from the pretreatment sinus aspirates of 198 of 317 (62 per cent) patients, with the primary isolates being *Streptococcus pneumoniae* (22 per cent), *Haemophilus* spp. (17 per cent), *Staphylococcus aureus* (13 per cent), and *Haemophilus influenzae* (10 per cent). A satisfactory clinical outcome (cure or improvement) was achieved in 85 per cent (98 of 115) and 82 per cent (102 of 124) of the clinically evaluable patients treated with cefuroxime axetil or amoxicillin/clavulanate, respectively ( $P = 0.446$ ). With respect to the eradication of the bacterial pathogens, a satisfactory outcome (cure or presumed cure) was obtained in 84 per cent (31 of 37) and 87 per cent (34 of 39) of bacteriologically evaluable patients treated with cefuroxime axetil or amoxicillin/clav-

ulanate, respectively ( $P = 0.567$ ). Treatment with amoxicillin/clavulanate was associated with a significantly higher incidence of drug-related adverse events (13 per cent versus 3 per cent,  $P = 0.001$ ), particularly diarrhoea (8 per cent versus 1 per cent,  $P = 0.001$ ). Two patients in the cefuroxime axetil group and three patients in the amoxicillin/clavulanate group withdrew from the study due to adverse events. **CONCLUSIONS:** Our results indicate that cefuroxime axetil twice a day is as effective as amoxicillin/clavulanate three times a day in the treatment of acute bacterial maxillary sinusitis but produces fewer adverse effects. Author.

**Upper and lower airway compromise in the Apert syndrome.** Cohen, M. M. Jr, Kreiborg, S. Department of Oral Biology, Faculty of Dentistry, Dalhousie University, Halifax, Nova Scotia, Canada. *American Journal of Medical Genetics* (1992) Sep 1, Vol. 44 (1), pp. 90–3.

Both upper and lower airway compromise may be responsible for early death in some patients with the Apert syndrome. We report on two and review six cases with complete or partial cartilage sleeve abnormalities of the trachea. Possible mechanisms include tracheal stenosis and/or lack of tracheal distensibility which may result in respiratory inefficiency, inability to clear secretions, and/or increased liability to surface injury from tracheal suctioning. Upper airway compromise, consisting of obstructive sleep apnea and cor pulmonale, may result from reduced nasopharyngeal and oropharyngeal dimensions in the Apert craniofacial configuration. Author.

**Cigarette smoke-induced airway goblet cell secretion: dose-dependent differential nerve activation.** Kuo, H. P., Rohde, J. A., Barnes, P. J., Rogers, D. F. Department of Thoracic Medicine, National Heart and Lung Institute, London, United Kingdom. *American Journal of Physiology* (1992) Aug, Vol. 263 (2 Pt 1), pp. L161–7.

We studied the effect of acute inhalation of middle-tar cigarette smoke on airway goblet cell secretion in anesthetized guinea pigs. Secretion induced by a low dose of smoke (10 breaths diluted 1:10 in air) was blocked by either hexamethonium or by filtering out the particulate phase of the smoke. The response was partially inhibited by atropine but was not inhibited by propranolol, phentolamine, or capsaicin pretreatment. Cutting the nerve supply to the airways did not inhibit the response to low-dose smoke. In contrast, goblet cell secretion induced by a high dose of cigarette smoke (20 breaths undiluted) was inhibited by capsaicin pretreatment but not by autonomic receptor blockade nor by filtering out the particulate phase. Secretion induced by the vapour phase of the high dose of cigarette smoke was blocked by capsaicin pretreatment but was not inhibited by hexamethonium. We conclude that in guinea pig airways the particulate phase of low doses of smoke activates cholinergic nerves via stimulation of parasympathetic ganglia, whereas the vapour phase of high doses of smoke activates capsaicin-sensitive sensory nerves. Author.

**Recurrent parapharyngeal rhabdomyoma. Evidence of neoplastic nature of the tumor from cytogenetic study.** Gibas, Z., Miittinen, M. Department of Pathology and Cell Biology, Thomas Jefferson University, Philadelphia, Pennsylvania. *American Journal of Surgical Pathology* (1992) Jul, Vol. 16 (7), pp. 721–8.

A 64-year-old Caucasian male with a left parapharyngeal mass had a past medical history that was significant for excision of a benign rhabdomyoma of the soft palate 30 years previously. Then 25 years ago, the tumour recurred in the palate and retropharyngeal space on the left and was reexcised. Histologic examination of all three excisions showed adult rhabdomyoma. Ultrastructural and histochemical studies of the second excision of this tumour have been published previously. The present study included histologic, ultrastructural, immunohistochemical, and cytogenetic analyses. The histologic and

ultrastructural features of the tumour were identical to those reported 25 years ago. Immunohistochemical studies demonstrated that the tumour cells were desmin and myoglobin positive and vimentin negative. Focal positivity for CD56 was also present. Intracellular inclusions in the tumour cells were strongly positive for desmin. Cytogenetic examination of short-term cultures of the tumour cells demonstrated clonal chromosome abnormalities in 60 per cent of metaphases. The majority of cells showed a reciprocal translocation between chromosomes 15 and 17 as the sole abnormality. A minor clone was characterized by abnormalities of the long arm of chromosome 10. The presence of clonal structural chromosome abnormalities in extracardiac adult rhabdomyoma lends strong support to the idea that these rare tumours are true neoplasms rather than hamartomatous or regenerative lesions. Author.

**Decreased airway mucosal prostaglandin E2 production during airway obstruction in an animal model of asthma.** Gray, P. R., Derksen, F. J., Broadstone, R. V., Robinson, N. E., Peters-Golden, M. Department of Large Animal Clinical Sciences, Michigan State University, East Lansing 48824-1314. *American Review of Respiratory Disorders* (1992) Sep, Vol. 146 (3), pp. 586-91.

Heaves is a respiratory disorder of horses and ponies characterized by bouts of acute airway obstruction and airway hyperresponsiveness. We measured prostaglandin E2 (PGE2) and 15-hydroxyeicosatetraenoic acid (15-HETE) production in vitro in tracheal epithelium obtained from six affected horses at the time of acute airway obstruction as compared with six matched control horses. Strips of epithelium and subepithelial tissue were prepared and stimulated with A23187, histamine, and bradykinin. The PGE2 and 15-HETE in media from strips was quantitated by radioimmunoassay. 15-HETE above the limits of accurate detection was found in epithelial strips of only two principal animals and in none of the control horses, and the amount of 15-HETE was not increased when strips were stimulated. Epithelial strips from affected horses tended to produce less PGE2 than did strips from control horses, and there was a significant correlation between epithelial PGE2 production and the time taken for affected animals to develop airway obstruction. Subepithelial tissue strips from control horses produced significantly more PGE2 in response to A23187 and bradykinin than did strips from affected horses. We conclude that equine tracheal epithelium is not a significant source of 15-HETE. Airway mucosal PGE2 production is reduced in horses with heaves, which suggests that a relative decrease in this bronchorelaxant substance may be a factor in the pathogenesis of this model of asthma. Author.

**Cardiovascular responses to insertion of the laryngeal mask.** Wilson, I. G., Fell, D., Robinson, S. L., Smith, G. University Department of Anaesthesia, Leicester Royal Infirmary. *Anaesthesia* (1992) Apr, Vol. 47 (4), pp. 300-2.

We have compared, in 40 healthy patients, the cardiovascular responses induced by laryngoscopy and intubation with those produced by insertion of a laryngeal mask. Anaesthesia was induced with thiopentone and maintained with enflurane and nitrous oxide in oxygen; vecuronium was used for muscle relaxation. Arterial pressure was measured with a Finapres monitor. The mean maximum increase in systolic arterial pressure after laryngoscopy and tracheal intubation was 51.3 per cent compared with 22.9 per cent for laryngeal mask insertion ( $P$  less than 0.01). Increases in maximum heart rate were similar (26.6 per cent v 25.7 per cent), although heart rate remained elevated for longer after tracheal intubation. We conclude that insertion of the laryngeal mask airway is accompanied by smaller cardiovascular responses than those after laryngoscopy and intubation and that its use may be indicated in those patients in whom a marked pressor response would be deleterious. Author.

**The effect of nitrous oxide on laryngeal mask cuff pressure. In vitro and in vivo studies.** Lumb, A. B., Wrigley, M. W. Division of Anaesthesia, Clinical Research Centre, Harrow. *Anaesthesia* (1992) Apr, Vol. 47 (4), pp. 320-3.

We have studied the effect of nitrous oxide on the cuff pressure of a laryngeal mask both in vitro and in vivo. In laboratory tests, we showed that nitrous oxide and carbon dioxide diffuse across the cuff wall much more rapidly than nitrogen and oxygen. Differing partial pressures of these gases across the cuff wall therefore give rise to changes in volume and pressure within the cuff. We then studied 18 patients undergoing general anaesthesia with nitrous oxide, and found a consistent and linear increase in cuff pressure in all patients. After 30 min, the mean pressure had increased by 30 mmHg, and there was approximately 10 per cent nitrous oxide in the cuff. It is dif-

icult to relate these findings to pressure on pharyngeal structures, but methods of limiting the rise in intracuff pressure are discussed. Author.

**Nosocomial sinusitis in ventilated patients. Nasotracheal versus orotracheal intubation.** Bach, A., Boehrer, H., Schmidt, H., Geiss, H. K. Department of Anaesthesiology, University of Heidelberg, Germany. *Anaesthesia* (1992) Apr, Vol. 47 (4), pp. 335-9.

A total of 68 postoperative patients whose lungs were ventilated for more than four days were studied prospectively during a one-year study period to investigate the effect of the mode of intubation on the paranasal sinuses. After an initial X ray of the skull showing no pathological findings, patients were assigned randomly to one of the study groups; the lungs of patients in group A were ventilated via an orotracheal tube ( $n = 32$ ), and patients in group B via a nasotracheal tube ( $n = 36$ ). X ray examinations of the sinuses were performed at regular intervals. Diagnosis of sinusitis was confirmed by transantral needle puncture and culture of fluids obtained. Antibiotic regimens were altered according to laboratory testing. Two patients in group A developed signs of sinusitis in comparison to 15 patients in group B ( $P$  less than 0.01). However, there were significantly more airway complications in the orotracheal group, particularly during the period of weaning from ventilation. We conclude that orotracheal intubation should be preferred as the routine route of intubation. Author.

**Quantitative magnetic resonance imaging in temporal lobe epilepsy: relationship to neuropathology and neuropsychological function.** Lencz, T., McCarthy, G., Bronen, R. A., Scott, T. M., Inserni, J. A., Sass, K. J., Novelly, R. A., Kim, J. H., Spencer, D. D. Neuropsychology Lab, Veterans Administration Medical Centre, West Haven, CT 06516. *Annals of Neurology* (1992) Jun, Vol. 31 (6), pp. 629-37.

Magnetic resonance images (MRIs) were obtained from 25 patients with medically refractory epilepsy of temporal lobe origin (12 on the left, 13 on the right) and 14 right-handed control subjects. The hippocampi and temporal lobes were traced by computer on successive coronal images and the resulting measurements of area were summed for each region. The left and right hippocampi were symmetrical in the control subjects; however, for patients the hippocampus was smaller on the side of the seizure focus. Moreover, the left-right hippocampi ratio significantly differentiated the control subjects from each patient group. The left temporal lobe was significantly smaller than the right in control subjects. The epileptics' temporal lobes were smaller on the side of the seizure focus, compared to the temporal lobes in the control subjects. MRI hippocampal measurements were compared to hippocampal neuronal densities obtained post-operatively. Significant correlations were obtained between the ratio (side ipsilateral to focus/side contralateral to focus) of MRI hippocampal measurements and neuronal densities in all hippocampal subfields except CA2. Prior to surgery, patients were administered the Wechsler Memory Scale and the verbal Selective Reminding Test. Significant correlations existed between MRI measurements of the left hippocampus and the Wechsler logical memory percent retention scores and between the left temporal lobe measurements and the verbal Selective Reminding Test scores for patients with seizure foci in the left temporal lobe. Author.

**Extended latissimus dorsi musculocutaneous flaps for extremely wide cervical skin defects involving the cervical esophagus.** Koshima, I., Moriguchi, T., Soeda, S., Yamamoto, H., Orita, Y., Hara, A. Department of Plastic and Reconstructive Surgery, Kawasaki Medical School, Okayama, Japan. *Annals of Plastic Surgery* (1992) Aug, Vol. 29 (2), pp. 149-52.

Two cases using island distally and anteriorly extended latissimus dorsi musculocutaneous flaps for one-stage reconstruction of pharyngo-oesophageal defects of the entire front of the neck are reported. The advantage of this flap is its extremely large skin territory, which provides a reliable vascular supply. This flap is suitable for extremely wide cervical defects where the recipient vessels are damaged after severe infection and irradiation. Author.

**Massive pharyngocutaneous fistulae: salvage with two-layer flap closure.** Peat, B. G., Boyd, J. B., Gullane, P. J. Division of Plastic Surgery, Toronto Hospital, Ontario, Canada. *Annals of Plastic Surgery* (1992) Aug, Vol. 29 (2), pp. 153-6.

Massive pharyngocutaneous fistulae may be arbitrarily defined as those involving two-thirds or more of the circumference of the pharyngeal wall. Three such patients are presented, all after failed radiotherapy and surgery. The principles of management consist of salivary



diversion, complete debridement, nutritional support, prophylactic antibiotics, and two-layer, well-vascularized overlapping closure. We currently recommend a radial forearm flap used in conjunction with a pectoralis muscle (or musculocutaneous) flap for rapid rehabilitation of these patients, particularly in the presence of obesity or an irradiated bed. Author.

**Temporomandibular joint air in fractures in the skull base.** Mercuri, V., House, R. J. Radiology Department Royal Melbourne Hospital, Victoria. *Australasian Radiology* (1992) May, Vol. 36 (2), pp. 129–30.

Basilar skull fractures involving the temporal bone extend through the tympanic part of the temporal bone in two-thirds of cases. The anatomical relationship of this part of the temporal bone and the temporomandibular joint enables air to pass from the auditory canal into the joint. Air in the temporomandibular joint is demonstrated on CT scans as an indirect sign of temporal bone fracture. Author.

**Reticular formation influences on primary and non-primary auditory pathways as reflected by the middle latency response.** Kraus, N., McGee, T., Littman, T., Nicol, T. Evoked Potentials Laboratory, Northwestern University, Evanston, IL 60208. *Brain Research* (1992) Aug 7, Vol. 587 (2), pp. 186–94.

Ongoing studies are aimed at identifying the neural pathways responsible for the middle latency response (MLR). These studies involve the analysis of surface and intracranial potentials following pharmacologic inactivation (with lidocaine) of discrete regions of the guinea pig brain. Previous investigations have shown that MLR surface waves recorded over the temporal lobe originate from pathways anatomically and functionally distinct from those that generate MLR waves recorded over the midline, and that both primary and non-primary auditory thalamo-cortical pathways contribute to the guinea pig MLR. The present investigation examines the role of the mesencephalic reticular formation (mRF) in the MLR generating system. Inactivation of the mRF was associated with disruption of the midline response. These waves have been shown to reflect activity from non-primary subdivisions of the thalamo-cortical pathway. Components recorded over the temporal lobe were also affected, consisting of amplitude reduction and latency prolongation without changes in response morphology. Changes in temporal MLR components with mRF inactivation were smaller than those associated with direct inactivation of primary and non-primary subdivisions of the medial geniculate body. These findings indicate that mRF input is essential for normal generation of those components of the MLR thought to reflect both primary and non-primary auditory pathway activity. Author.

**Expression of beta-2-microglobulin by nasopharyngeal carcinoma.** Shiu, W., Leung, S. F., Leung, W. T., Ho, S., Tao, M. Department of Clinical Oncology, Prince of Wales Hospital, Chinese University of Hong Kong. *British Journal of Cancer* (1992) Sep, Vol. 66 (3), pp. 555–7.

Serum beta-2-microglobulin (beta 2M) levels of 274 Chinese patients with different stages of nasopharyngeal carcinoma at presentation and that of 35 patients who developed distant metastases post-treatment were assayed. Beta 2M level was found to increase with advancing stage of disease, with statistically significant differences among early-stage, advanced-stage, and metastatic disease. Elevated pre-treatment beta 2M levels were expressed more frequently by tumours with lower degree of histological differentiation. The sensitivity of serum beta 2M for diagnosis of nasopharyngeal carcinoma, however, is low. Author.

**Familial nasopharyngeal carcinoma in patients who are not Chinese.** Levine, P. H., Pocinki, A. G., Madigan, P., Bale, S. Epidemiology and Biostatistics Program, National Cancer Institute, Bethesda, MD 20892. *Cancer* (1992) Sep 1, Vol. 70 (5), pp. 1024–9.

**BACKGROUND:** Nasopharyngeal carcinoma (NPC) is a malignancy that is prominent in Cantonese Chinese people. It is presumed to result from an interaction of genetic and environmental factors, including the Epstein-Barr virus (EBV). In an attempt to further clarify the pathogenesis of this disease, an evaluation of NPC occurring in racial/ethnic groups not considered susceptible to this disease could be informative. **METHODS:** A white family with NPC occurring in three siblings was investigated and information was gleaned from literature on other reports of familial NPC in non-Chinese families. **RESULTS:** In the family being investigated, another genetically determined disease, hemophilia, was identified. Radiation early in life was noted to be a possible risk factor for NPC in the proband. A

review of familial NPC in the white population revealed that in contrast to sporadic NPC, which is usually of the well-differentiated type, familial NPC usually is poorly differentiated. **CONCLUSIONS:** Familial NPC offers an important opportunity to investigate the etiology of this disease. With newer laboratory techniques to investigate pathogenetic mechanisms, detailed evaluations of non-Chinese NPC families may become increasingly important. Author.

**Sinonasal fibrosarcomas, malignant schwannomas, and 'Triton' tumours. A clinicopathologic study of 67 cases.** Heffner, D. K., Gnepp, D. R. Department of Otolaryngic and Endocrine Pathology, Armed Forces Institute of Pathology, Washington, D.C. 20306-6000. *Cancer* (1992) Sep 1, Vol. 70 (5), pp. 1089–101.

**BACKGROUND:** Sinonasal fibrosarcomatous neoplasms are uncommon tumours and there are no previous studies of a large number of such cases. The clinical and histologic features of 67 fibrosarcomatous neoplasms of the nasal cavity and paranasal sinuses are reported. **METHODS:** Multiple clinical and histologic parameters (including immunostain results) were analyzed to characterize the features important for histologic recognition of the tumours and for correlation with patient outcomes. **RESULTS:** Some tumours could be classified as malignant schwannomas or malignant 'Triton' tumours, but their behaviour was similar to that of the fibrosarcomas. Histologically, most tumours were very low-grade malignant neoplasms; however, 22 per cent of patients died of their tumours. Factors that correlated with death were mitotic rate (greater than 4 mitoses per 50 high-power fields), increased tumour cellularity, and male sex. **CONCLUSIONS:** Many tumours originally were diagnosed as benign (by others), probably causing initial undertreatment of some patients. Proper recognition and histologic evaluation of the tumour are important to ensure the best therapy and optimal patient survival. Author.

**Phase II trial of 4'-0-tetrahydropyranyladriamycin (pirarubicin) in head and neck carcinoma.** Sridhar, K. S., Hussein, A. M., Benedetto, P., Ardalan, B., Savaraj, N., Richman, S. P. Department of Medical Oncology, Sylvester Comprehensive Cancer Centre, University of Miami School of Medicine, FL 33136. *Cancer* (1992) Sep 15, Vol. 70 (6), pp. 1591–7.

**BACKGROUND:** 4'-0-tetrahydropyranyladriamycin (Pirarubicin, Meiji Seika (USA) Inc., New York, NY) may be less toxic than doxorubicin. **METHODS:** A Phase II trial of Pirarubicin was done in 26 patients who had not previously had chemotherapy and who had measurable and incurable head and neck carcinoma. All patients received an intravenous bolus dose of 60 mg/m<sup>2</sup> Pirarubicin in the first cycle without any prophylactic antiemetic. The cycles were repeated every three weeks. Based on tumour response, nadir counts, or complications of myelosuppression, the doses were escalated or de-escalated by 10 mg/m<sup>2</sup>, if necessary, in the second cycle to achieve mild leukopenia (3000–4000 leukocytes/microlitres). **RESULTS:** Leukopenia was mild, moderate (2000–2999 leukocytes/microlitres), severe (1000–1999 leukocytes/microlitres), and life threatening (less than 1000 leukocytes/microlitres) in 13 per cent, 31 per cent, 27 per cent and 9 per cent of the first two courses, respectively. The median interval to nadir leukopenia was 13 days (range, 7–21 days), with a median of eight days (range, 5–13 days) to recover to normal. One patient with a leukocyte count of 800/microlitres and an absolute granulocyte count (AGC) of 488/microlitres died of sepsis 15 days after the first course. All patients had at least one course that resulted in leukopenia. One episode each of mild (100,000–150,000 platelets/microlitres) and severe (25,000–49,999 platelets/microlitres) thrombocytopenia occurred in the first two courses. Leukocyte, granulocyte, and platelet counts were not done routinely after the second cycle. Six patients who received four or more courses with cumulative doses of 310, 610, 340, 260, 660, and 550 mg/m<sup>2</sup> had decrements of 0 per cent, 1 per cent, 7 per cent, 10 per cent, 12 per cent and 13 per cent, respectively, in radionuclide left ventricular ejection fraction (LVEF). All other toxic effects were mild. **CONCLUSIONS:** In the 24 patients with disease evaluable for response to Pirarubicin therapy, one had a complete response that lasted five months and four had a partial response of two, three, six and eight months. The median survival time in patients with disease that responded to Pirarubicin therapy was 27 months; in patients with disease that did not respond to Pirarubicin therapy, the median survival time was four months, and in the total cohort, it was five months. Pirarubicin was well tolerated and was an active agent in head and neck squamous cell carcinoma. Author.

**Radiosurgery for palliation of base of skull recurrences from head and neck cancers.** Kaplan, I. D., Adler, J. R., Hicks, W. L. Jr.,

Fee, W. E., Goffinet, D. R. Department of Radiation Oncology, Stanford University School of Medicine, California 94305. *Cancer* (1992) Oct 1, Vol. 70 (7), pp. 1980–4.

**BACKGROUND.** Seven patients received stereotaxic radiosurgery for 10 lesions at the base of the skull (BOS) from recurrent head and neck malignant neoplasms. **METHODS.** A radiation dose of 17.5–35.0 Gy was delivered as a single fraction. Follow-up ranged from one to 14 months. **RESULTS.** Nine lesions were symptomatic, and the symptoms improved in five and stabilized in four lesions. In addition, a significant radiographic response was observed in four of 10 recurrences. Cranial nerve signs developed in two patients, and an area of asymptomatic necrosis developed in one patient in the temporal lobe tip. **CONCLUSIONS.** From their brief experience, the authors conclude that stereotaxic radiosurgery may be a promising treatment in locally controlling recurrent head and neck cancers that involve the BOS. Author.

**Tracheal sounds in upper airway obstruction.** Pasterkamp, H., Sanchez, I. Department of Pediatrics and Child Health, University of Manitoba, Winnipeg, Canada. *Chest* (1992) Sep, Vol. 102 (3), pp. 963–5.

A boy with subglottic narrowing secondary to laryngotracheitis presented with noisy breathing. Acoustic measurements of tracheal sounds at standardized air flows correlated well with the clinical course and with spirometric assessments. This indicates the potential value of respiratory sound characterization in patients with upper airway obstruction. Author.

**Dangerous pencils and a new technique for removal of foreign bodies.** Yuksek, T., Solak, H., Odabas, D., Yeniterzi, M., Ozpinar, C., Ozergin, U. Department of Thorax and Cardiovascular Surgery, School of Medicine, Selcuk University, Konya, Turkey. *Chest* (1992) Sep, Vol. 102 (3), pp. 965–7.

Aspirated foreign bodies are important problems during childhood. Some instances may be fatal. Most of the foreign bodies are removed with use of classic instruments like rigid bronchoscopes and foreign body forceps. But sometimes we fail to remove them, particularly aspirated beads and spherical objects. In this case, a Fogarty catheter is helpful. Although we have had many experiences recently we failed to remove one aspirated foreign body which was a pencil cap. We succeeded in removing this pencil cap with a new technique that is explained in this article. We used a Storz transbronchial aspiration biopsy needle and a cotton-carrier stylet to remove the pencil cap. Author.

**CT findings in paranasal aspergillosis.** Patel, P. J., Kolawole, T. M., Malabarey, T. M., Hulailah, A., Hamid, F., Chakaki, M. Radiology Department, King Khalid University Hospital, Riyadh, Saudi Arabia. *Clinical Radiology* (1992) May, Vol. 45 (5), pp. 319–21.

Computed tomographic (CT) scan of eight cases of paranasal sinus aspergillosis were reviewed. Different CT patterns were observed such as areas of high densities, linear interlacing network of high density, radiolucent thin rim periphery to the masses, calcification, expansion of involved sinuses and bone erosion. Two cases of invasive type showed extension beyond the sinuses into the orbit and intracranially simulating a malignant tumour. The findings are similar to those described by previous authors. The differential diagnosis is also discussed. Author.

**Radiology of congenital abnormalities of the chest.** Davis, S. D., Umlas, S. L. Department of Radiology, New York Hospital-Cornell Medical Centre, NY 10021. *Current Opinion in Radiology* (1992) Oct, Vol. 4, pp. 25–35.

Radiologic imaging plays a critical role in the management of congenital abnormalities affecting the tracheobronchial tree, lung parenchyma, pulmonary vessels, and the mediastinum. Although procedures such as bronchoscopy, bronchography, and angiography may at times still be required, diagnosis is now usually established noninvasively using ultrasound, CT, MR imaging, or radionuclide imaging techniques. Earlier diagnosis, even in the antenatal period, is possible, thus allowing more prompt and effective treatment. Patients with congenital abnormalities that were previously fatal in infancy and childhood are surviving into adulthood. Clinicians and radiologists alike must now be able to recognize congenital disorders in patients who may have minimal or absent symptoms. Author.

**Temporary transection of the trachea in cervical esophagectomy.** Kato, H., Ebihara, S. Department of Surgery, National Cancer Centre Hospital, Tokyo, Japan. *European Journal of Surgical Oncology* (1992) Aug, Vol. 18 (4), pp. 335–9.

A new method to preserve the larynx and to achieve a better exposure of the cervical esophagus was performed in four patients with cervical esophageal carcinoma. The trachea, which prevented exposure of the esophagus, was cut, keeping the continuity of the recurrent laryngeal nerves. The tracheo-esophageal space was opened like a double door. The cervical esophagus was replaced with a substitution followed by tracheal reconnection. Three different substitutions were used for the reconstruction of the cervical esophagus: free jejunum, free skin tube graft and stomach. This procedure offers a further excision of the esophagus while preserving the larynx, and results in free surgical margins and safe anastomoses of the alimentary tract. This method is applicable for a curative operation of carcinoma without invasion to the trachea to offer the patient a better quality of life. Author.

**Differential effects of ear-canal pressure and contralateral acoustic stimulation on evoked otoacoustic emissions in humans.** Veuillet, E., Collet, L., Morgon, A. Universite Claude Bernard, Hopital Edouard Herriot, Lyon, France. *Hearing Research* (1992) Aug, Vol. 61 (1–2), pp. 47–55.

The effect of ear canal pressure variation (ECPV) on click evoked otoacoustic emissions (EOAEs) was compared to the suppressive effect observed with contralateral acoustic stimulation (CAS) in 11 healthy subjects. Both total EOAE amplitude and amplitude of 200 Hz frequency bands (22) were analyzed. Our results revealed that the ECPV as the CAS induced a decrease of the total EOAE amplitude; these two factors showed an additive effect when they are conjoint. The study of the EOAE frequency bands showed that the majority of them decreased under CAS and ECPV; however, a few bands are not affected. Moreover, it appeared that amplitude of the EOAE frequency bands were not modified in a similar way between the two factors: indeed some bands around 4.1 kHz did not decrease either by CAS or ECPV. These results suggest that these applied factors exert different actions on EOAEs. Moreover, the lack of a decrease effect for the same bands, both with CAS and ECPV, may explain the vulnerability of some cochlear locations. Author.

**Second head and neck cancers following radiation therapy of T1 and T2 cancers of the oral cavity and oropharynx.** Fijuth, J., Mazeiron, J. J., Le-Pechoux, C., Piedbois, P., Martin, M., Haddad, E., Calitchi, E., Pierquin, B., Le-Bourgeois, J. P. Departement de Cancerologie, Hopital Henri Mondor, Creteil, France. *International Journal of Radiation Oncology, Biology and Physics* (1992), Vol. 24 (1), pp. 59–64.

The risk of second cancer in the head and neck region following definitive radiation therapy was evaluated among 600 patients who were treated for T1 and T2 cancers of the oral cavity and oropharynx at the Henri Mondor Hospital between January 1970 and March 1987. Seventy-five patients (12.5 per cent) were managed with external irradiation only, 243 (40.5 per cent) with RT and Iridium 192, and 282 (47 per cent) with Iridium 192 alone. One hundred and fifteen patients (19 per cent) developed a second cancer from three to 183 months after initial therapy (median: 32 months), including 69 patients (11.5 per cent) in whom the second malignancy was diagnosed in the head and neck region. An increased and constant actuarial risk of development of second head and neck cancer was found (2.7 per cent year of observation). Univariate analysis showed that age, sex, stage, and modality of the initial treatment did not influence the risk of second head and neck cancer; there was a greater risk of second head and neck malignancy for those patients with soft palate carcinoma ( $P$  less than 0.05). Multivariate analysis revealed that the only group of patients who developed a second head and neck cancer more frequently were those who were irradiated with Iridium 192 only ( $P = 0.0076$ ). There was a trend toward a greater risk of second head and neck malignancy for those with soft palate carcinoma ( $P = 0.059$ ). Radical treatment of the second head and neck malignancy by surgery and/or re-irradiation was performed for 67 per cent of patients. Patients initially treated by Iridium 192 only could undergo salvage treatment more often than those who previously received external beam radiotherapy (79 per cent vs 53 per cent,  $P = 0.02$ ). The overall two-year and five-year survivals after the diagnosis of the second head and neck cancer were 32 per cent and 10 per cent, respectively. Author.

**A survey of prevention and treatment regimens for oral sequelae resulting from head and neck radiotherapy used in Dutch radiotherapy institutes.** Jansma, J., Vissink, A., Bouma, J., Vermey, A., Panders, A. K., s-Gravenmade, E. J. Department of Oral and Maxillofacial Surgery, University Hospital Groningen, The Netherlands. *International Journal of Radiation Oncology, Biology and Physics* (1992), Vol. 24 (2), pp. 359–67.



Radiation treatment plays an important role in the management of head and neck cancer. Unfortunately several radiation-induced side effects may occur including mucositis, hyposalivation, radiation caries, trismus and osteoradionecrosis. It is generally accepted that most side effects can be prevented or reduced in severity. The purpose of this investigation was to make a survey of the prevention and treatment regimens for oral sequelae resulting from head and neck radiotherapy applied in all radiotherapy institutes in the Netherlands, and to evaluate the differences in these regimens. In all Dutch centres ( $n = 20$ ) in which irradiation of head and neck cancer patients is performed, members of the staff responsible for prevention and treatment of oral side effects were interviewed. Questions referred to composition of the dental team, screening and care pre-irradiation, care during irradiation, and care post-irradiation. There appeared to be a great diversity in the preventive approach of the head and neck cancer patient in Dutch radiotherapy institutes. The most comprehensive counselling was performed by those centres in which a dental team was active, particularly when an oral hygienist was a member of such a team. The diversity is among others based on lack of well-defined guidelines in many centres, the spread of a relatively small patient group over a rather large number of centres, absence of a dental team in some centres, absence of an oral hygienist in some dental teams, and the observation that a rather large number of patients were not referred, or not timely referred to the dental team. There seems to be a need for the development of a general protocol for the prevention of oral complications applicable in all centres. Author.

**Sound-power collection by the auditory periphery of the Mongolian gerbil *Meriones unguiculatus*. I: Middle-ear input impedance.** Ravicz, M. E., Rosowski, J. J., Voigt, H. F. Eaton-Peabody Laboratory of Auditory Physiology, Massachusetts Eye and Ear Infirmary, Boston 02114. *Journal of the Acoustical Society of America* (1992) Jul, Vol. 92 (1), pp. 157–77.

This is the first paper of a series dealing with sound-power collection by the auditory periphery of the gerbil. The purpose of the series is to quantify the physiological action of the gerbil's relatively large tympanic membrane and middle-ear air cavities. To this end the middle-ear input impedance  $Z_T$  was measured at frequencies between 10 Hz and 18 kHz before and after manipulations of the middle-ear cavity. The frequency dependence of  $Z_T$  is consistent with that of the middle-ear transfer function computed from extant data. Comparison of the impedance and transfer function suggests a middle-ear transformer ratio of 50 at frequencies below 1 kHz substantially smaller than the anatomical value of 90 (Lay, J. Morph. 138, 41–120 (1972)). Below 1 kHz the data suggest a low-frequency acoustic stiffness  $K_T$  for the middle ear of  $970 \text{ Pa/mm}^3$  and a stiffness of the middle-ear cavity of  $720 \text{ Pa/mm}^3$  (middle-ear volume  $V \text{ MEC}$  of  $195 \text{ mm}^3$ ); thus the middle-ear air spaces contribute about 70 per cent of the acoustic stiffness of the auditory periphery. Manipulations of a middle-ear model suggest that decreases in  $V \text{ MEC}$  lead to proportionate increases in  $K_T$  but that further increases in middle-ear cavity volume produce only limited decreases in middle-ear stiffness. The data and the model point out that the real part of the middle-ear impedance at frequencies below 100 Hz is determined primarily by losses within the middle-ear cavity. The measured impedance is comparable in magnitude and frequency dependence to the impedance in several larger mammalian species commonly used in auditory research. A comparison of low-frequency stiffness and anatomical dimensions among several species suggests that the large middle-ear cavities in gerbil act to reduce the middle-ear stiffness at low frequencies. A description of sound-power collection by the gerbil ear requires a description of the function of the external ear. Author.

**The role of the immunologist in sinus disease.** Polmar, S. H. Division of Immunology, Children's Hospital, Boston, Mass. 02115. *Journal of Allergy and Clinical Immunology* (1992) Sep, Vol. 90 (3 Pt 2), pp. 511–4; discussion 514–5.

The clinical immunologist is playing an increasingly important role in the evaluation and management of sinus disease. Although most patients with sinus disease are not immunodeficient, a significant proportion of patients with chronic sinusitis unresponsive to medical and/or surgical therapy may have an immunodeficiency. Most immunodeficient patients for whom sinusitis is a major clinical problem tend to be those with humoral immunodeficiency diseases. The role of immunoglobulin replacement therapy is well established for patients with global immunoglobulin and antibody deficiencies (e.g. X-linked agammaglobulinemia and common variable immunodeficiency) and may be helpful in controlling refractory sinusitis in patients with more selective immunoglobulin deficiencies (e.g., IgG subclass deficiency

and selective antibody deficiencies), but efficacy in these conditions remains to be established by controlled studies. Many immunodeficient patients have a history of repeated sinus surgery before the recognition of their immune defect. Even in immunodeficient patients treated with antibiotics and immunoglobulin replacement therapy, functional endoscopic sinus surgery is successful in only half of the patients. Author.

**The role of allergy in sinusitis in adults.** Spector, S. L. UCLA School of Medicine. *Journal of Allergy and Clinical Immunology* (1992) Sep. Vol. 90 (3 Pt 2), pp. 518–20.

Allergic sinus disease in adults has not been definitively established. On the other hand, sinusitis is more common in allergic individuals than control subjects. Nasal provocation studies with allergens produce clinical findings and radiographic evidence suggestive of allergic sinusitis. Studies that use single-photon emission computerized tomography do not confirm direct entry of pollens into the sinuses. Fungal sinusitis typically occurs in patients with allergic rhinitis and nasal obstruction for many years. Patients often have an elevated specific IgE and total IgE with positive skin tests to the fungus involved. The diagnosis is confirmed by computed tomographic scan or magnetic resonance imaging of the sinuses. There is no direct fungal invasion. Many patients who have chronic severe sinusitis, asthma, and frequently aspirin idiosyncrasy appear to have immunologic reactions in the sinuses (and bronchial tissue). Histologic findings of the sinus mucosa show infiltration with plasma cells and eosinophils. Immunofluorescent stains show IgE dispersed throughout the tissue possibly in plasma cells. An intense linear stain for IgD is found along the epithelial side of the basement membrane. Author.

**Aspergilloma in the frontal sinus expanding into the orbit.** Swoboda, H., Ullrich, R. Department of Otorhinolaryngology, University of Vienna, Austria. *Journal of Clinical Pathology* (1992) Jul, Vol. 45 (7), pp. 629–30.

A case of primary frontal sinus aspergilloma in a 79-year-old non-immunocompromised woman, who presented with a right-sided pyocoele expanding into the orbit, is presented. The low susceptibility of the frontal sinus is probably related to the brachycephalic shape of the human skull which locates this sinus far anterosuperiorly to the nasal cavity. In human frontal sinus aspergilloma nasal symptoms are absent; the clinical manifestation of this rare disease is initiated by complications, especially orbital or intracranial invasion. Sinus opacity may raise early suspicion. Treatment consists of surgical debridement and re-aeration. Diagnosis is established by histological analysis of intraluminal contents. Author.

**Effects of sodium hyaluronate on tympanic membrane perforations.** Rivas-Lacarte, M. P., Casasin, T., Alonso, A. Department of Otorhinolaryngology, Viladecans Hospital, Barcelona, Spain. *Journal of International Medical Research* (1992) Aug, Vol. 20 (4), pp. 353–9.

The effects of topically applied one per cent sodium hyaluronate as an alternative treatment to surgery for tympanic membrane perforations was studied. In an open study, the inclusion criteria were increased by accepting patients previously treated by surgery or with placebo and, compared with a previous study, the frequency at which sodium hyaluronate was applied was reduced. Reduction in the size of the perforation was detected in 12/16 (75 per cent) patients, six (37.5 per cent) of whom showed complete tympanic healing, and in the remaining four (25 per cent) there was no healing. The average percentage reduction in the perforation area was 80.5 per cent. The two factors altered in this trial, i.e. inclusion criteria and frequency of administration of treatment, had little influence on the degree of membrane healing. Author.

**Upper limb defect associated with developmental delay, unilateral poorly developed antihelix, hearing deficit, and bilateral choroid coloboma: a new syndrome.** Ward, J. R., Saad de-Owens, C., Sierra, I. A. Clinical Genetics Section, Complejo Hospitalario Metropolitano de la Caja del Seguro Social Arnulfo Arias M, Panama City, Panama. *Journal of Medical Genetics* (1992) Aug, Vol. 29 (8), pp. 589–91.

Two sibs are reported with upper limb defect, developmental delay, central hearing loss, unilateral poorly developed antihelix, and bilateral choroid coloboma. The inheritance is probably autosomal recessive. Author.

**What is the validity of an 'abnormal' evoked or event-related potential in MS? Auditory and visual evoked and event-related potentials in multiple sclerosis patients and normal subjects.** van-

Dijk, J. G., Jennekens-Schinkel, A., Caekebeke, J. F., Singh, A., Zwiderman, A. H. Department of Neurology and Clinical Neurophysiology, Leiden University Hospital, The Netherlands. *Journal of Neurological Sciences* (1992) May, Vol. 109 (1), pp. 11–7.

The predictive validity of evoked potentials (EPs) and event-related potentials (ERPs) in multiple sclerosis (MS) has not yet been fully investigated, as only the sensitivity of these tests has so far been reported. EPs (short, middle and long latency auditory evoked potentials and visual evoked potentials) and ERPs (visual and auditory) were studied in 19 controls and 30 multiple sclerosis (MS) patients. Abnormality thresholds of peak latencies were defined on the basis of the mean plus 2 or 3 standard deviations, based on data from the control group. The effects of changing the latency thresholds and including the absence of peaks in the abnormality definition were assessed. In accordance with earlier reports we found a high sensitivity (up to 93 per cent for bimodal combined EPs and 47 per cent for combined ERPs). False positive rates of separate peaks were low and conformed to expectation. However, combining separate peak measurements increased false positive rates of EPs and ERPs to unacceptably high levels (up to 58 per cent for combined EPs and 32 per cent for combined ERPs). Positive likelihood ratios for bimodal EPs were low (between 1.6 and 4.0, depending on the abnormality definition). They ranged from 1.4 to 2.2 for bimodal ERPs. Abnormal combined EPs or ERPs were therefore not the reliable indicators of functional damage that they are supposed to be. Separate EPs were much more reliable in this respect. ERPs failed to distinguish between the groups, either separately or in combination. Changing the latency threshold and including absent peaks in the abnormality definition influenced the abnormality rates in both groups. However, these changes were not consistent, and occurred in the patient as well as in the control group. As a result the validity of the tests was not improved. The choice of abnormality definition and the method of data combination have a pronounced effect on the false positive rates of EPs and ERPs, which are unacceptably high with currently conventional methods. Author.

**Evaluation of the substantivity of a chlorhexidine oral rinse in irradiated head and neck cancer patients.** Toljanic J. A., Hagen, J. C., Takahashi, Y., Shapiro, R. D. Section of Oral and Maxillofacial Surgery/Dentistry, University of Chicago, IL. *Journal of Oral and Maxillofacial Surgery* (1992) Oct, Vol. 50 (10), pp. 1055–9.

A trial was conducted to evaluate the substantivity of chlorhexidine in a population of patients who had undergone primary or adjunctive radiation therapy for tumours of the head and neck. Subjects were instructed to first rinse with 0.12 per cent chlorhexidine as per manufacturer instructions, followed by a releasing rinse provided one minute, one hour, and four hours later. All expectorants were collected, pH adjusted, and introduced to the test microorganism. Zones of bacterial inhibition were then measured and recorded. The results suggest that 0.12 per cent chlorhexidine is retained in the oral cavity for at least four hours after an initial rinsing and that the property of substantivity remains active in spite of radiation-induced changes in the oral cavity and salivary glands. Author.

**Cefpodoxime proxetil compared with amoxicillin-clavulanate for the treatment of otitis media.** Mendelman, P. M., Del-Beccaro, M.A., McLinn, S. E., Todd, W. M. Children's Hospital and Medical Centre, Seattle, WA 98105. *Journal of Pediatrics* (1992) Sep, Vol. 121 (3), pp. 459–65.

In a multicentre, randomized, investigator-blinded trial, patients were randomly selected to receive either cefpodoxime proxetil or amoxicillin-clavulanate potassium orally for the treatment of acute suppurative otitis media. Patients were seen before, during, and at the end of therapy, and two to three weeks after completion of therapy. A total of 229 patients, 153 receiving cefpodoxime and 76 receiving amoxicillin-clavulanate were entered into the study; all patients were examined to determine drug safety. A total of 146 patients, 98 in the cefpodoxime group and 48 in the amoxicillin-clavulanate group, completed the study and were examined to determine drug efficacy. End-of-therapy microbiologic eradication rates in assessable patients were 92 per cent for cefpodoxime and 86 per cent for amoxicillin-clavulanate ( $P = 0.14$ ; 95 per cent confidence interval (CI) on difference: -4.4 per cent, 19.2 per cent). End-of-therapy clinical response rates for assessable patients were as follows: cured, 68 per cent for cefpodoxime and 65 per cent for amoxicillin-clavulanate; improved, 24 per cent for cefpodoxime and 23 per cent for amoxicillin-clavulanate; and failed, 8 per cent for cefpodoxime and 13 per cent for amoxicillin-clavulanate ( $P = 0.57$ ; 95 per cent CI: -8.4 per cent, 16.5 per cent). Recurrence rates at long-term follow-up were 24 per cent for cefpodoxime-treated patients and 25 per cent for those given amoxicil-

lin-clavulanate. Both drugs were well tolerated; 20.9 per cent of those given cefpodoxime and 31.6 per cent of amoxicillin-clavulanate-treated patients had drug-related adverse medical events ( $P = 0.102$ ; 95 per cent CI: -23.9 per cent, 2.6 per cent). Gastrointestinal complaints were the most frequently reported drug-related side effect in both groups: 11.8 per cent of cefpodoxime-treated patients and 21.1 per cent of those given amoxicillin-clavulanate ( $P = 0.076$ ; 95 per cent CI: -20.8 per cent, 2.2 per cent). Drug-related dermatologic side effects (e.g. diaper rash, pruritus, urticaria) were reported in 7.8 per cent of cefpodoxime-treated patients and 14.5 per cent of those who received amoxicillin-clavulanate ( $P = 0.160$ ; 95 per cent CI: -16.6 per cent, 3.3 per cent). Our findings suggest that clinical efficacy for cefpodoxime administered twice daily is equivalent to that of amoxicillin-clavulanate administered three times a day. Author.

**Placebo-controlled trial of prednisolone in children intubated for croup.** Tibballs, J., Shann, F. A., Landau, L. I. Intensive Care Unit, Royal Children's Hospital, Melbourne, Australia. *Lancet* (1992) Sep 26, Vol. 340 (8822), pp. 745–8.

Many studies have attempted to find out whether steroid treatment is beneficial in children with croup, but the results have been inconclusive. We have done a prospective placebo-controlled study of the effect of prednisolone on two clinical endpoints—the duration of intubation and the need for reintubation. Reasons for exclusion were age under six months, congenital airway anomalies, and previous intubation. Seventy eligible children were randomly assigned treatment with prednisolone 1 mg/kg ( $n = 38$ ) or placebo ( $n = 32$ ) every 12 h given by nasogastric tube until 24 h after extubation. Eleven (34 per cent) placebo-treated and only two (5 per cent) prednisolone-treated patients required reintubation after accidental or elective extubation ( $P = 0.004$ , Fisher's exact test; odds ratio 8.9, 95 per cent confidence interval 1.7–59.3). Survival analysis with log-normal regression showed that the duration of intubation was shorter with steroid therapy ( $P$  less than 0.003) and increasing age ( $P$  less than 0.02), but was not influenced by endotracheal tube size or abnormality on chest radiograph. The median duration of intubation was 138 (95 per cent CI 118–160) h in children who received placebo and 98 (85–113) h in the prednisolone group. Steroid therapy reduces the duration of intubation and the need for reintubation in children intubated for croup. Author.

**Treatment of advanced squamous-cell carcinoma of the head and neck with alternating chemotherapy and radiotherapy.** Merlano, M., Vitale, V., Rosso, R., Benasso, M., Corvo, R., Cavallari, M., Sanguineti, G., Bacigalupo, A., Badellino, F., Margarino, G., et al. Department of Medical Oncology, National Institute for Cancer Research, Genoa, Italy. *New England Journal of Medicine* (1992) Oct 15, Vol. 327 (16), pp. 1115–21.

**BACKGROUND.** For patients with advanced, unresectable squamous-cell carcinoma of the head and neck, radiotherapy is the standard treatment but has poor results. We therefore designed a randomized trial to determine whether alternating chemotherapy with radiotherapy would improve the survival of such patients. **METHODS.** Patients in the trial had biopsy-confirmed unresectable, previously untreated Stage III or IV, squamous-cell carcinoma of the oral cavity, pharynx, or larynx. They were randomly assigned to chemotherapy consisting of four cycles of intravenous cisplatin (20 mg per square meter of body-surface area per day of five consecutive days) and fluorouracil (200 mg per square meter per day for five consecutive days) alternating with radiotherapy in three two-week courses (20 Gy per course; 2 Gy per day, five days per week), or to radiotherapy alone (up to 70 Gy; 2 Gy per day, five days per week). **RESULTS.** The 80 patients given chemotherapy alternating with radiotherapy and the 77 given radiotherapy alone were compatible in terms of age, sex, performance status, disease stage, and site of the primary tumour. Complete responses were obtained in 42 per cent of the patients in the combined-therapy group and 22 per cent of those in the radiotherapy group ( $P = 0.037$ ). The median survival was 16.5 months in the combined-therapy group and 11.7 months in the radiotherapy group ( $P$  less than 0.05); the three-year survival was 41 per cent and 23 per cent, respectively. Severe mucositis occurred in 19 per cent of the patients in the combined-therapy group and 18 per cent of those in the radiotherapy group. **CONCLUSIONS.** In patients with advanced unresectable squamous-cell carcinoma of the head and neck, chemotherapy alternating with radiotherapy increases the median survival and doubles the probability of survival for three years as compared with radiotherapy alone. However, since local diseases cannot be controlled in over half the patients who receive the combined treatment and since almost two-thirds die within three years, further improvements in management are necessary. Author.



**Outpatient management of chronic suppurative otitis media without cholesteatoma in children.** Dagan, R., Fliss, D. M., Einhorn, M., Kraus, M., Leiberman, A. Pediatric Infectious Disease Unit, Ben-Gurion University Negev, Beer-Sheva, Israel. *Pediatric Infectious Diseases Journal* (1992) Jul, Vol. 11 (7), pp. 542–6.

Prolonged antipseudomonal parenteral antibiotic therapy combined with daily aural toilet has been effective in resolving long standing ear discharge in children with chronic suppurative otitis media. However, such treatment suffered from the disadvantages of prolonged hospitalization. We conducted a prospective study to investigate the feasibility and efficacy of exclusive outpatient treatment of children with chronic suppurative otitis media without cholesteatoma who had failed otological/oral antimicrobial therapy. The treatment consisted of daily aural toilet (suction and debridement) and twice daily parenteral ceftazidime (50 mg/kg/dose). Thirty-seven children were included. The duration of discharge from the ear before treatment was 6 to 121 months (median, 30 months). Aerobic cultures yielded *Pseudomonas aeruginosa* in 97 per cent, often with other organisms. The management and follow-up were performed jointly by otolaryngology and infectious diseases physicians using the hospital ambulatory services. The route of ceftazidime administration (intravenous or intramuscular) was chosen according to the parents' and patients' convenience. Discharge stopped within three to 20 days (median, eight days) in all children but one. Seventy-six per cent of the 29 children available for follow-up 12 months after treatment were still free of discharge. Our results demonstrate that a regimen combining daily aural toilet and twice daily parenteral ceftazidime is highly efficacious in resolving ear discharge in children with chronic suppurative otitis media without cholesteatoma and that such a regimen does not require hospitalization. Author.

**Ten-year review of otitis media pathogens.** Bluestone, C. D., Stephenson, J. S., Martin, L. M. Otitis Media Research Centre, University of Pittsburgh School of Medicine, PA. *Pediatric Infectious Diseases Journal* (1992) Aug, Vol. 11 (8 Suppl), pp. S7–11.

Data collected from 1980 to 1989 by investigators at the Pittsburgh Otitis Media Research Center were examined to detect changes over time in the prevalence of bacteria isolated from middle ear effusions in patients with otitis media. The organisms isolated most commonly from the 7,396 effusions cultured at the centre were *Streptococcus pneumoniae* and *Haemophilus influenzae*. *S. pneumoniae* predominated in the subgroup of patients with acute otitis media, whereas *H. influenzae* was isolated most frequently from patients with otitis media with effusion. The most notable changes to occur during the 10-year period were a statistically significant increase in the prevalence of *S. pneumoniae* in patients with acute otitis media and a progressive rise in the percentage of beta-lactamase-producing strains of *H. influenzae* and *Moraxella* (*Branhamella*) *catarrhalis*. The latter finding suggests the need for therapeutic alternatives to amoxicillin, which is not active against beta-lactamase-producing organisms, when these organisms are suspected or cultured from the middle ear. Author.

**Loracarbef (LY163892) vs. penicillin VK in the treatment of streptococcal pharyngitis and tonsillitis.** Disney, F. A., Hanfling, M. J., Hausinger, S. A. Elmwood Pediatric Group, Rochester, NY. *Pediatric Infectious Diseases Journal* (1992) Aug, Vol. 11 (8 Suppl), pp. S20–6.

A double blind, randomized clinical trial compared loracarbef (LY163892) with penicillin VK. Two hundred and thirty-three pediatric patients (less than or equal to 12 years) with a diagnosis of pharyngitis or tonsillitis resulting from Group A beta-hemolytic streptococci were randomized to treatment. Patients in the loracarbef group ( $n = 120$ ) received loracarbef as a 15 mg/kg/day oral suspension or 200 mg capsule taken twice daily for 10 days. Patients in the penicillin group ( $n = 113$ ) received penicillin VK as a 20 mg/kg/day oral suspension or 250 mg capsule taken four times daily for 10 days. Successful clinical responses were demonstrated in 101 of the 104 (97.1 per cent) evaluable patients treated with loracarbef compared with 83 of 88 (94.3 per cent) of evaluable patients treated with penicillin. The clinical relapse rate for the loracarbef group was 2.9 per cent vs. 5.7 per cent for the penicillin group. Bacteriologic response data approximated the clinical response data, as eradication of Group A beta-hemolytic streptococci was found in 86.5 and 81.8 per cent of the loracarbef group and the penicillin group, respectively. No statistically significant difference in the incidence of treatment-emergent adverse reactions was noted between the two groups. The results indicate that loracarbef taken twice daily was comparable in safety and efficacy to penicillin VK taken four times daily in the treatment of Group A beta-hemolytic *Streptococcus*-associated pharyngitis and tonsillitis in children. Author.

**Tracheobronchial foreign bodies. Experience at Red Cross Children's Hospital, 1985–1990.** Linegar, A. G., von-Oppell, U. O., Hegemann, S., de Groot, M., Odell, J. A. Department of Cardiothoracic Surgery, University of Cape Town. *South African Medical Journal* (1992) Sep, Vol. 82 (3), pp. 164–7.

Ninety-six children with suspected tracheobronchial foreign bodies were referred to the Department of Cardiothoracic Surgery at Red Cross War Memorial Children's Hospital, Cape Town, between February 1985 and February 1990. Foreign bodies were removed by rigid bronchoscopy from 63 patients, 79 per cent of whom were under five years of age. The majority of patients (59 per cent) presented more than 24 hours after aspiration of the foreign body, and this delay in definitive management was associated with an increased incidence of complications ( $P = 0.01$ ). Complications occurred in 28 patients, and there was one fatality at bronchoscopy due to overwhelming aspiration of an unanticipated release of pus, following the removal of a chronically impacted foreign body. The complete classic diagnostic triad (sudden onset of coughing, wheezing and decreased air entry) was seldom present, and we recommend diagnostic bronchoscopy in children presenting with either a history of sudden choking or a witnessed aspiration of a foreign body, an unexplained acute wheeze or cough or a chronic pulmonary infection. This report also highlights the continued need for increased awareness on the part of both parents and medical practitioners of the need for early referral if a foreign body is suspected. Furthermore, public education is needed as regards the dangers of allowing young children to eat peanuts. Peanuts were the commonest foreign bodies removed. Author.

**Prevalence of olfactory dysfunction, hearing deficit, and cognitive dysfunction among elderly patients in a suburban family practice.** DeVore, P. A. Department of Community and Family Medicine, Georgetown University School of Medicine, Washington, D.C. *Southern Medical Journal* (1992) Sep, Vol. 85 (9), pp. 894–6.

Olfactory and hearing senses diminish with age, and cognitive dysfunction increases. The association between sensory deficits and cognitive dysfunction has not been well studied. This paper presents the results of testing a group of 50 community-dwelling patients of a family physician who developed a computer-assisted comprehensive geriatric assessment programme. Olfactory dysfunction was present in 39 per cent of subjects, with 18 per cent being unable to detect smoke. There was no correlation between olfactory dysfunction and cognitive dysfunction. Hearing deficit, however, was found in 10 per cent of subjects, all of whom also had either an associated olfactory or cognitive dysfunction. This study demonstrates the high prevalence of olfactory and auditory dysfunction in an ambulatory geriatric population, with a possible association between hearing deficit and cognitive dysfunction. The problem of multiple sensory deficits should be addressed in any long-term management decisions regarding elderly patients. Author.

**Mucociliary function, ciliary ultrastructure, and ciliary orientation in Young's syndrome.** de-Iongh, R., Ing, A., Rutland, J. Respiratory Unit, Concord Hospital, Concord, New South Wales, Australia. *Thorax* (1992) Mar, Vol. 47 (3), pp. 184–7.

**BACKGROUND:** Mucociliary clearance is impaired in patients with Young's syndrome (obstructive azoospermia with recurrent sinobronchial disease), cystic fibrosis, and primary ciliary dyskinesia. No defect of cilia or mucus has been detected in Young's syndrome. **METHODS:** Ciliary function and ultrastructure, including ciliary orientation, were studied quantitatively in 20 patients with Young's syndrome and 20 normal subjects to determine the incidences of ciliary defects. Nasal ciliated epithelium was obtained from each subject and used for measurement of ciliary beat frequency and ultrastructural analyses. Ciliary orientation was determined by measuring ciliary deviation in electron micrographs; ciliary deviation is a measure of the relative orientation of cilia in relation to each other in which high values indicate ciliary disorientation. **RESULTS:** Ciliary beat frequency and the incidence of microtubular defects and numbers of dynein arms did not differ between patients with Young's syndrome and control subjects. In patients with Young's syndrome basal ciliary deviation (16.0 degrees) was similar to that in control subjects (14.1 degrees), but at the ciliary tip ciliary deviation (21.9 degrees) was greater than in healthy subjects (14.5 degrees). **CONCLUSION:** The relative disorientation of the distal ciliary axoneme in patients with Young's syndrome compared with normal subjects may be due to a structural defect but is more likely to be a consequence of abnormal mucus. Author.