

Abstract Selection

Auditory event-related potential (P300) in relation to peripheral nerve conduction in workers exposed to lead, zinc, and copper: effects of lead on cognitive function and central nervous system. Araki, S., Murata, K., Yokoyama, K., Uchida, E. Department of Public Health, Faculty of Medicine, University of Tokyo, Japan. *American Journal of Industrial Medicine* (1992), Vol. 21 (4), pp. 539-47.

By measuring auditory event-related potential (P300 and N100) and peripheral nerve conduction velocities, the subclinical effects of lead, zinc, and copper on the central and peripheral nervous system were examined in 22 male gun metal foundry workers exposed to these metals. Their blood lead (BPb) concentrations ranged from 12 to 59 micrograms/dl (median 30). Control subjects were 14 healthy workers, employed at the same factory, who had never been occupationally exposed to these metals. In the gun metal foundry workers, the latencies of P300 and N100 were significantly prolonged; the latency of P300 was significantly correlated with BPb concentrations and other indicators of lead absorption. Similarly, the maximal motor and sensory conduction velocities in the radial and median nerves were significantly slowed, and were significantly correlated with indicators of lead absorption. The data suggest that lead exposure at low levels affects cognitive and central auditory nervous system function together with peripheral nerve conduction. Author.

Penetration of lomefloxacin into bronchial secretions following single and multiple oral administration. Bergogne-Berezin, E., Muller-Serieys, C., Kafé, H. Department of Microbiology, Hopital Bichat, Paris, France. *American Journal of Medicine* (1992) Apr 6, Vol. 92 (4A), pp. 8S-11S.

The bronchial penetration of lomefloxacin, a new difluorinated quinolone, was evaluated in 36 patients who underwent bronchoscopies for diagnostic purposes. Patients were randomized into two groups, with 18 patients (Group I) receiving a single oral dose of 400 mg lomefloxacin and 18 patients (Group II) receiving 400 mg twice daily. Samples of serum and bronchial secretions were collected simultaneously in both groups at one, two or four hours after lomefloxacin administration. The results of this study showed that bronchial penetration of lomefloxacin was rapid and yielded high concentrations; the mean bronchial levels of the drug reached 2.78 ± 3.64 micrograms/mL in Group I one hour after the dose, and 2.84 ± 1.73 micrograms/mL in Group II at the fourth hour. The ratio between bronchial and simultaneous serum concentrations was 89 per cent at the first and second hours after the dose for Group I, and it was 77 per cent four hours after oral administration in Group II. In comparing these results to previous reports of lomefloxacin penetration into bronchial mucosa or of concentrations of other new fluoroquinolones into bronchial secretions, it is to be noted that the local concentrations of the newer quinolones are of very similar values, ranging from 2.7 micrograms/mL (ofloxacin) to 4.46 micrograms/mL (pefloxacin). This study confirms that lomefloxacin achieves high tissue concentrations in the respiratory tree; this characteristic, together with lomefloxacin's antibacterial spectrum, indicates promise in the treatment of many respiratory infections. Author.

Mechanisms of airway protection and upper esophageal sphincter opening during belching. Shaker, R., Ren, J., Kern, M., Dodds, W.J., Hogan, W. J., Li, Q. Department of Medicine, Medical College of Wisconsin, Milwaukee 53226. *American Journal of Physiology* (1992) Apr, Vol. 262 (4 Pt 1), pp. G621-8.

The mechanisms of airway protection, upper esophageal sphincter (UES) opening, and their coordination during belching were studied with a concurrent videoendoscopic, videofluoroscopic, and manometric technique. Analysis of videoendoscopic recordings revealed that glottal function during gastric and esophageal belching was similar and consisted of vocal cord adduction resulting in closure of intotus to trachea, followed by anterior-caudad movement of the

glottis, followed by slitlike or triangular UES opening. When a belch episode was associated with an intragastric pressure increase, in addition to the above features, there was approximation of arytenoids to the base of the epiglottis before the UES opened. Duration of vocal cord closure during belches induced by 40 ml intraesophageal air injection was significantly longer than belches induced by 20 ml (P less than 0.01). Vocal cord closure preceded the UES opening invariably. Analysis of videofluoroscopic recordings showed that hyoid bone movement during belching had a distinctive pattern different from its movement during swallowing. UES opening started generally when the hyoid bone was pulled anteriorly. Anterior hyoid excursion of 0.78 ± 0.1 cm during belching was significantly shorter than its excursion of 1.8 ± 0.09 cm during swallowing (P less than 0.01). We conclude that glottal closure is an integral component of both esophageal and gastric belch reflexes that prevents aspiration of regurgitated material in to the airway. Glottal closure mechanism during belching has two tiers of closure: 1) vocal cord closure and 2) aryepiglottic approximation. Glottal and UES functions are closely coordinated during belching, and finally, during belching, UES is pulled open after its relaxation. Author.

Hoarseness after tracheal intubation. Jones, M. W., Catling, S., Evans, E., Green, D. H., Green, J. R. Singleton Hospital, Swansea. *Anaesthesia* (1992) Mar, Vol. 47 (3), pp. 213-6.

The reported incidence of hoarseness following short-term tracheal intubation varies widely. It has been reported as being permanent in 3 per cent. This suggests that an enormous problem exists considering the numbers of patients intubated daily in the United Kingdom. A prospective study of 235 adult patients undergoing general anaesthesia in a district general hospital included 167 patients whose tracheas were intubated. Of these 167, 54 (32 per cent) complained of hoarseness postoperatively. All but five returned to normal within seven days. The others were hoarse for nine, 10, 12, 54 and 99 days. Those who were hoarse for 54 and 99 days had vocal cord granulomata. Regression analyses showed that certain patient and anaesthetic factors had a significant effect on the hoarseness. This study confirms a low incidence of prolonged or permanent hoarseness following short-term tracheal intubation. Author.

Human upper respiratory tract responses to inhaled pollutants with emphasis on nasal lavage. Koren, H. S., Devlin, R. B. Health Effects Research Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711. *Annals of the New York Academy of Sciences* (1992) Apr 30, Vol. 641, pp. 215-24.

A set of symptoms has been described during the past two decades. These symptoms, which have been called the sick building syndrome, include eye, nose, and throat irritation; headache; mental fatigue; and respiratory distress. It is likely that VOCs present in synthetic materials used in homes and office buildings contribute to these symptoms. There have been few studies, however, in which humans have been exposed to known amounts of VOCs under carefully controlled conditions. In this study, 14 subjects have been exposed to a mixture of VOCs (25 mg/m³ total hydrocarbon) representative of what is found in new homes and office buildings. Because irritation of the nose and throat are symptoms often associated with the upper respiratory tract and may result from an inflammatory response in the upper airways, we have used NAL to monitor PMN influx into the nasal passages following exposure to VOCs. We report statistically significant increases in PMNs both immediately after a four-hour exposure to VOCs, as well as 18 hr later. Author.

Open tip rhinoplasty. Chen, K. T., Noordhoff, M. S. Chang Gung Medical College, Chang Gung Memorial Hospital, Taipei, Taiwan, Republic of China. *Annals of Plastic Surgery* (1992) Feb, Vol. 28 (2), pp. 119-30.

An open tip rhinoplasty was used to correct moderate to severe

secondary cleft lip nasal deformities in 122 patients from January 1986 to January 1988. The results of the surgery on 92 patients who were followed for one year or more were evaluated. When the surgery was performed after the age of three years, 60 per cent of the patients had a satisfactory result. The pathology of the deformity included 32 per cent with deficiencies of the nasal lining, 35 per cent needed framework support such as a columellar strut, and 45 per cent required correction of columellar deficiencies. Patients using a postoperative nasal stent had a 71 per cent satisfactory result compared with a 37 per cent satisfactory result when the stent was not used. The pathology and techniques to correct the nasal deformity are described. Author.

Wrestler's ear: pathophysiology and treatment. Giffin, C. S. Cosmetic Surgery of Indiana, Fort Wayne. *Annals of Plastic Surgery* (1992) Feb, Vol. 28 (2), pp. 131–9.

Management of auricular hematomas has always been a challenge for physicians. This injury is very common among wrestlers since early olympic competition times. Initial treatment usually involves simple aspiration and a compression bandage. Most of these hematomas recur; then it must be decided how to manage this recurrent problem and the eventual 'cauliflower ear'. A treatment is proposed that directs attention to the pathophysiology of the injury and involves total excision of the newly formed fibrocartilaginous layer. Unless this layer is successfully removed the hematoma will persist and a thickened ear will result. This treatment can be performed on an outpatient basis under local anesthesia and allows immediate resumption of wrestling competition. Author.

Cytomegaloviral laryngitis and probable malignant lymphoma of the larynx in a patient with acquired immunodeficiency syndrome. Siegel, R. J., Browning, D., Schwartz, D. A., Hudgins, P. A. Department of Pathology, Grady Memorial Hospital, Atlanta, GA 30335. *Archives of Pathology and Laboratory Medicine* (1992) May, Vol. 116 (5), pp. 539–41.

We describe a case of cytomegaloviral laryngitis and probable primary laryngeal malignant non-Hodgkin's lymphoma in a man with acquired immunodeficiency syndrome who presented to an otolaryngology clinic with odynophagia and hoarseness. While both of these disease processes have a known association with human immunodeficiency virus infection, laryngeal presentation is extremely rare. We stress the need for thorough clinical and pathologic otolaryngologic evaluation of patients with human immunodeficiency virus infection who have upper aerodigestive complaints. Author.

Otic and ophthalmic pneumocystosis in acquired immunodeficiency syndrome. Report of a case and review of the literature. Wasserman, L., Haghghi, P. Laboratory Service, Veteran's Administration Medical Center, San Diego, CA. *Archives of Pathology and Laboratory Medicine* (1992) May, Vol. 116 (5), pp. 500–3.

A case of primary *Pneumocystis carinii* infection involving the left middle ear of a patient with acquired immunodeficiency syndrome is described, and the literature on the otic and ophthalmic pneumocystosis is reviewed. Otic pneumocystosis typically presents as a unilateral polypoid mass, and it is clinically manifested as otalgia, hearing loss, or, sometimes, otorrhea without evidence of current respiratory disease or previous *Pneumocystis pneumonia*. In contrast, choroidal pneumocystosis usually occurs in a patient with acquired immunodeficiency syndrome with at least one previous episode of *Pneumocystis pneumonia* and aerosolized pentamidine treatment, it is usually asymptomatic and bilateral, and it may be discovered only because of other concurrent human immunodeficiency virus-related ophthalmic disease. The diagnosis is made clinically, and intravenous antiparasite treatment is successful. Author.

Olfactory neuroblastoma—management of a rare tumor at the Queensland Radium Institute and literature review. Ahern, V. A., Poulsen, M. G. Queensland Radium Institute, Royal Brisbane Hospital. *Australasian Radiology* (1991) Nov, Vol. 35 (4), pp. 366–9.

Olfactory neuroblastoma (esthesioneuroblastoma) is an extremely rare tumor arising from the olfactory epithelium of the nasal cavity close to the cribriform plate. Most institutions will have little experience in recognizing the clinical and histological features, or management of this tumor and reliance is placed on researching the literature when the individual patient presents. This study reviews seven patients with olfactory neuroblastoma treated at the Queensland Radium Institute from 1971 to January 1990. The overall local

control rate in this series is 57 per cent (four of seven patients) and 43 per cent of patients (three of seven) remain alive. Conservative surgery and post-operative radiotherapy is recommended for early disease and more radical surgery with post-operative radiotherapy for advanced disease. Author.

Nasopharyngeal carcinoma: treatment of neck node recurrence by radiotherapy. Sham, J. S., Choy, D. Institute of Radiotherapy and Oncology, Queen Mary Hospital, Hong Kong. *Australasian Radiology* (1991) Nov, Vol. 35 (4), pp. 370–3.

The records of 91 nasopharyngeal carcinoma patients who were treated with external radiotherapy for recurrent neck node disease were reviewed. All patients had received prior radiotherapy for cervical nodal disease or prophylactic neck irradiation. The node size (product of the greatest perpendicular diameters) at the time of treatment for nodal relapse ranged from 1 cm² to 35 cm² (median 2.25 cm²). The radiation dose ranged from 823 RETs to 1949 RETs (median 1520 RETs). The recurrent node size and radiation dose were found significant prognostic factors for local control. The local tumor control for nodes 4 cm² or smaller was 51 per cent at five years, for nodes greater than 4 cm² was 16 per cent at 18 months ($p = 0.01$). The overall 5 year survival was 19.7 per cent. Radiation dose greater than 1600 RETs was significantly associated with better survival for patients with recurrent nodes measured 4 cm² or smaller, but higher radiation dose did not improve the survival of patients with recurrent nodes greater than 4 cm². Because of the dilemma of suboptimal control resulting from inadequate radiation dose when compared with surgical treatment, and possible radiation complication from higher dose, surgery should be the treatment of choice for neck node recurrence after primary radiotherapy for nasopharyngeal carcinoma. Author.

Psychological and social outcome of prominent ear correction in children. Bradbury, E. T., Hewison, J., Timmons, M. J. Department of Plastic Surgery, St Luke's Hospital, Bradford. *British Journal of Plastic Surgery* (1992) Feb-Mar, Vol. 45 (2), pp. 97–100.

The effectiveness of surgery to correct prominent ears in relieving the psychosocial distress of children has been analysed in this prospective study. Thirty children and their families were assessed pre-operatively and again 12 months postoperatively. It was found that whilst prominent ear correction improved the well-being of 90 per cent of the children, there was a small group of acutely distressed children who remained dissatisfied with outcome. These were children who were socially isolated prior to surgery. Careful screening and referral back to the family doctor of the more distressed children is recommended. Author.

The double cross plasty: a new technique for nasal stenosis. Naasan, A., Page, R. E. Department of Plastic Surgery, Northern General Hospital, Sheffield. *British Journal of Plastic Surgery* (1992) Feb-Mar, Vol. 45 (2), pp. 165–8.

Atresia and stenosis of the anterior nares is caused by a lack of the normal mucosa membrane lining the nasal vestibule. The condition may be congenital but is usually acquired. In most cases the external contour of the nose is not affected but an extensive deficiency of the mucosal lining may alter the shape of the cartilaginous part of the nose. The width of the obstruction, the state of the surrounding lining and the degree of the external deformity are the main factors to be assessed in any attempt at surgical correction. A new technique is presented which has successfully corrected severe unilateral stenosis in two children. Author.

Tobacco, alcohol, asbestos, and occupational risk factors for laryngeal cancer. Muscat, J. E., Wynder, E. L. Division of Epidemiology, American Health Foundation, New York, New York 10017. *Cancer* (1992) May 1, Vol. 69 (9), pp. 2244–51.

Data from a hospital-based case-control study between 1985–1990 were used to examine the effects of tobacco, alcohol, asbestos, and other occupational exposures on laryngeal cancer risk in 194 white men with primary cancer of the larynx and 184 age-matched control subjects. A dose-dependent effect for current cigarette smoking was observed, with higher relative risks (RR) for supraglottic cancer (RR, 21.6 to 68) than for cancer of the glottis (RR, 5.5 to 20.7). Elevated RR for ex-smokers (RR, 4.8) and pipe and cigar smokers (RR, 4.3) did not vary by subsite. The effects of alcohol also showed dose-dependent effects, with higher RR for cancer of the supraglottis than glottis for heavy drinkers (207 ml or more/daily; RR, 9.6 versus 2.5) and binge drinkers (RR, 28.4 versus 8.3). A slightly elevated but not significant association was seen for asbestos exposure and glottic

cancer (RR, 1.3). The RR did not increase linearly with the number of years employed in asbestos-related occupations. No relationship was observed between asbestos and cancer of the supraglottis. When examining the data for a synergistic effect of cigarette smoking and asbestos exposure, no excess risk was found. A significantly elevated risk was found for men exposed to diesel fumes (RR, 5.2). Elevated but not significant RR were seen for men chronically exposed to rubber (RR, 6.4) and wood dust or employed as construction laborers, auto mechanics, and other jobs. A significant inverse trend with body mass was observed for cancer of the supraglottis. Author.

Amino acid profiles correlate diagnostically with organ site in three kinds of malignant tumors. Kubota, A., Meguid, M. M., Hitch, D. C. Department of Surgery, University Hospital, State University of New York Health Science Center, Syracuse, New York 13210. *Cancer* (1992) May 1, Vol. 69 (9), pp. 2343–8.

The hypothesis that tumors arising in a particular organ site impose a characteristic plasma free amino acid (PFAA) pattern was tested by analyzing PFAA in fasting venous blood of preoperative patients with breast cancer, gastrointestinal tract cancer, and head and neck cancer. Healthy volunteers served as control subjects. Levels of 28 PFAA were determined in blood samples using an amino acid analyzer, and the data were compared using discriminant analysis and chi-square testing. Compared with control subjects, the concentrations of seven amino acids (glutamine, threonine, histidine, cysteine, alanine, arginine, and ornithine) in patients with tumors correlated closely with the known diagnoses. By means of discriminant analysis, these seven amino acids had the highest correlation with the specific diagnoses, indicating that PFAA profiles correlate diagnostically with the organ-site origin of three different kinds of malignant tumors. Author.

Preoperative combined chemotherapy and radiation therapy plus radical surgery in advanced head and neck cancer. Five-year results with impressive complete response rates and high survival. Slotman, G. J., Doolittle, C. H., Glicksman, A. S. Surgical Service, Providence Veterans Administration Medical Center, Rhode Island. *Cancer* (1992) June 1, Vol. 69 (11), pp. 2736–43.

Radiation therapy combined with cisplatin as a chemoradiation sensitizer (CT/RT) has been reported to enhance tumor response in squamous cell carcinoma of the head and neck. In the present study, CT/RT was used preoperatively in advanced Stage III and IV head and neck cancer. Fifty-three patients were entered prospectively into a Phase II study. Treatment consisted of 4500 cGy of radiation therapy in five weeks combined with cisplatin 20 mg/m² for four days during weeks one and four of radiation therapy. This was followed four to eight weeks later by curative surgery. Pretherapy dental care; long-term nutritional support; individualized skin, mouth, and wound care; and continuous interdisciplinary communication were integral parts of this regimen. In four patients, CT/RT toxicity was seen (8 per cent); three episodes of skin reaction or stomatitis and three episodes of leukopenia (less than 2500/microliters), causing a delay in CT/RT treatment in one patient. Three patients died of other causes during the preoperative interval, without clinical evidence of toxicity. Fifty patients (94 per cent) had a complete (CR) or partial response (PR) to CT/RT. Clinical CR was seen in 38 of 51 (75 per cent) primary tumors and 21 of 27 (78 per cent) cervical nodes. Forty-one patients (77 per cent) underwent curative surgery. In 27 of 32 (84 per cent) resected CR primary tumors and 16 of 18 (89 per cent) CR metastatic nodes, the surgical specimen was microscopically free of tumor. Postoperative morbidity was 32 per cent. Five patients (12 per cent) required additional surgery for their complications. Perioperative mortality was 5 per cent. Five patients had tumor recurrence: three postoperatively after clinical PR to CT/RT and two in clinical CR patients who refused further treatment after CT/RT, then had a recurrence and were salvaged surgically. No patient with a CR in both the tumor and nodes who underwent surgery had a tumor recurrence. With a follow-up of 8 years (median, 40 months), the median survival for all patients was 45 months. The 5-year actuarial survival rate was 43 per cent for all patients and 55 per cent for patients who had CT/RT and surgery. This multimodality treatment of advanced head and neck cancer has low toxicity and impressive survival. It renders a significant number of patients tumor-free before surgery. These patients may be candidates for additional study triaging additional CT/RT for complete CR only and surgery for PR and biopsy-proved residual disease. Author.

Interruptions adversely affect local control and survival with hyperfractionated radiation therapy of carcinomas of the upper

respiratory and digestive tracts. New evidence for accelerated proliferation from Radiation Therapy Oncology Group Protocol 8313. Cox, J. D., Pajak, T. F., Marcial, V. A., Coia, L., Mohiuddin, M., Fu, K. K., Selim, H. M., Byhardt, R. W., Rubin, P., Ortiz, H. G., et al. University of Texas M.D. Anderson Cancer Center, Houston 77030. *Cancer* (1992) Jun 1, Vol. 69 (11), pp. 2744–8.

Hyperfractionated radiation therapy (HFX) attempts to overcome tumor proliferation during treatment by permitting higher total doses in the same overall time as standard fractionation. Whereas interruptions, including splits, reduce local control with standard fractionation in carcinoma of the upper respiratory and digestive tracts, HFX might compensate for interruptions. Patients were randomized to receive total doses of 6720, 7200, 7680, and 8160 cGy, using 120 cGy twice daily, five days per week. Those analyzed received ± 4 per cent of assigned total dose and lived 90 days or more. Treatment was completed within five days of the time specified for each treatment arm in 233 patients; 48, 80, and 131 patients had delays 14, 10, and five days or more, respectively. Locoregional control and survival were significantly (*P* less than or equal to 0.03) reduced with delays of five days or more when corrected for prognostic factors. Late effects of radiation therapy were not affected by interruptions. These data support the hypothesis that proliferation (possibly accelerated) of tumor clonogens during treatment influences the outcome. Author.

Use of brainstem auditory-evoked response testing to assess neurologic outcome following near drowning in children. Fisher, B., Peterson, B., Hicks, G. Department of Critical Care, San Diego Children's Hospital, CA 92123. *Critical Care Medicine* (1992) May, Vol. 20 (5), pp. 578–85.

OBJECTIVE: To determine a correlation between serial brainstem auditory-evoked response measurements and ultimate neurologic outcome in pediatric patients who suffered a cardiac arrest resulting from a submersion accident. **DESIGN:** Inception cohort, prospective correlation a study. **SETTING:** A 15-bed pediatric ICU (within a 150-bed tertiary care pediatric hospital) admitting patients of all ages except nonsurgical neonates. **PATIENTS:** All previously normal pediatric patients who suffered a cardiac arrest after a submersion accident. Patients evaluated: 111; patients studied: 89. **METHODS:** Patients received serial brainstem auditory-evoked response testing within six hours of resuscitation and then once daily for up to 10 days. Brainstem auditory-evoked response measurements included wave I–V interpeak latency, wave V amplitude, and wave I/V amplitude ratio. Upon discharge, patients were evaluated and classified into one of four neurologic outcome groups: normal, handicapped, vegetative, or dead. Patients classified into the handicapped group exhibited mild neurologic deficits after discharge. Vegetative patients were noninteractive with their environment and required full-time caretaker support. Serial brainstem auditory-evoked response measurements from the four outcome groups were compared with brainstem auditory-evoked response measurements obtained from a group of 39 healthy children of comparable age. **MAIN RESULTS:** Patients who recovered neurologically intact manifested brainstem auditory-evoked response measurements that were similar to controls. Brainstem auditory-evoked response measurements in the handicapped outcome group were also normal after resuscitation but showed significant reduction in wave V amplitudes over the ensuing days. When compared with controls, patients with a vegetative outcome manifested abnormally prolonged wave I–V interpeak latencies, diminished wave V amplitudes, and large-wave I/V amplitude ratios following resuscitation. However, I–V interpeak latencies normalized within 24 hours after resuscitation. I–V interpeak latencies were no different than controls until hospital day three, at which time they became significantly prolonged. Patients who were declared brain dead or died from cardiovascular collapse exhibited very abnormal brainstem auditory-evoked response measurements on admission and until death. Wave V could not be detected on admission in 19/31 patients within this group. **CONCLUSIONS:** Brainstem auditory-evoked response testing is useful as an aid in the assessment of neurologic outcome following submersion-induced cardiac arrest. However, standardization of brainstem auditory-evoked response testing and production of normative data are required before this modality can be more widely studied and applied. Author.

Melanotic neuroectodermal tumor of infancy: a case report emphasizing the importance of computed tomography. Cheung, L. K., Piette, E. M., Tideman, H. Department of Oral Surgery and Oral Medicine, Prince Philip Dental Hospital, University of Hong

Kong. *Dentomaxillofacial Radiology* (1991) Aug, Vol. 20 (3), pp. 172–4.

A case is reported of the rare melanotic neuroectodermal tumor of infancy involving the maxilla of a four-month-old girl. The role of CT is discussed with particular reference to the diagnosis. Author.

Close linkage of the olfactory marker protein gene to the mouse deafness mutation shaker-1. Brown, K. A., Sutcliffe, M. J., Steel, K. P., Brown, S. D. Department of Biochemistry and Molecular Genetics, St Mary's Hospital Medical School, London, United Kingdom. *Genomics* (1992) May, Vol. 13 (1), pp. 189–93.

One thousand sixty-six progeny have been generated from a back-cross segregating for the mouse deafness mutation, shaker-1 (sh-1). One thousand fifty-two mice were analyzed for a protein polymorphism segregating for the distal flanking marker, beta-globin (Hbb), and 13 recombinants between Hbb and sh-1 were identified. One thousand eight mice were analyzed for a restriction fragment length polymorphism segregating for the proximal flanking marker, tyrosinase (c), and 54 recombinants between c and sh-1 were identified, completing a panel of 67 recombinant mice from the backcross in the vicinity of the sh-1 mutation. This panel allows the identification of markers closely linked to the sh-1 mutation that may act as start points for a chromosomal walk to the gene. One such marker, the olfactory marker protein gene (Omp), is recombinant with sh-1 in only one mouse from the recombinant panel. Thus, the Omp gene lies 0.1 cM from sh-1, on average, a distance of 200 kb. Haplotype analysis indicates that Omp lies proximal to sh-1. Author.

Circadian and menstrual rhythms in frequency variations of spontaneous otoacoustic emissions from human ears. Bell, A. Research School of Biological Sciences, Australian National University, Canberra. *Hearing Research* (1992) Feb, Vol. 58 (1), pp. 91–100.

This paper reports hourly and daily monitoring of the frequencies of spontaneous otoacoustic emissions. Regular circadian variations in frequency were found in two of three subjects. Consistent monthly variations, in step with the menstrual cycle, were seen in three of four women. The circadian cycle typically showed a rise in frequency of 0.6–1 per cent while asleep and a similar fall while awake. The monthly cycle typically saw frequencies rise and fall by 0.4–0.6 per cent, reaching a minimum near the onset of menstruation, and rising to a peak close to ovulation. A review of the literature revealed that certain cardiovascular parameters such as arterial blood pressure follow, over both daily and menstrual cycles, a broadly similar time course to SOAE frequency. Further experiments produced data supporting a relationship between blood pressure and SOAE frequency, and it is therefore suggested that much of the circadian-linked, menstrual-linked, and background variation in SOAE frequency may arise from cardiovascular changes. A likely causal mechanism, involving cerebrospinal fluid, is discussed. Author.

Pinna-based spectral cues for sound localization in cat. Rice, J. J., May, B. J., Spirou, G. A., Young, E. D. Department of Biomedical Engineering, Johns Hopkins University School of Medicine, Baltimore, Maryland 21205. *Hearing Research* (1992) Mar, Vol. 58 (2), pp. 132–52.

The directional dependence of the transfer function from free field plane waves to a point near the tympanic membrane (TM) was measured in anesthetized domestic cats. A probe tube microphone was placed approximately 3 mm from the TM from beneath the head in order to keep the pinna intact. Transfer functions were computed as the ratio of the spectrum of a click recorded near the TM to the spectrum of the click in freefield. We analyze the transfer functions in three frequency ranges: low frequencies (less than 5 kHz) where interaural level differences vary smoothly with azimuth; mid-frequencies (5–18 kHz) where a prominent spectral notch is observed; and high frequencies (greater than 18 kHz) where the transfer functions vary greatly with source location. Because no two source directions produce the same transfer function, the spectrum of a broadband sound at the TM could serve as a sound localization cue for both elevation and azimuth. In particular, we show that source direction is uniquely determined, for source directions in front of the cat, from the frequencies of the midfrequency spectral notches in the two ears. The validity of the transfer functions as measures of the acoustic input to the auditory system is considered in terms of models of sound propagation in the ear canal. Author.

Distortion-product and click-evoked otoacoustic emissions of normally-hearing adults. Smurzynski, J., Kim, D. O. Department

of Surgery, University of Connecticut Health Center, Farmington 06030. *Hearing Research* (1992) Mar, Vol. 58 (2), pp. 227–40.

The purpose of this study was to compare distortion-product otoacoustic emissions (DPOEs) and click-evoked otoacoustic emissions (CEOEs) for normally-hearing human adults. The statistical analysis consisted of computing the DPOE and CEOE levels versus frequency corresponding to the 10th, 25th, 50th, 75th and 90th percentiles among normal adult ears. The mean and standard deviations of the DPOEs and CEOEs were computed. A direct comparison of the DPOE and CEOE data obtained from the same ears showed that, in a 1–4 kHz frequency region, there was a statistically significant correlation between the levels of the two types of otoacoustic emissions. This finding supports the hypothesis that DPOEs and CEOEs arise from some common mechanisms of the cochlea such as active nonlinear biomechanical mechanisms of the outer hair cells. Author.

Perceptive bilateral deafness following clinical tetanus to a neonate. Skevas, A., Kastanioudakis, I., Exarchakos, G., Assimakopoulos, D. Department of Otorhinolaryngology, University of Ioannina, Ioannina, Greece. *International Journal of Pediatric Otorhinolaryngology* (1992) Mar, Vol. 23 (2), pp. 177–80.

A rare case of bilateral perceptive deafness following clinical tetanus is reported. The patient was a 15-day-old neonate. The clinical tetanus was treated with tetanus antitoxin (human gamma globulins) and penicillin. The exact mechanism of auditory nerve damage associated clinical tetanus and treatment with human tetanus antitoxin and penicillin is still not clearly known. We believe that the damage of the hearing organ can be attributed to the tetanus toxin and not to the human gamma globulins (tetanus antitoxin). Author.

Intranasal ethmoidectomy in nasal polyposis in children. Indications and results. Triglia, J. M., Dessi, P., Cannoni, M., Pech, A. Department of Otorhinolaryngology, University of Marseille, France. *International Journal of Pediatric Otorhinolaryngology* (1992) Mar, Vol. 23 (2), pp. 125–31.

Nasal polyposis in children is a rare pathology that is difficult to treat, with results that are often disappointing. The aim of this paper is focused on the surgical possibilities of ethmoidectomy by endonasal approach. Thirty-nine ethmoidectomies were performed in 24 children with a mean age of 12 years (cystic fibrosis, n = 7; Woakes' syndrome, n = 2; isolated polyposis, n = 15). The decision for surgical treatment was based upon the severity of initial symptoms, principally nasal obstruction, lack of improvement after medical treatment, and the assurance of good surgical follow-up. Twenty-three children were followed up for a mean of three years. Complete recurrence was noted in 13 per cent of the cases (n = 3). In all the other cases, including those with partial recurrence, the lives of the children were transformed. Ethmoidectomy by endonasal approach is reliable if the appropriate surgical techniques are strictly followed. It has proven its efficacy in children with nasal polyposis with results that are very encouraging compared to previously proposed therapies. Author.

Laryngeal ultrasonography in infants and children: a new way of investigating. Normal and pathological findings. Garel, C., Contencin, P., Polonovski, J. M., Hassan, M., Narcy, P. Department of Radiology, Hopital Robert Debre, Paris, France. *International Journal of Pediatric Otorhinolaryngology* (1992) Mar, Vol. 23 (2), pp. 107–15.

Ultrasound of the larynx appears as a new way of imaging the larynx in infants and children. The normal sonographic anatomy is briefly described. The pathological findings of this method, its advantages and its drawbacks are discussed. It appears to be a very interesting method for functional disorders and space-occupying lesions. Author.

Candida laryngotracheitis: a complication of combined steroid and antibiotic usage in croup. Burton, D. M., Seid, A. B., Kearns, D. B., Pransky, S.M. Children's Hospital and Health Center, San Diego, CA. *International Journal of Pediatric Otorhinolaryngology* (1992) Mar, Vol. 23 (2), pp. 171–5.

The use of corticosteroids to reduce the morbidity associated with laryngotracheobronchitis (croup) has been a controversial issue for many years. Recent literature, however, does support a decreased morbidity and increased clinical response when short-term steroids are used. As a prophylactic measure against bacterial superinfection, antibiotics are commonly utilized in the treatment of croup. We present the case of an otherwise healthy infant with severe croup who

was hospitalized and treated with both steroids and antibiotics. A relapse in her symptoms led to the diagnosis of candida laryngotracheitis. We recommend close monitoring of patients with croup treated aggressively with steroids and antibiotics. Steroid use should be limited to 24 h with antibiotics reserved for patients with signs of bacterial infection. Author.

Fractionated radiation therapy in the treatment of stage III and IV cerebello-pontine angle neurinomas: preliminary results in 20 cases. Maire, J. P., Floquet, A., Darrouzet, V., Guerin, J., Bebear, J. P., Caudry, M. Service de Radiothérapie, Hopital Saint-Andre, Bordeaux, France. *International Journal of Radiation, Oncology, Biology and Physics* (1992), Vol. 23 (1), pp. 147–52.

From January 1986 to March 1989, 20 patients with stage III and IV cerebello-pontine angle neurinomas were treated with external fractionated radiation therapy; seven patients had phacomatosis. Indications for radiation therapy were as follows: (a) poor general condition or old age contraindicating surgery, 10 patients; (b) hearing preservation in bilateral neurinomas after contralateral tumor removal, five patients; (c) partial resection or high risk of recurrence after subsequent surgery for relapse, four patients; (d) non-surgical relapse, one patient. Most patients were irradiated with a 9 MV linear accelerator. A three to four-field technique with 5×5 cm portals was used. Doses were calculated on a 95 per cent isodose and were given 5 days a week for a mean total dose of 5140 cGy (180 cGy/fraction). Median follow-up from radiation therapy was 30 months (7 to 46); four patients died, two with progressive disease. Two patients underwent total tumor removal after radiation therapy (one stable and one growing tumor). On the whole, 14 tumors remained stable, three decreased in size, and three progressed. CT scan or NMR tumor changes consistent with partial tumor necrosis appeared in four cases. Hearing preservation was obtained in 3/5 hearing patients with phacomatosis. When surgery is not indicated or incomplete, fractionated radiation therapy appears to be an effective and well-tolerated treatment for stage III and IV neurinomas. Hearing can be preserved. Author.

Effectiveness of earplugs in high-intensity impulse noise. Dancer, A., Grateau, P., Cabanis, A., Barnabe, G., Cagnin, G., Vailant, T., Lafont, D. French-German Research Institute of Saint-Louis, France. *Journal of the Acoustical Society of America* (1992) Mar, Vol. 91 (3), pp. 1677–89.

The efficiency of different types of earplugs was assessed by means of Bekesy audiometry following the exposure of 42 human subjects to weapon impulses. The peak pressure of the impulses ranged from 2.3–27.8 kPa (from 161 to 183-dB peak SPL) and the A-weighted equivalent level (over 8 h) of each exposure ranged from 100–114 dB. All subjects wore earplugs fitted by an experienced individual. The devices tested included one brand of conventional foam earplugs and a number of different models of perforated earplugs, one type of which had been previously shown to provide nonlinear attenuation. Perforated earplugs were tested because they provide better speech communication than conventional passive earplugs, and in the nonlinear case also afford attenuation that increases with the peak pressure of the impulses. The temporary threshold shifts (TTSs) observed in these experiments were very small and indicated no significant hazard for hearing. Well-fitted perforated earplugs seem to be able to protect the ear from infrequent exposures to the high-level impulses produced by small and large weapons while allowing good speech communication, and without impairing the operational capacity of soldiers who must remain aware of their acoustic environment. Author.

Mechanisms of control of alae nasi muscle activity. Mezzanotte, W. S., Tangel, D. J., White, D. P. Pulmonary Division, Denver Veterans Affairs Medical Center, National Jewish Center, Denver, Colorado. *Journal of Applied Physiology* (1992) Mar, Vol. 72 (3), pp. 925–33.

Human upper airway dilator muscles are clearly influenced by chemical stimuli such as hypoxia and hypercapnia. Whether in humans there are upper airway receptors capable of modifying the activity of such muscles is unclear. We studied alae nasi electromyography (EMG) in normal men in an attempt to determine 1) whether increasing negative intraluminal pressure influences the activity of the alae nasi muscle, 2) whether nasal airway feedback mechanisms modify the activity of this muscle, and 3) if so, whether these receptor mechanisms are responding to mucosal temperature/pressure changes or to airway deformation. Alae nasi EMG was recorded in 10 normal men under the following conditions: 1) nasal

breathing (all potential nasal receptors exposed), 2) oral breathing (nasal receptors not exposed), 3) nasal breathing with splints (airway deformation prevented), and 4) nasal breathing after nasal anesthesia (mucosal receptors anesthetized). In addition, in a separate group, the combined effects of anesthesia and nasal splints were assessed. Under each condition, EMG activity was monitored during basal breathing, progressive hypercapnia, and inspiratory resistive loading. Under all four conditions, both load and hypercapnia produced a significant increase in alae nasi EMG, with hypercapnia producing a similar increment in EMG regardless of nasal receptor exposure. On the other hand, loading produced greater increments in EMG during nasal than during oral breathing, with combined anesthesia plus splinting producing a load response similar to that observed during oral respiration. These observations suggest that nasal airway receptors have little effect on the alae nasi response to hypercapnia but appear to mediate the alae nasi response to loading or negative airway pressure. Author.

Prospective flow cytometric analysis of head and neck carcinomas. Prognostic relevance of DNA-content and S-fraction. Mohr, C., Molls, M., Streffer, C., Pelzer, T. Department for Maxillo-Facial Surgery, University Hospital Essen, Germany. *Journal of Craniomaxillofacial Surgery* (1992) Jan, Vol. 20 (1), pp. 8–13.

Flow cytometric data were obtained from 142 primary squamous cell carcinomas of the oral cavity or the oropharynx. Aneuploidy was found in 36.8 per cent of the tumors. The DNA indices showed a significant correlation with the S-fraction, tumor size and evidence of suspicious lymphnodes. There was no clear correspondence between the S-fraction and the tumor stage. Tumor size, histopathologically-positive lymphnodes and the mode of treatment were significantly correlated with the survival rates. In contrast, there was no clear correlation between flow cytometric data and the prognosis of the whole group as well as several clinical subgroups. In 40 patients who received preoperative irradiation, DNA indices and S-fractions were compared before and after the preoperative treatment. In 12 of 14 aneuploid tumors irradiation led to a decrease in the DNA indices into the range of euploidy. Only two tumors remained aneuploid. After irradiation 26 of 37 tumors showed a decrease in S-fraction, 11 tumors showed an increase. Loss of aneuploidy after irradiation was associated with a histologically-proven increasing differentiation of tumor cells, decrease in S-fraction corresponded to a tendency to a better prognosis. Author.

The role of flexible endosonography in diagnostic imaging of carcinomas of the oral cavity and oropharynx. Heppt, W., Issing, W. Department of Otorhinolaryngology, University of Heidelberg, Germany. *Journal of Craniomaxillofacial Surgery* (1992) Jan, Vol. 20 (1), pp. 34–9.

Currently-used imaging methods often fail to depict carcinomas of the oral cavity and oropharynx properly. Scanning these tumors with recently developed digitally-guided transducers of 5 and 7.5 MHz, we found that diagnosis and assessment are significantly facilitated by flexible endosonography. The demonstration of T1- and T2-tumors was shown to be facilitated by this technique as compared to other imaging methods. The assessment of large tumors is improved in special areas. Nonetheless, we recommend that in such cases flexible endosonography be supported by CT or MRI for a complete demonstration of the extent of the tumor. Author.

An infant with Crouzon's syndrome with a cartilaginous trachea and a human tail. Sagehashi, N. Department of Plastic Surgery, Maebashi Red Cross Hospital, Gunma, Japan. *Journal of Craniomaxillofacial Surgery* (1992) Jan, Vol. 20 (1), pp. 21–3.

Due to abnormal three-dimensional growth of facial and skull bones, certain craniosynostosis syndromes are occasionally accompanied by nasopharyngeal stenosis. However, two cases of Crouzon's and Pfeiffer's syndromes have been reported in which respiratory distress was more severe, compared with the usual respiratory problems in craniofacial anomalies. In both cases, tracheal anomalies were present and manifested by a completely cartilaginous trachea, without rings. The author reports herein a case of Crouzon's syndrome accompanied by serious airway stenosis which was a problem both before and after surgery and a caudal appendage (human tail). The patient suddenly died at home 50 days postoperatively. Autopsy revealed that instead of having rings, the tracheal cartilage had a continuous tubular structure. The normal mucous membrane structure was absent, and squamous epithelization developed around the margins of the tracheostomy. When craniofacial anomalies are accompanied by severe respiratory disorder, physicians must be

aware of a possible tracheal anomaly. There is a high probability of aggravated respiratory problems after surgery. There have been no reports in the literature of Crouzon's syndrome accompanied by a human tail. Author.

Association of atrophy of the medial temporal lobe with reduced blood flow in the posterior parietotemporal cortex in patients with a clinical and pathological diagnosis of Alzheimer's disease. Jobst, K. A., Smith, A. D., Barker, C. S., Wear, A., King, E. M., Smith, A., Anslow, P. A., Molyneux, A. J., Shepstone, B. J., Soper, N., *et al.* University Department of Clinical Neurology, Radcliffe Infirmary, Oxford. *Journal of Neurology, Neurosurgery and Psychiatry* (1992) Mar, Vol. 55 (3), pp. 190-4.

A combination of medial temporal lobe atrophy, shown by computed tomography, and reduced blood flow in the parietotemporal cortex, shown by single photon emission tomography, was found in 86 per cent (44/51) of patients with a clinical diagnosis of senile dementia of the Alzheimer type (SDAT). The same combination of changes was found in four out of 10 patients with other clinical types of dementia and in two out of 18 with no evidence of cognitive deficit. Of the 12 patients who died, 10 fulfilled histopathological criteria for Alzheimer's disease, nine of them having a clinical diagnosis of SDAT, and one a clinical diagnosis of multi-infarct dementia. All 10 patients with histopathologically diagnosed Alzheimer's disease had shown a combination of hippocampal atrophy and reduced parietotemporal blood flow in life. In 10 patients (nine with SDAT) out of 12 in whom the hippocampal atrophy was more noticeable on one side of the brain than on the other the parietotemporal perfusion deficit was also asymmetrical, being greater on the side showing more hippocampal atrophy. These results suggest that the combination of atrophy of the hippocampal formation and reduced blood flow in the parietotemporal region is a feature of dementia of the Alzheimer type and that the functional change in the parietotemporal region might be related to the loss of the projection neurons in the parahippocampal gyrus that innervate this region of the neocortex. Author.

Brain tissue heterotopia in the nasopharynx. Contribution of MRI to assessment of extension. Braun, M., Boman, F., Hascoet, J. M., Chastagner, P., Brunet, A., Simon, C. Service de Neuroradiologie, CHU Nancy, France. *Journal of Neuroradiology* (1992) Vol. 19 (1), pp. 68-74.

The authors report two cases of brain tissue heterotopia in the nasopharynx, without other malformations and, in one of the cases, with a persistent craniopharyngeal canal opening onto the heterotopia. This exceptional malformation is very similar to brain heterotopia in the nose, or 'nasal glioma', which is more frequent and less diversified at histology. The malformation is revealed by obstruction of the pharynx with respiratory distress immediately after birth or during the first weeks of life. Total surgical excision provides cure without sequelae. The diagnosis is based on histology. MRI is essential to the diagnostic and pretherapeutic evaluation, notably to avoid missing an ectopic hypophysis, but it is insufficient to diagnose a sphenoidal meningoencephalocele. Author.

Malignant triton tumor of the acoustic nerve. Case report. Han, D. H., Kim, D. G., Chi, J. G., Park, S. H., Jung, H. W., Kim, Y. G. Department of Neurosurgery, Seoul National University College of Medicine, Korea. *Journal of Neurosurgery* (1992) May, Vol. 76 (5), pp. 874-7.

The authors present the clinical, radiological, pathological features, and autopsy findings of a patient with malignant triton tumor of the acoustic nerve, which probably arose from a pre-existing acoustic schwannoma. The term 'malignant triton tumor' is applied to malignant schwannomas with rhabdomyoblastic differentiation. A cerebellopontine angle tumor with spinal drop metastasis occurred in this patient 10 months after near-total removal of the original tumor. Author.

Nasal intubation in the presence of frontobasal fractures: a retrospective study. Bahr, W., Stoll, P. Department of Oral and Maxillofacial Surgery, University Hospital, Freiburg, Germany. *Journal of Oral and Maxillofacial Surgery* (1992) May, Vol. 50 (5), pp. 445-7.

In most cases, surgical management of craniofacial fractures involves correction of occlusion. This requires nasal intubation. In the case of frontobasal fractures with simultaneous cerebrospinal fluid (CSF) fistula, nasal intubation is thought to increase the risk of meningitis. An analysis of the records of 160 patients with frontoba-

sal fractures and CSF fistulae showed that the route of intubation had no influence on the postoperative complication rate. Nasal intubation is therefore not contraindicated in frontobasal fractures with CSF fistulae. Author.

Managing sore throat: a literature review. I. Making the diagnosis. Del-Mar, C. Department of Social and Preventive Medicine, University of Queensland, Medical School, Herston. *Medical Journal of Australia* (1992) Apr 20, Vol. 156 (8), pp. 572-5.

OBJECTIVE: To assess the justification for the routine use of investigations in the diagnosis of bacterial causes of sore throat. **DATA SOURCES:** The literature from 1945 to 1990 was systematically screened to identify studies that addressed diagnosis of bacterial infection and the efficacy of antibiotics in sore throat, using the keywords 'pharyngitis' and 'tonsillitis'. **RESULTS:** Difficulties were identified with clinical methods and investigations that identify streptococcal infections. The practice of throat-swab culture—the 'gold standard'—appears to have developed as a strategy to protect patients from acute rheumatic fever. However, this method may be limited in its usefulness for protection against acute rheumatic fever because: (i) in many cases in which the streptococcus is isolated from symptomatic patients there is no serological evidence of infection; (ii) there are very high asymptomatic carrier rates of the streptococcus; (iii) even after adequate treatment with penicillin there are high bacteriological failure rates; and (iv) those organisms that can be isolated from the mucosal surface are a poor representation of organisms lying deep in the tissues. Evaluation of other diagnostic techniques such as Gram's stain and rapid antigen testing, as well as decision analysis, has also been hampered by the difficulties encountered with use of this inadequate gold standard. **CONCLUSION:** There is little indication from the literature that any routine system of identifying bacterial causes of sore throat is helpful to the clinician. Author.

Clinical signs of temporomandibular joint internal derangement in adults. An epidemiologic study. Lundh, H., Westesson, P. L. Department of Stomatognathic Physiology, University of Lund School of Dentistry, Malmo, Sweden. *Oral Surgery, Oral Medicine, Oral Pathology* (1991) Dec, Vol. 72 (6), pp. 637-41.

This study investigated the frequency and distribution of clinical signs of temporomandibular joint (TMJ) internal derangement in an adult non-TMJ patient population. Four hundred three persons who participated in an epidemiologic investigation were examined for clinical signs of TMJ internal derangement by four examiners who followed a standardized form. Clinical signs of internal derangement were found in 76 persons (19 per cent). Twenty-nine persons (7 per cent) had reciprocal clicking and 47 (12 per cent) had a history of clicking replaced by limitation of mouth opening with deviation to the affected side. Reciprocal clicking was associated with TMJ pain during mouth opening and with limitation of jaw movement. A history of clicking replaced by limitation of mouth opening with deviation to the affected side was associated with pain during mouth opening, limitation of opening, and palpatory tenderness of the TMJ. The study indicates that clinical signs of TMJ internal derangement are present in nearly one fifth of non-TMJ patients. Those with clinical signs of internal derangement frequently also have subjective symptoms but they have not sought treatment for these symptoms. Author.

Nasofacial zygomycosis. Ng, K. H., Chin, C. S., Jalleh, R. D., Siar, C. H., Ngui, C. H., Singaram, S. P. Division of Stomatology, Institute for Medical Research, Kuala Lumpur, Malaysia. *Oral Surgery, Oral Medicine, Oral Pathology* (1991) Dec, Vol. 72 (6), pp. 685-8.

Zygomycosis is an uncommon polymorphic fungal disease. One clinical subtype, nasofacial zygomycosis, is caused by infectious exposure to the organism *Conidiobolus coronatus*. A case affecting the nose and lips of a 42-year-old Malay man is reported here. The clinicopathologic features and management of this disease are described, and its differential diagnosis is discussed. Author.

Efficacy of myringotomy with and without tympanostomy tubes for chronic otitis media with effusion. Mandel, E. M., Rockette, H. E., Bluestone, C. D., Paradise, J. L., Nozza, R. J. Otitis Media Research Center, Children's Hospital of Pittsburgh, PA 15213. *Pediatric Infectious Diseases Journal* (1992) Apr, Vol. 11 (4), pp. 270-7.

In a previous trial involving 109 children with chronic otitis media with effusion of at least a two months' duration that had been unresponsive to medical treatment, we compared the efficacy of myr-

ingotomy with tube insertion, myringotomy alone and no surgical intervention with regard to time with middle ear effusion, hearing status and other indices over a three-year period. Because interpretation of the results was rendered difficult by certain complexities of study design, the present trial with a revised protocol was carried out in an additional group of 111 children. As in the previous trial, myringotomy with tube insertion resulted in less time with effusion and better hearing than did either myringotomy alone or no surgery. However, acute and chronic otorrhea and tympanic membrane perforation developed not uncommonly after tube insertion. Myringotomy alone offered no advantage over no surgery regarding the percent of time with effusion or the number of episodes of acute otitis media. Currently for children with long-standing middle ear effusion, we recommend either watchful waiting with periodic hearing assessment or myringotomy with tube insertion, individualizing the recommendation for each child. Author.

Osteomalacia should be sought and treated before withdrawal of anticonvulsant therapy in UK Asians. Macallan, D. C., Maxwell, J. D., Eastwood, J. B. Division of Biochemical Medicine, St George's Hospital Medical School, London, UK. *Postgraduate Medical Journal* (1992) Feb, Vol. 68 (796), pp. 134–6. Individuals from the Asian sub-continent in the United Kingdom are at particular risk of developing osteomalacia. We report a Gujarati woman who developed osteomalacia whilst taking anticonvulsant drugs; withdrawal of anticonvulsant therapy was followed by a seizure complicated by femoral neck fracture. In patients with other risk factors for osteomalacia, as is the case for Asians living in Britain, anticonvulsant drugs should not be reduced or withdrawn until osteomalacia, which puts the skeleton at increased risk of fracture,

and its associated hypocalcaemia, which reduces seizure threshold, have been sought and adequately treated. Author.

Occupational hearing loss in farmers. Plakke, B. L., Dare, E. Department of Communicative Disorders, University of Northern Iowa, Cedar Falls 50614-0356. *Public Health Reports* (1992) Mar-Apr, Vol. 107 (2), pp. 188–92.

Studies have shown that there is a great deal of high-frequency sensorineural hearing loss among farmers. The studies have failed, however, to differentiate farmers who have occupational noise exposure only from other potential hearing loss etiologies. This study, through extensive case history information, has isolated a farm noise-exposure group and matched its members by age with persons with no significant noise exposure. Results indicate that farmers exposed only to noise from farming have significantly poorer hearing sensitivity than persons not exposed to noise. author.

Invasive sinusitis due to *Pseudallescheria boydii* in an immunocompetent host. Stamm, M. A., Frable, M. A. Department of Otolaryngology—Head and Neck Surgery, Medical College of Virginia, Virginia Commonwealth University, Richmond 23219-0115. *Southern Medical Journal* (1992) Apr, Vol. 85 (4), pp. 439–41.

Chronic invasive sinusitis with *Pseudallescheria boydii* as the etiologic agent is uncommon but occurs in immunocompetent hosts. We have presented the fourth documented case of sinusitis due to *P. boydii* in a patient without other medical problems. *Pseudallescheria* is generally sensitive to ketoconazole and not amphotericin B in therapeutic levels. In vitro culture and sensitivity studies are essential in selecting the appropriate antibiotic. Author.