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Abstract Selection

Autosomal dominant congenital laryngomalacia. Shohat, M., Sivan, Y., Taub, E., Davidson, S. Department of Medical Genetics, Sackler School of Medicine, Tel Avivo University, Petah Tiqva, Israel. *American Journal of Medical Genetics* (1992) Apr 1, Vol. 42 (6), pp. 813–4.
A family is presented in which congenital stridor due to laryngomalacia was evident in nine individuals through three generations. This report confirms the autosomal dominant transmission of at least one type of laryngomalacia. Author.

High frequency jet ventilation for microlaryngeal laser surgery. An improved technique. Dhara, S. S., Butler, P. J. Department of Anaesthesia and Intensive Care, Singapore General Hospital. *Anaesthesia* (1992) May, Vol. 47 (5), pp. 421–4.
The use of a triple lumen central venous catheter, which can be shielded from laser irradiation by metal tape, as a conduit for high frequency jet ventilation in six children, is described. The problems of anaesthesia for laryngeal laser surgery and the advantages of the technique described in this paper are discussed. Author.

Sore throat after endotracheal intubation. Mandoe, H., Nikolajsen, L., Lintrup, U., Jepsen, D., Molgaard, J. Department of Anesthesia, Central Hospital, Herning, Denmark. *Anesthesia and Analgesia* (1992) Jun, Vol. 74 (6), pp. 897–900.
Nitrous oxide can diffuse into the cuff of an endotracheal tube during tracheal intubation, and the cuff pressure against the tracheal wall may cause mucosal damage. An endotracheal tube has been developed (Brandt Anesthesia Tube) that effectively limits nitrous oxide-related intracuff pressure increases. We determined whether the incidence of postoperative sore throat could be reduced by using this tube. Forty-eight female patients, 18–50 years of age, were included in the study. Endotracheal intubation was performed with either a Brandt Anesthesia Tube or a Mallinckrodt endotracheal tube. All patients were interviewed postoperatively after 20–30 h by individuals who did not know which tube was used. In the Mallinckrodt group, 12 of 20 patients had a sore throat and 10 patients had intracuff pressures greater than 25 mmHg. Only 3 of 20 patients in the Brandt group had a sore throat. We found that the incidence of sore throats after intubation could be significantly reduced by using the Brandt Anesthesia Tube (P less than 0.005). Author.

Efficacy and safety of cetirizine therapy in perennial allergic rhinitis. Mansmann, H. C. Jr., Altman, R .A., Berman, B. A., Buchman, E., Dockhorn, R. J., Leese, P. T., Love, S. J., Middleton, E. Jr. Jefferson Medical College, Philadelphia, Pennsylvania. *Annals of Allergy* (1992) Apr, Vol. 68 (4), pp. 348–53.
A double-blind, placebo-controlled trial was undertaken to assess the safety and efficacy of once daily cetirizine in alleviating the symptoms of perennial allergic rhinitis. Subjects were adults with perennial allergic rhinitis, characterized by nasal congestion, postnasal discharge, sneezing, rhinorrhea, nasal itching, lacrimation, ocular itching, and itching of the roof of the mouth, and a total pretreatment symptom severity score of greater than or equal to eight. Patients were randomized to treatment with 10 mg cetirizine, 20 mg cetirizine, or placebo for four weeks. Efficacy was assessed in 215 patients and safety in 216. Cetirizine in once daily dosages of 10 or 20 mg proved to be effective in relieving the overall symptoms of perennial allergic rhinitis and particularly postnasal discharge and sneezing. The 10 mg dose afforded optimal symptomatic relief, and the 20 mg dose provided little or no additional benefit. Cetirizine was well tolerated, and the frequency of somnolence was not significantly greater in patients receiving this drug than in those given placebo. Author.

A new method for correction of Stahl's ear. Tsujiguichi, K., Tajima, S., Tanaka, Y., Hira, M. Department of Plastic and Reconstructive Surgery, Osaka Medical College, Japan. *Annals of Plastic Surgery* (1992) Apr, Vol. 28 (4), pp. 373–6.
Stahl's ear is characterized by a third crus, a flat helix, hypoplasia or total absence of the superior crus, and deformity of the scaphoid fossa. There are various methods for the correction of Stahl's ear, but the surgical correction of this deformity is more difficult than it appears. We recently devised a new surgical method of our own. During the past four years, we treated five patients with Stahl's ear with this procedure. Our procedure can be used in every kind of deformity of Stahl's ear and can get satisfactory results. Author.

Velocity storage in labyrinthine disorders. Hain, T. C., Zee, D. S. Department of Neurology, Northwestern University School of Medicine, Chicago, Illinois 60616. *Annals of the New York Academy of Science* (1992) May 22, Vol. 656, pp. 297–304.
We studied 13 patients with unilateral peripheral vestibular lesions following removal of acoustic neurinomas. The time constant of the VOR after surgery was 6.4 ± 2.6 sec (normal is 18.5 ± 7.7 sec). The time constant of OKAN after surgery was 7.2 ± 1.8 sec (normal is 11.3 ± 3.2 sec). The mean initial velocity of OKAN after surgery was 9.7 ± 2.4 deg/sec (normal is 11.7 ± 5.9 deg/sec). These data suggest that unilateral peripheral vestibular loss is associated with a complete loss of velocity storage for canal input but only a partial loss of velocity storage for visual input. These results can be accounted for by current mathematical models of the velocity storage mechanism. Author.

Food-borne outbreak of group A beta-hemolytic streptococcal pharyngitis. Lossos, I. S., Felsenstein, I., Breuer, R., Engelhard, D. Israel Defence Forces, Jerusalem. *Archives of Internal Medicine* (1992) Apr, Vol. 152 (4), pp. 853–5.
An outbreak of pharyngitis due to group A beta-hemolytic streptococci type T 12 occurred at a military base. An epidemiologic investigation indicated that the outbreak was food borne. Consumption of boiled egg salad at lunch was significantly associated with the illness. Immediate institution of antibiotic therapy and isolation of the patients prevented secondary respiratory spread of the infection. No cases of poststreptococcal suppurative and nonsuppurative complications were found during a six-week period after the outbreak. Medical personnel should be aware of the possibility of food-borne streptococcal pharyngitis. Regular health surveillance of food handlers and food preparation processes are important for prevention of such outbreaks. Author.

Tympanic electrocochleography: normal and abnormal patterns of response. Margolis, R. H., Levine, S. C., Fournier, E. M., Hunter, L. L., Smith, S. L., Lilly, D. J. Department of Otolaryngology, University of Minnesota, Minneapolis 55455. *Audiology* (1992) Vol. 31 (1), pp. 8–24.
Electrocochleography has been widely used in human and animal studies of endolymphatic hydrops. A variety of response patterns have been reported in normal and hydropic ears. Recent clinical studies have focused almost exclusively on the amplitude ratio of the summating potential (SP) and action potential (AP) derived from alternating polarity click responses. In this report normal response patterns are described with a tympanic membrane electrode employing condensation, rarefaction and alternating polarity clicks and tone burst stimulation. A variety of response abnormalities are described in patients with suspected endolymphatic hydrops. The exclusive use of alternating polarity clicks is not adequate to reveal the nature of these abnormalities. Author.

Salivary secretion and seasickness susceptibility. Gordon, C. R., Jackman, Y., Ben-Aryeh, H., Doweck, I., Spitzer, O., Szargel, R., Shupak, A. Motion Sickness and Human Performance Laboratory, Israel Naval Hyperbaric Institute, Haifa. *Aviation, Space and Environmental Medicine* (1992) May, Vol. 63 (5), pp. 356–9.
The salivary flow rate and composition of two groups of 31 subjects, one group at each extreme of the seasickness susceptibility scale, were compared. No significant differences were found between the

two groups in flow rates and electrolyte concentrations of whole resting and stimulated saliva. Amylase activity and rate of secretion in resting saliva were significantly higher in subjects susceptible to seasickness as compared with nonsusceptible subjects. Also, the total protein rate of secretion in resting saliva was significantly higher in the susceptible group. The present findings could be explained in terms of higher sympathetic tone in subjects susceptible to seasickness, and salivary amylase levels might be recommended as an additional parameter in the evaluation of seasickness susceptibility. Author.

Cancer of the nose and paranasal sinuses in the metal industry: a case-control study. Comba, P., Barbieri, P. G., Battista, G., Belli, S., Ponterio, F., Zanetti, D., Axelson, O. Istituto Superiore di Sanita, Rome, Italy. *British Journal of Industrial Medicine* (1992) Mar, Vol. 49 (3), pp. 193–6.
The association between nasal cancer and work in the metal industry was investigated in a case-control study located in the province of Brescia, north eastern Italy. Thirty five cases of malignant epithelial neoplasms of the nasal cavity and paranasal sinuses who were resident in the province of Brescia and diagnosed or treated by the ear, nose, and throat department and the radiotherapy unit (Centro Alte Energie) of the Brescia Hospital in the years 1980–89 were included in the study. Controls (102) were patients affected by benign and malignant neoplasms of the head and neck who were resident in the Brescia Province and matched the cases by age and sex. All the subjects were interviewed by telephone. Metal workers showed an increased risk of nasal cancer (odds ratio (OR) 3.1; 90% confidence interval (90% CI) 0.48–20); a higher risk was associated with work in foundries (OR 5.9; 90 CI 0.77–46). Work in wood, leather, and textile industries was also associated with increased risk of nasal cancer. Author.

Recurrent odontogenic keratocyst within the temporalis muscle. Worrall, S. F. Department of Oral and Maxillofacial Surgery, Queen Elizabeth Hospital, Edgbaston, Birmingham. *British Journal of Oral and Maxillofacial Surgery* (1992) Feb, Vol. 30 (1), pp. 59–62.
Recurrence following treatment of odontogenic keratocysts is not infrequent. However, recurrence within soft tissues is rarely reported. A case of an odontogenic keratocyst recurring within the temporalis muscle is described with a brief review of the literature concerning cyst recurrence. Author.

The histologic pattern of bone invasion by squamous cell carcinoma of the mandibular region. Lukinmaa, P. L., Hietanen, J., Soderholm, A. L., Lindqvist, C. Department of Dental Radiology/Oral Pathology, University of Helsinki, Finland. *British Journal of Oral and Maxillofacial Surgery* (1992) Feb, Vol. 30 (1), pp. 2–7.
Surgical specimens from 16 nonirradiated patients with carcinoma of the mandibular region who had undergone resection of the mandible were investigated histologically to evaluate the presence, pattern and extent of bone involvement. Thirteen of the 16 carcinomas had invaded the mandibular bone. Two main patterns of growth were identified: seven carcinomas had infiltrated nonuniformly into the bone and six tumours had advanced as a compact front. Direct invasion from the oral mucosal tumour could be verified in 12 cases. Extension of four of these 12 tumours in bone clearly exceeded their dimension in the overlying mucosa. Carcinoma tissue in the mandibular canal, at a distance from the major tumour extension, was seen in two cases, whereas the periodontal ligament spaces were invaded only when there was a direct contiguous invasion by the tumour. The grade of histologic differentiation of the carcinoma did not definitely correlate with the frequency, pattern or extension of bone involvement. The results indicate that large tumour size, location on the mandibular alveolar ridge and clinical fixation to the mandibular bone predispose to, but are not prerequisites for bone invasion. Taken together, this study has shown that prediction of the presence and extent of bone involvement of the carcinoma located in the mandibular region is difficult on clinical grounds. Author.

Modulation of cell cycle kinetics in human cancer with total parenteral nutrition. Frank, J. L., Lawrence, W. Jr., Banks, W. L. Jr., McKinnon, J. G., Chan, W. M., Collins, J. M. Department of Surgery, Medical College of Virginia, Richmond 23298. *Cancer* (1992) Apr 1, Vol. 69 (7), pp. 1858–64.
Prior DNA flow cytometric data from the laboratory of the Division of Surgical Oncology, Massey Cancer Center, demonstrated an increase in the hyperdiploid compartment of tumor cells taken from patients with squamous cell carcinoma of the head and neck after a course of total parenteral nutrition (TPN). To assess a putative increase in the percentage of tumor cells actively synthesizing DNA in this system, the authors administered bromodeoxyuridine (BrdU) intravenously to ten patients before and after the administration of TPN. Cell suspensions prepared from biopsy specimens of normal oral mucosa and tumor tissue were analyzed with flow cytometric study. Before TPN administration, the mean percentage of tumor cells incorporating BrdU was 2.47 ± 1.11 per cent. After TPN administration, the percentage of S-phase cells increased significantly (p less than 0.05) to a mean of 4.52 ± 2.67 per cent. Before TPN was given, normal mucosa demonstrated a mean of 7.97 ± 2.69 per cent of cells incorporating BrdU. After TPN was given, a mean of 8.47 ± 2.51 per cent was seen (not significant (NS)). A potential strategy for the use of TPN to enhance tumor cell susceptibility to S-phase-specific chemotherapy is strongly suggested by these data. Author.

Brief chemotherapy, involved field radiation therapy, and central nervous system prophylaxis for paranasal sinus lymphoma. Cooper, D. L., Ginsberg, S. S. Department of Medicine, Yale University School of Medicine, New Haven, Connecticut 06510. *Cancer* (1992) Jun 15, Vol. 69 (12), pp. 2888–93.
Lymphoma of the paranasal sinus is a rare tumour characterized by bulky local disease, early systemic dissemination, and a propensity for central nervous system (CNS) spread. Treatment with radiation alone generally has been disappointing. Based on previous encouraging reports of initial brief chemotherapy followed by involved field radiation therapy (IFRT) for localized large cell lymphoma, four consecutive patients with paranasal sinus lymphoma were treated with six weeks of chemotherapy followed by IFRT and CNS prophylaxis. All patients had bulky localized disease and diffuse large cell lymphoma. Complete response was seen in all patients, and none have had a relapse (minimum follow-up, 25 months; range, 25 to 32 months). Chemotherapy and radiation therapy were well tolerated. One patient developed an osteogenic sarcoma in the radiation field 32 months after completion of therapy. Administration of early frequent chemotherapy followed by IFRT and CNS prophylaxis appears to be an effective treatment strategy for patients with localized large cell lymphoma of the paranasal sinuses. Author.

Meningioma of the mandible. Landini, G., Kitano, M. Department of Oral Pathology, Kagoshima University Dental School, Japan. *Cancer* (1992) Jun 15, Vol. 69 (12), pp. 2917–20.
This is the first case report to the authors' knowledge of a primary extracranial meningioma located in the mandible. Ultrastructurally, the tumor cells had intricate cellular membranes and desmosome-like attachment structures. Using immunohistochemical analysis, the tumor expressed both epithelial membrane antigen and vimentin. Although the origin of extracranial meningiomas has been attributed to proliferation of ectopic embryonal nests of arachnoidal cells, the proliferation of perineural cells of peripheral nerves also is possible as a result of the structural and functional similarities of perineural cell and arachnoid cells. The authors suggest that extracranial meningiomas may be more common than published reports indicate because of certain histologic similarities between these tumors, neurilemomas, and solitary neurofibromas. Author.

Colonization of dental plaque by respiratory pathogens in medical intensive care patients. Scannapieco, F. A., Stewart, E. M., Mylotte, J. M. Department of Oral Biology, State University of New York, Buffalo. *Critical Care Medicine* (1992) Jun, Vol. 20 (6), pp. 740–5.
OBJECTIVE: To assess the prevalence of oral colonization by respiratory pathogens in a group of ICU patients, with specific attention to dental plaque and the oral mucosa. DESIGN: Prospective, nonrandomized study with age-matched controls. SETTINGS: Medical ICU in a tertiary-care Veterans Affairs Medical Center and a dental school outpatient preventive dentistry clinic. PATIENTS: Nonconsecutive, unselected patients admitted to the medical ICU during a 2-month period; controls were age-matched patients seen for the first time in the preventive dentistry clinic. INTERVENTIONS: None. MEASUREMENTS: Oral hygienic status was assessed in both groups using a semiquantitative system. Quantitative cultures of dental plaque and buccal mucosa were done within 12 h of medical ICU admission and every third day thereafter until discharge/death from the medical ICU. In controls, cultures of plaque and buccal mucosa were done on the initial visit only. Severity of illness of medical ICU patients was quantitative using the Acute Physiology and Chronic Health Evaluation (APACHE II) system and McCabe-

Jackson criteria. MAIN RESULTS: Oral hygiene of medical ICU patients was poor. These patients had a mean plaque score (1.9 ± 0.2) that was significantly greater than that same score seen in outpatients of the preventive dentistry clinic (1.4 ± 0.1; p less than 0.005). Plaque and/or oral mucosa of 22 (65 per cent) of 34 medical ICU patients were colonized by respiratory pathogens, in contrast to only four (16 per cent) of 25 preventive dentistry clinic patients (p less than 0.005). The potential respiratory pathogens cultured from medical ICU patients included methicillin-resistant Staphylococcus aureus, Pseudomonas aeruginosa, and ten genera of Gram-negative bacilli. Colonization by respiratory pathogens was statistically associated with concomitant antibiotic therapy within the medical ICU group of patients, but not with severity of illness. Although medical ICU patients tended to have more dental plaque than preventive dentistry clinic patients, there was no statistically significant association noted between the presence of dental plaque and respiratory pathogen colonization. CONCLUSIONS: These findings suggest that bacteria commonly causing nosocomial pneumonia colonize the dental plaque and oral mucosa of intensive care patients. In many cases, this colonization occurs by large numbers of bacteria. Dental plaque may be an important reservoir of these pathogens in medical ICU patients. Efforts to improve oral hygiene in medical ICU patients could reduce plaque load and possibly reduce oropharyngeal colonization. Author.

Middle latency auditory evoked potentials improve the detection of abnormalities along auditory pathways in multiple sclerosis patients. Versino, M., Bergamaschi, R., Romani, A., Banfi, P., Callieco, R., Citterio, A., Gerosa, E., Cosi, V. Neurological Institute Fondazione C. Mondino, University of Pavia, Italy. *Electroencephalography and Clinical Neurophysiology* (1992) May–Jun, Vol. 84 (3), pp. 296–9.
Brain-stem and middle latency auditory evoked potentials (BAEPs and MLAEPs) have been studied in 34 multiple sclerosis (MS) patients. We were able to detect a central nervous system auditory pathway involvement in 17 (50 per cent) of the patients: 38 per cent by BAEPs alone (I–V inter-peak latency) and 47 per cent by MLAEPs alone (Na and Pa peak latency). Five patients had abnormal MLAEPs with normal BAEPs whereas the opposite was detectable in only one patient. In addition, most MLAEP parameters in the MS group statistically differed from those obtained in the control group. Therefore, our results demonstrated that the auditory pathway impairment could frequently be located at a rostral level along the auditory radiation. In conclusion, even if only Na and Pa components were considered, MLAEPs succeeded in improving the sensitivity of the auditory evoked potential examination without increasing the false positive rate. Author.

Brain-stem auditory evoked potentials in adults with Down's syndrome. Kakigi, R., Kuroda, Y. Department of Internal Medicine, Saga Medical School, Japan. *Electroencephalography and Clinical Neurophysiology* (1992) May-Jun, Vol. 84 (3), pp. 293–5.
Brain-stem auditory evoked potentials (BAEPs) were examined in 37 adult patients with Down's syndrome and in 37 age-matched normal subjects. All absolute and interpeak latencies except for the interpeak latency IV-V were shorter in patients than in normal subjects. The amplitude of wave V and the amplitude ratio V/I were smaller in patients than in normal subjects. Short latencies in patients were considered to be due to the smaller size of the brainstem or to faster conduction velocity. The prolonged interpeak latency IV-V and the smaller wave V may indicate physiological dysfunctions between the upper pons and the lower midbrain. Author.

Management of cystic hygroma of the head and neck in Lagos, Nigeria; a 10-year experience. Adeyemi, S. D. Department of Surgery, College of Medicine, Lagos, Nigeria. *International Journal of Pediatric Otorhinolaryngology* (1992) May, Vol. 23 (3), pp. 245–51.
Management of cystic hygroma in 25 children as practised in Lagos, Nigeria during 1980 through 1989 was studied. Thirteen (52 per cent) were infants out of which seven were newborns. Thirty-three operations were performed including those for recurrences. There were 29 excisions out of which 22 (76 per cent) were one-stage complete excisions. Complications included four cases of facial paresis, six recurrences and respiratory obstruction which led to death in five new borns, the only deaths in the series, and an operative mortality of 20.8 per cent. A striking feature of this study is the observation that some recurrences occurred at sites which were normal at the initial or previous excision. Such recurrences led to four surgical operations at different times in one child. The term 'progressive infilterating cystic hygroma' (PICH) is being suggested to distinguish this type from the ordinary cystic hygroma. Author.

Modulation of humoral and cellular resistance in children with laryngeal papillomatosis. Jakubikova, J., Oravec, C., Klacansky, I. Pediatric Otolaryngologic Clinic, Faculty of Medicine, Comenius University, Bratislava Czechoslovakia. *International Journal of Pediatric Otorhinolaryngology* (1992) May, Vol. 23 (3), pp. 229–36.
As accessory cells in immunity response immunoglobulin and lymphocytes participate in antitumor immunity. Quantitative changes in concentrations and numbers were studied once before therapy, without examining the functional state. In order to gain more information on the humoral response during and after treatment, and in cases of recurrence, bactericidal antibodies against B. anthracis were determined by means of 51Cr-labeled microbes. The results of the present study show that IgG levels were normal and IgA and IgM normal or increased. In only two children (0.8 per cent) the levels of serum IgM were lowered. Although a high percentage of increased trend values of bactericidity in cured children was found (75 per cent), the percentage in children with recurrences reaching 50 per cent, the differences are considered statistically insignificant. Following T lymphocyte, figures a significant decrease in juvenile laryngeal papillomatosis (JLP) patients were found. Author.

Recurrent otitis media with non-typable haemophilus influenzae: the role of serum bactericidal antibody. Bernstein, J. M., Faden, H. S., Loos, B. G., Murphy, T. F., Ogra, P. L. Department of Otolaryngology, State University of New York, Buffalo. *International Journal of Pediatric Otorhinolaryngology* (1992) Jan, Vol. 23 (1), pp. 1–13.
The effect of serum bactericidal antibody on colonization with nontypable Haemophilus influenzae (NTHI) was studied in 26 children. Serum bactericidal antibody did not prevent colonization with NTHI in the nasopharynx. Antibody was present in 53 per cent before, 91 per cent during and 100 per cent after documented colonization of the nasopharynx with NTHI. In addition, five children with recurrent otitis media with effusion (OME) due to NTHI were observed for bactericidal serum antibody during a four year period. Bactericidal antibody against the causative NTHI strain was not detected in the acute sera of any patient during each episode, but was observed in the convalescent sera of all of the patients. The bactericidal antibody in the convalescent serum did not appear to be protective against colonization and recurrence of disease by a different heterologous strain of NTHI. However, bactericidal antibody was augmented in some cases by a heterologous infection with NTHI. We confirmed the emergence of new strains of NTHI with DNA fingerprinting and outer membrane protein (OMP) analysis. The data suggest that the immune response to NTHI in OME is usually strain-specific, and furthermore, the results demonstrate that strain-specific bactericidal antibody does not prevent colonization in the nasopharynx with the homologous or heterologous bacterial strains. In general, bactericidal antibody is not cross-protective against heterologous strains of NTHI causing a second or third episode of otitis media with NTHI. Author.

Re-treatment of nasopharyngeal carcinoma in 53 patients. Pryzant, R. M., Wendt, C. D., Delclos, L., Peters, L. J. Department of Radiotherapy, University of Texas M.D. Anderson Cancer Center, Houston 77030. *International Journal of Radiation, Oncology, Biology and Physics* (1992), Vol. 22 (5), pp. 941–7.
Fifty-three patients with locally recurrent or persistent nasopharyngeal carcinoma were re-treated with megavoltage radiation therapy at The University of Texas M.D. Anderson Cancer Center from 1954 through 1989. The time from initial treatment to re-treatment ranged from two to 189 months (median 33 months). Documented local disease was confined to the nasopharynx in 27 patients (Group 1), while in the other 26 patients there was local spread beyond the nasopharynx (Group 2). At the time of re-treatment, nodal disease was present in 27 of the 53 cases. Forty-two patients were re-treated with external beam therapy alone and 11 with a component of brachytherapy. Re-treatment doses specified at the nasopharyngeal vault ranged from 27.5 to 99 Gy (median 57 Gy), and total cumulative dose ranged from 80 to 160 Gy (median 112 Gy). Overall five-year actuarial local control (LC), disease-free survival (DFS), and survival rates were 35 per cent, 18 per cent and 21 per cent, respectively. Patients with Group 1 disease did better than those with Group 2

disease in terms of five-year survival, 32 per cent versus 9 per cent ($p = 0.01$) and five-year DFS, 23 per cent versus 12 per cent ($p = 0.002$). Nodal status at the time of re-treatment did not predict for LC or survival. The five-year survival of patients with lymphoepitheliomas was 28 per cent compared with 13 per cent for patients with squamous cell carcinomas ($p = 0.04$). Eight patients developed severe complications from re-treatment, of which five involving the brain (two), spinal cord (one), and lower cranial nerves (two) were fatal. The incidence of severe complications was related to the total cumulative dose of external beam irradiation: 4 per cent for patients receiving doses less than or equal to 100 Gy compared with 39 per cent for those patients who received doses greater than 100 Gy ($p = 0.066$). Beginning in 1977, a combination of external beam therapy (20 to 30 Gy) and intracavitary cesium (40 to 50 Gy surface dose) was used in selected cases: nine of the 53 patients were re-treated with this combination. Of these, seven achieved LC with a follow-up of seven to 102 months and none sustained a severe complication. Five-year actuarial LC, DFS, and survival in this group were 67 per cent, 44 per cent and 60 per cent respectively. Author.

Chemodectoma of the head and neck: results of treatment in 84 patients. Powell, S., Peters, N., Harmer, C. Head and Neck Unit, Royal Marsden Hospital, London, England. *International Journal of Radiation, Oncology, Biology and Physics* (1992) Vol. 22 (5), pp. 919–24.
Eighty-four patients with chemodectoma of the head and neck presented to the Royal Marsden Hospital between 1949 and 1985. For tumors arising at the skull base (glomus jugulare and glomus tympanicum) 46 were treated with radiotherapy alone resulting in an actuarial local control rate of 73 per cent at 25 years; 13 were treated with surgery plus radiotherapy with no recurrences during a median follow-up of nine years; four had surgery alone but all recurred by seven years. For tumors of the soft tissues of the neck (carotid body and glomus vagale) 13 were treated with surgery alone with an actuarial control rate of 54 per cent at 15 years; four were treated with radiotherapy which resulted in local control at 1, 2, 8 and 11 years; and one patient who received both surgery and radiotherapy remained controlled at one year. Although comparison between radiotherapy and surgery in terms of tumor control is not simple, the case is argued for more frequent use of radiotherapy at all sites. This case is strengthened by minimal morbidity from radiotherapy in doses which appear effective: in the range of 45–50 Gy in 25 daily fractions over five weeks. Author.

Treatment of recurrent head and neck cancer with 5-fluorouracil, hydroxyurea, and reirradiation. Weppelmann, B., Wheeler, R. H., Peters, G. E., Kim, R. Y., Spencer, S. A., Meredith, R. F., Salter, M. M. Department of Radiation Oncology, University of Alabama Medical Center, Birmingham 35233. *International Journal of Radiation, Oncology, Biology and Physics* (1992), Vol. 22 (5), pp. 1501–6.
Head and neck cancer locally recurrent after previous irradiation and surgery presents a difficult management problem. Conventional treatment alternatives include chemotherapy, reirradiation with interstitial implant, and hyperthermia. Reirradiation with external beam is generally not considered because of previous high radiation dose and limited tissue tolerance. In this study, 21 patients with recurrent and previously irradiated head and neck cancer were treated in a Phase I–II fashion. Patients received five days of 5-fluorouracil, 300 mg/m2/day IV bolus, Hydroxyurea 1.5 or 2 g/day by mouth and external beam radiation therapy every two weeks for up to four courses. Of 20 evaluable patients, nine have attained a complete response (CR) and six a partial response (PR). Fifteen patients completed all planned therapy, eight on time, seven patients with delays. With a median follow-up of seven months, 13 patients are alive, seven disease-free (three after salvage surgery) and six with recurrence. Eight patients have died. The one-year survival is 56 per cent. Treatment toxicity was mainly neutropenia. No major early or late radiation related side effects have been observed at a median follow-up of seven months. Neither previous radiation dose, time since first radiation, prior chemotherapy, or site of recurrence was predictive of response or treatment tolerance. Patients with a performance status of at least 80 had a significant higher CR rate, with 7/10 patients in this group, as compared to 2/10 patients in patients with a performance status less than 80, achieving a CR. Reirradiation with 5-fluorouracil and hydroxyurea is a well tolerated outpatient treatment program for patients with recurrent and previous irradiated head and neck cancer that produces a high response rate and can provide significant palliation of symptoms. Author.

Ultrasonographic evaluation of neck masses—sonographic patterns in differential diagnosis. Barki, Y. Department of Radiology, Soroka Medical Center, Beer Sheva, Israel. *Israel Journal of Medical Science* (1992) Mar-Apr, Vol. 28 (3–4), pp. 212–6.
Ultrasound is a relatively inexpensive, widely available noninvasive method of investigation. Although there is extensive documentation on the use of ultrasound in abdominal lesions, it appears to have been underutilized in the evaluation of neck masses. Ultrasound enables detection of thyroidal and extrathyroidal masses, and definition of their boundaries and their relationship to great vessels. The traditional and exclusive use of ultrasound to separate cystic from solid lesions is outdated. High resolution new-generation real-time machines allow recognition of secondary changes in the structure of basically solid or cystic masses. Infected cystic masses may give the impression of a solid neoplasm. Although partial or total necrosis within a lymph node may simulate a branchial cleft cyst, ultrasonography can in many cases recognize such a 'cystic-looking' malignant lymph node and thus prevent a premature biopsy that could transform an initially curable disease into an incurable one. Author.

Manifestations of intense noise stimulation on spontaneous otoacoustic emission and threshold microstructure: experiment and model. Furst, M., Reshef, I., Attias, J. Department of Electrical Engineering Systems, Faculty of Engineering, Tel Aviv University, Israel. *Journal of the Acoustical Society of America* (1992) Feb, Vol. 91 (2), pp. 1003–14.
Comparison between changes that occur simultaneously on spontaneous otoacoustic emissions (SOAEs) and on other cochlear origin phenomena can contribute to the understanding of cochlear micromechanical activity. The temporary changes that arise after short noise exposure are investigated in the following paper. The effects of noise exposure on the threshold microstructure near an SOAE and on the amplitude and frequency of the SOAE were measured. These experimental results indicate the following: (1) exposure to wideband noise for a short time causes a temporary reduction in the SOAE frequency and amplitude, and alters reversibly the threshold microstructure in the vicinity of the SOAE. The difference between the minimum and maximum in the threshold microstructure is reduced, and the frequency that yields the minimum threshold decreases; (2) the threshold at the SOAE frequency is most sensitive to noise exposure; (3) intense stimulation causes a relatively small increase, or even a decrease, in threshold at frequencies near the SOAE. The experimental results are interpreted in terms of a nonlinear transmission line model which includes nonlinear amplifiers. The effect of the noise exposure is modelled by reduction in the cochlear partition amplification term. Most of the experimental results are predicted by this model. Author.

Effect of ear-canal air pressure on evoked otoacoustic emissions. Naeve, S. L., Margolis, R. H., Levine, S. C., Fournier, E. M. Department of Otolaryngology, University of Minnesota, Minneapolis 55455. *Journal of the Acoustical Society of America* (1992) Apr, Vol. 91 (4 (Pt 1)), pp. 2091–5.
The effect of ear-canal air pressure on click-evoked otoacoustic emissions was measured for pressures ranging from 200 to −200 daPa and stimulus levels ranging from 60–90 dB PeSPL. Positive and negative ear-canal pressures (relative to ambient pressure) reduced the emission amplitude by 3–6 dB. A spectral analysis of the emissions revealed that the effect of ear-canal air pressure is that of a high-pass filter with a cut-off frequency of 2600 Hz and a slope of 4 dB/oct. The spectral changes are the expected effect of an increase in stiffness of the middle ear and were independent of pressure polarity and click level. Ear-canal air pressure substantially reduced the reproducibility of the emission waveform, in many cases rendering the emission indistinguishable from background noise. The implication of these findings for hearing screening applications is that a high false alarm rate may occur in normal-hearing patients with intratympanic air pressures that are significantly different from ambient pressure. Author.

Speech pattern hearing aids for the profoundly hearing impaired: speech perception and auditory abilities. Faulkner, A., Ball, V., Rosen, S., Moore, B. C., Fourcin, A. Department of Phonetics and Linguistics, University College London, England. *Journal of the Acoustical Society of America* (1992) Apr, Vol. 91 (4 (Pt 1)), pp. 2136–55.
A family of prototype speech pattern hearing aids for the profoundly hearing impaired has been compared to amplification. These aids are

designed to extract acoustic speech patterns that convey essential phonetic contrasts, and to match this information to residual receptive abilities. In the first study, the presentation of voice fundamental frequency information from a wearable SiVo (sinusoidal voice) aid was compared to amplification in 11 profoundly deafened adults. Intonation reception was often better, and never worse, with fundamental frequency information. Four subjects scored more highly in audio-visual consonant identification with fundamental frequency information, five performed better with amplified speech, and two performed similarly under these two conditions. Five of the 11 subjects continued use of the SiVo aid after the tests were complete. A second study examined a laboratory prototype compound speech pattern aid, which encoded voice fundamental frequency, amplitude envelope, and the presence of voiceless excitation. In five profoundly deafened adults, performance was better in consonant identification when additional speech patterns were present than with fundamental frequency alone; the main advantage was derived from amplitude information. In both consonant identification and connected discourse tracking, performance with appropriately matched compound speech pattern signals was better than with amplified speech in three subjects, and similar to performance with amplified speech in the other two. In nine subjects, frequency discrimination, gap detection, and frequency selectivity were measured, and were compared to speech receptive abilities with both amplification and fundamental frequency presentation. The subjects who showed the greatest advantage from fundamental frequency presentation showed the greatest average hearing losses, and the least degree of frequency selectivity. Compound speech pattern aids appear to be more effective for some profoundly hearing-impaired listeners than conventional amplifying aids, and may be a valuable alternative to cochlear implants. Author.

Comparison of frequency selectivity and consonant recognition among hearing-impaired and masked normal-hearing listeners. Dubno, J. R., Schaefer, A. B. Medical University of South Carolina, Department of Otolaryngology and Communicative Sciences, Charleston 29425. *Journal of the Acoustical Society of America* (1992) Apr, Vol. 91 (4 (Pt 1)), pp. 2110–21.
Frequency selectivity and consonant recognition were determined for normal-hearing and hearing-impaired listeners using techniques that facilitate comparisons of performance among listeners whose absolute thresholds vary in magnitude and configuration. First, for each of six subjects with cochlear hearing loss, masked thresholds in notched noise and narrow-band-noise maskers were obtained and compared to results for three normal-hearing listeners whose thresholds were precisely matched to the impaired listeners' by masking with spectrally shaped broadband noise. Second, for hearing-impaired listeners and their masked normal-hearing controls, measurements of consonant recognition were obtained at several speech-presentation levels selected on the basis of articulation-index predictions to assure equal speech-spectrum audibility across listeners. The results suggest that frequency selectivity is poorer for hearing-impaired listeners than for masked normal-hearing listeners, even when thresholds among subjects are equated, but the deviation from normal frequency selectivity is smaller than estimated from comparisons with normal-hearing listeners in quiet. Critical ratios for hearing-impaired listeners are equivalent to normal. Although frequency selectivity is reduced, there is no consistent difference in consonant recognition between hearing-impaired subjects and masked normal-hearing subjects, when performance is assessed under conditions that assure equal speech-spectrum audibility across subjects. Author.

Nasal flow-resistive responses to challenge with cold dry air. Strohl, K. P., Arnold, J. L., Decker, M. J., Hoekje, P. L., McFadden, E. R. Department of Medicine, Case Western Reserve University, Cleveland, Ohio. *Journal of Applied Physiology* (1992) Apr, Vol. 72 (4), pp. 1243–6.
Recent studies have suggested that the inhalation of cold air through the nose is associated with the subsequent release of mediators of immediate hypersensitivity. To determine if mucosal surface heat and water loss influence the nasal functional response to cold air, we measured nasal resistance by posterior rhinomanometry before and 1, 5 and 10 min after a 4-min period of isocapnic hyperventilation (30 l/min) through the nose in nine healthy subjects (five males, four females; aged 25–39 years) while they inhaled air at 0 degrees C. During the challenge period, the subjects breathed either in and out of the nose or in through the nose and out through the mouth. No changes in nasal resistance developed when subjects breathed exclusively through the nose; however, when subjects breathed in through the nose and out through the mouth, nasal resistance was increased 200 per cent at 1 min (p less than 0.01) after the challenge and returned to baseline values by 10 min after cessation of the challenge. These data indicate that nasal functional responses to cold dry air are dependent on the pattern of the ventilatory challenge. If the heat given up from the nasal mucosa to the incoming air is not recovered during expiration (as is the case with inspiration through the nose and expiration through the mouth), nasal obstruction will occur. Hyperpnea of cold air, per se, does not influence nasal resistance. Author.

Streptococcus pyogenes pharyngitis: characterization of strains by multilocus enzyme genotype, M and T protein serotype, and pyrogenic exotoxin gene probing. Musser, J. M., Gray , B. M., Schlievert P. M., Pichichero, M. E. Department of Pathology, Baylor College of Medicine, Houston, Texas 77030. *Journal of Clinical Microbiology* (1992) Mar, Vol. 30 (3), pp. 600–3.
Multilocus enzyme electrophoresis, serological characterization of M and T proteins, and probing for pyrogenic exotoxin A and C genes were used to investigate the bacteriologic epidemiology of strains of Streptococcus pyogenes recovered primarily from patients with recurrent pharyngitis. A total of 164 strains recovered from individuals living in nine states of the United States was analyzed. Two-thirds of the patients in our sample were infected with the homologous strain following antibiotic therapy and presumably represented treatment failures, whereas the other one-third of the patients were infected with a heterologous strain after therapy and probably represented reinfections. Multilocus enzyme electrophoresis was as efficacious in strain discrimination as serologic typing techniques were and, in addition, successfully characterized all organisms that were serologically nontypeable. Two clones of S. pyogenes responsible for most of the episodes of toxic shock-like syndrome in the United States are geographically widespread, but they vary by locality in the frequency of their occurrence. Compared with a sample of strains cultured from patients whose pharyngeal infections were eliminated by antimicrobial therapy, these two clones were statistically overrepresented among organisms that cause recurrent pharyngitis. Author.

Epstein-Barr virus DNA in nasopharyngeal carcinomas from Chinese patients in Hong Kong. Dickens, P., Srivastava, G., Loke, S. L., Chan, C. W., Liu, Y. T. Department of Pathology, Queen Mary Hospital, University of Hong Kong. *Journal of Clinical Pathology* (1992) May, Vol. 45 (5), pp. 396–7.
AIMS: To investigate the presence of Epstein-Barr virus (EBV) in cases of nasopharyngeal carcinoma (NPC) in Chinese patients living in Hong Kong. METHODS: Nasopharyngeal biopsy specimens, formalin fixed and paraffin wax embedded, from 24 patients, eight with undifferentiated nasopharyngeal carcinoma, eight with well differentiated squamous carcinoma, and eight showing normal tissue histology, were analysed for the presence of Epstein-Barr virus (EBV) DNA by slot-blot hybridization on extracted unamplified DNA, and also after amplification of EBV specific sequences by the polymerase chain reaction (PCR). RESULTS: DNA slot-blot analysis showed viral DNA in all the undifferentiated, five of the well differentiated tumours, and none of the normal biopsy specimens. PCR studies confirmed positivity in the eight undifferentiated tumours, but six of the well differentiated tumours and three of the normal biopsy specimens showed viral DNA by this method, illustrating its greater sensitivity. CONCLUSIONS: EBV genome is present in appreciable copy number in most cases of well differentiated NPC in Chinese patients in Hong Kong. Author.

Autosomal dominant palmoplantar hyperkeratosis and sensorineural deafness in three generations. Sharland, M., Bleach, N. R., Goberdhan, P. D., Patton, M. A. Department of Genetics, St George's Hospital Medical School, London. *Journal of Medical Genetics* (1992) Jan, Vol. 29 (1), pp. 50–2.
A family is presented with autosomal dominant progressive palmoplantar hyperkeratosis, which is invariably associated with a slowly progressive, bilateral, high frequency, sensorineural hearing loss. The family show no other ectodermal abnormality. The differential diagnosis and possible mechanisms are discussed. This family appears to represent a unique variant in the hyperkeratosis-deafness association. Author.

Distal spinal muscular atrophy with vocal cord paralysis. Pridmore, C., Baraitser, M., Brett, E. M., Harding, A. E. Department

of Clinical Genetics, Institute of Child Health, London. *Journal of Medical Genetics* (1992) Mar, Vol. 29 (3), pp. 197–9.
We describe a family with distal spinal muscular atrophy and vocal cord paralysis, similar to the condition reported by Young and Harper in 1980. Both pedigrees are consistent with autosomal dominant inheritance. Author.

Uvulitis and supraglottitis: early manifestations of Kawasaki disease. Kazi, A., Gauthier, M., Lebel, M. H., Farrell, C. A., Lacroix, J. Department of Pediatrics, Ste-Justine Hospital, University of Montreal, Quebec, Canada. *Journal of Pediatrics* (1992) Apr, Vol. 120 (4 Pt 1), pp. 564–7.
Two children with Kawasaki disease initially had upper respiratory tract manifestations. The first was admitted with a diagnosis of uvulitis; in the second the clinical picture was characterized by supraglottic involvement, confirmed by direct laryngoscopic examination. Author.

Effect of viral respiratory tract infection on outcome of acute otitis media. Chonmaitree, T., Owen, M. J., Patel, J. A., Hedgpeth, D., Horlick, D., Howie, V. M. Department of Pediatrics, University of Texas Medical Branch, Galveston 77550. *Journal of Pediatrics* (1992) Jun, Vol. 120 (6), pp. 856–62.
We prospectively studied 271 infants and children (two months to seven years of age) with acute otitis media (AOM) for viral and bacterial causes, outcome at the end of therapy, and frequency of recurrence within one month. Comprehensive virologic methods, including viral antigen detection, cell culture, and serologic studies, were used to diagnose viral infection of the respiratory tract, middle ear, or both. Evidence of viral infection was found in 46 per cent (124/271) of patients with AOM. Sixty-six patients (24 per cent) had virus or viral antigen in the middle ear fluid; 50 of these patients (76 per cent) also had bacteria in middle ear fluid, and 16 (24 per cent) had virus alone. More patients with AOM and combined bacterial and viral infection (51 per cent) had persistent otitis (three to 12 days after institution of antibiotic treatment), compared with those with only bacterial otitis (35 per cent; $p = 0.05$) or patients with only viral infection, (19 per cent; p less than 0.01). Of patients with only viral infection, four of 10 with virus in middle ear fluid had persistent otitis, compared with none of 11 patients who had virus only in nasal wash specimens or whose viral infection was diagnosed only by serologic studies. Our data suggest that viruses interact with bacteria and that concurrent viral infection can significantly worsen the clinical course of bacterial AOM. The presence of virus in middle ear fluid may contribute to the pathogenesis and outcome of bacterial AOM. The mechanism of these interactions deserve further investigation. Author.

Loracarbef (LY163892) versus amoxicillin-clavulanate in the treatment of bacterial acute otitis media with effusion. Foshee, W. S. Department of Pediatrics, Medical College of Georgia, Augusta. *Journal of Pediatrics* (1992) Jun, Vol. 120 (6), pp. 980–6.
The efficacy and safety of loracarbef, a new beta-lactam antibiotic, was compared with that of amoxicillin-clavulanate potassium in the treatment of bacterial acute otitis media with effusion. A double-blind format was utilized to administer 10-day, randomized, parallel treatment regimens to patients who were between six months and 12 years og age. The most prevalent causative pathogens found in the two treatment groups were Streptococcus pneumoniae, Haemophilus influenzae, and Moraxella (Branhamella) catarrhalis. The percentages of favourable posttherapy clinical responses in evaluable patients were similar for both drugs: 87.3 per cent (124/142) of the loracarbef group, compared with 91.5 per cent (130/142) of the amoxicillin-clavulanate group, showed favorable responses within 72 hours after treatment. Ten to 16 days after treatment, 68.1 per cent of the loracarbef group, compared with 76.1 per cent of the amoxicillin-clavulanate group, showed favourable responses. More patients in the amoxicillin-clavulanate group reported treatment-emergent events: 46.1 per cent compared with 35.8 per cent in the loracarbef group ($p = 0.023$). Diarrhea was the most frequently reported event, occurring in 13.3 per cent of the loracarbef group and in 26.3 per cent of the amoxicillin-clavulanate group (p less than 0.001). Vomiting was reported by 5.8 per cent of the loracarbef group and 10.3 per cent of the amoxicillin-clavulanate group ($p = 0.072$). Loracarbef is comparable in efficacy to amoxicillin-clavulanate in the treatment of bacterial acute otitis media with effusion and has a more desirable safety profile. Author.

Evaluation of the psychological profiles of patients with signsand symptoms of temporomandibular disorders. Zach, G. A., Andreasen, K. Department of Family Dentistry, University of Iowa, College of Dentistry, Iowa City. *Journal of Prosthetic Dentistry* (1991) Dec, Vol. 66 (6), pp. 810–2.
The psychologic profiles of 98 female patients with signs and symptoms of temporomandibular disorders are compared with those of a control group having no signs or symptoms of such disorders. Scores on the Crown Crisp Experimental Index indicate a significant difference in the profiles of somatization and hysteria. Author.

A psychometric study of complaints in chronic tinnitus. Hiller, W., Goebel, G. Clinic Roseneck Center for Behavioural Medicine, Prien, F.R.G. *Journal of Psychosomatic Research* (1992) May, Vol. 36 (4), pp. 337–48.
Dimensions of psychological complaints due to chronic and disabling tinnitus were investigated by means of the Tinnitus Questionnaire (TQ), administered to a sample of 138 tinnitus sufferers who had been admitted to a psychosomatic hospital. Factor analysis revealed that tinnitus-related patterns of emotional and cognitive distress, intrusiveness, auditory perceptual difficulties, sleep disturbances, and somatic complaints can be differentiated. Cognitive distortions and inappropriate attitudes towards the tinnitus and its personal consequences were found to be highly intercorrelated forming a subgroup within a broader and more general distress factor. The stability of the factor solution obtained was examined by systematically varying the number of factors to be extracted. Based on the results of this method, scales are proposed for the questionnaire which can be used in clinical and scientific work to specifically assess major areas of tinnitus-related distress and their degree of severity. Implications for a further evaluation of the instrument are discussed. Author.

Preoperative history and coagulation screening in children undergoing tonsillectomy. Burk, C. D., Miller, L., Handler, S. D., Cohen, A. R. Division of Hematology, Children's Hospital of Philadelphia, PA 19104. *Pediatrics* (1992) Apr, Vol. 90 (4 Pt 2), pp. 691–5.
To evaluate the usefulness of preoperative screening for coagulation disorders in children, we prospectively studied laboratory and bleeding histories in 1,603 children undergoing tonsillectomy. All patients had preoperative laboratory screening with a complete blood count, prothrombin time, activated partial thromboplastin time, and bleeding time. Persistent abnormalities on repeat testing one week later were investigated further by a standardized schema. A subset of 129 patients, including all those who bled perioperatively or had laboratory abnormalities, completed a standard historical questionnaire. Thirteen patients had persistent laboratory abnormalities diagnostic of lupus inhibitor (five), non-lupus inhibitor (six), mild hemophilia A (one), and von Willebrand disease (one). Two patients had persistently prolonged activated partial thromboplastin times of undefined cause. Fourteen patients (10.8 per cent) interviewed reported positive bleeding histories. Of these, five, including the patient with von Willebrand disease, had persistent laboratory abnormalities. History alone failed to detect the patient with hemophilia A. For patients with inhibitors or prolonged activated partial thromboplastin times of unknown cause, surgery was delayed until the coagulation abnormalities resolved, and there was no perioperative bleeding. The patient with von Willebrand disease had severe postoperative bleeding despite treatment with cryoprecipitate. In predicting perioperative bleeding, history and laboratory screening had a high specificity but a very low positive predictive value due to poor sensitivity and a low prevalence of bleeding. Some children with bleeding disorders may be identified first during routine preoperative coagulation testing, and replacement therapy or delay or cancellation of surgery may reduce or prevent perioperative hemorrhage. However, the large number of false positive laboratory tests and bleeding histories, coupled with the relative rarity of inherited and acquired coagulapathies, raises doubts about the overall value of routine screening. Author.