

Abstract Selection

Five-year follow-up study of hearing loss at several locations within a large automobile company. Lee-Feldstein, A. Department of Medicine, College of Medicine University of California, Irvine. *American Journal of Industrial Medicine* (1993) July, Vol 24 (1), pp 41–54.

This longitudinal epidemiologic study was designed to investigate hearing loss over a five-year period among noise-exposed employees of a large automobile company and to assess effectiveness of hearing conservation programs at locations representing the spectrum of operations (assembly, light manufacturing, heavy manufacturing and machining, metal fabrication, and founding). Based on computerized audiometric test data, the study summarizes methodology developed for measuring occupational hearing loss and its application in evaluating programs at these locations, which had maximal eight hour time-weighted average (TWA) noise exposures ranging from 104 to 110 dB (A). Methods presented here provide for consideration of age and hearing level of study subjects at baseline audiogram and clearly demonstrate the extent of hearing loss during the study period. Among five study locations, the average hearing loss at 2000–4000 Hz in the worst-loss ear ranged from 3.4 to 6.2 dB over the follow-up period; after adjustment for presbycusis, the loss was less than 2 dB at all but one location, which showed a loss of nearly 4 dB. In comparison to a control group of nonnoise-exposed employees, hearing conservation programs at four of the five locations were judged to be effective. One location, a metal fabrication plant with a large percentage of employees having an eight-hour TWA noise exposure over 90 dB(A), was particularly noted for the effectiveness of its program. Author.

Severe axial anomalies in the oculo-auriculo-vertebral (Goldenhar) complex. Ignacio-Rodriguez, J., Palacios, J., Lapunzina, P. Department of Pathology, La Paz Hospital, Madrid, Spain. *American Journal of Medical Genetics* (1993) August 1, Vol 47 (1), pp 69–74.

We have studied four infants with oculo-auriculo-vertebral (OAV) complex or Goldenhar 'syndrome' who also had severe axial anomalies, including multiple vertebral segmentation errors affecting the thoracic and the lumbar spine. One of them presented a previously unreported pattern of vertebral and rib anomalies similar to spondylocostal dysostosis. Three patients had twins, and all four patients had other associated non-skeletal malformations which affected the midline, ie cleft lip and palate, esophageal atresia with tracheoesophageal fistula, and ventricular septal defect. The broad extent of the axial anomalies, the association with midline defects and twinning, and the combination in the same patient of two distinct conditions support the concept that OAV complex is a polytopic developmental field defect arising during blastogenesis. Author.

Chloroform in alveolar air of individuals attending indoor swimming pools. Aggazzotti, G., Fantuzzi, G., Righi, E., Tartoni, P., Cassinadri, T., Predieri, G. Department of Hygiene, University of Modena, Italy. *Archives of Environmental Health* (1993) July–August, Vol 48 (4), pp 250–4.

Alveolar air samples were collected from 163 subjects at indoor swimming pools and from 77 nonexposed subjects. Chloroform was present in all samples collected from exposed subjects (median = 695.02 nmol/m³). It was found at very low levels in 53 per cent of samples from nonexposed subjects. Alveolar air chloroform levels from people attending indoor swimming pools (mean value within each sampling session) were correlated with environmental air concentration ($r = 0.907$, $p = 0.002$). Analysis of variance showed that levels of chloroform in alveolar air depend on environmental air concentration, age, intensity of the sport activity, and kind of swimming. Chloroform levels in samples collected from competitive swimmers versus nonswimming visitors were different

($F = 10.911$, $p = 0.001$). Moreover, their pattern of swimming may affect chloroform concentration in alveolar air. The analysis of chloroform in alveolar air assesses indoor exposure in healthy subjects simply and at low cost. Author.

Gastroesophageal reflux and laryngeal disease. Deveney, C. W., Benner, K., Cohen, J. Department of Surgery, Oregon Health Sciences University, Portland. *Archives of Surgery* (1993) September, Vol 128 (9), pp 1021–5; discussion 1026–7.

OBJECTIVE: We wanted to determine if surgical correction of gastroesophageal reflux disease (GERD) would affect inflammatory laryngeal lesions in a select group of patients with known GERD and chronic inflammatory laryngeal lesions. **DESIGN:** Patients with persistent inflammatory lesions in the larynx were referred for workup of GERD when these lesions were not associated with smoking or drinking or when cessation of smoking failed to ameliorate these lesions during a minimum period of six months. Twenty-four hour pH monitoring was used to confirm GERD in 10 patients, while two patients had GERD confirmed radiologically, and one patient had typical symptoms of esophagitis and incompetent lower esophageal sphincter. Thus, 13 patients with chronic laryngeal inflammation persistent after cessation of smoking had concomitant GERD. These patients were all treated with Nissen fundoplication for GERD. **SETTING:** Patients with chronic laryngitis were referred to an otolaryngologist at a tertiary medical center. **PATIENTS:** Patients were consecutively selected as they presented with chronic persistent laryngeal lesions and were found to have GERD. **INTERVENTIONS:** Surgical correction of GERD with Nissen fundoplication. **MAIN OUTCOME MEASURES:** Status of the larynx was assessed at three month intervals with fiberoptic laryngoscopy and symptoms (ie, hoarseness, sore throat) were evaluated. **RESULTS:** Laryngeal inflammatory lesions and voice changes (hoarseness and sore throat) promptly resolved in eight (73 per cent) of 11 patients. To date, these improvements have continued after a mean follow-up of 11 months. **CONCLUSIONS:** Correction of GERD in a selected subset of patients with laryngeal inflammatory lesions ameliorates these lesions. Author.

Investigation of long-term efficacy and tolerability of azelastine nasal spray in the treatment of perennial allergic rhinitis. Gastpar, H., Dorow, P., Aurich, R., Petzold, U. University of Munich, Ear Nose and Throat Clinic, Fed. Rep. of Germany. *Arzneimittelforschung* (1993) July, Vol 43 (7), pp 771–6.

The long-term efficacy and tolerability of azelastine (CAS 58581-89-8) nasal spray (0.14 mg/nostriil b.i.d.) was investigated in patients suffering from perennial allergic rhinitis. One hundred and eighty five patients entered an initial six months' study; 35 of them continued in a follow-up for a further 30 to 60 weeks' treatment. Azelastine both attenuated the severity and reduced the incidence of rhinitis symptoms, with the highest rate of improvement during the first month with some additional improvement during the following months. The most marked effects were on those symptoms which were initially most severe: nasal obstruction, mucosal swelling, rhinorrhoea, sneezing and nasal itching. Signs of rhinitis identified by rhinoscopic examination improved in parallel to symptoms. 84.1 per cent of patients reported 'good' or 'very good' efficacy as did 94.3 per cent during the follow-up. Approximately 96 per cent of patients rated the tolerability of treatment as 'very good' or 'good'. The incidence of adverse events of possibly causal relationship to azelastine treatment was low during the first six months. The most frequent events were the experience of application site reactions (eg burning) and bitter or unpleasant taste, specific to azelastine. No unwanted effects were reported by patients continuing treatment. In addition, results of nasal biopsies indicate that with the dose used azelastine nasal spray is a safe drug for long-term treatment of perennial allergic rhinitis. Author.

Squamous carcinoma presenting as an enlarged cervical lymph node. Jones, A. S., Cook, J. A., Phillips, D. E., Roland, N. R. Department of Otorhinolaryngology, University of Liverpool, England. *Cancer* (1993) September 1, Vol 72 (5), pp 1756–61.

BACKGROUND. Patients presenting with an enlarged cervical lymph node containing squamous cell carcinoma are a difficult problem for head and neck surgeons. In most cases, the primary site lies in the head and neck region. The advent of fine-needle aspiration cytologic study means that this group of patients can be accurately identified in the clinic and investigated accordingly. **METHODS.** The current report studies the records of 267 such patients presenting to the Head and Neck Unit at The University of Liverpool over a 29-year period. **RESULTS.** The five-year survival rate for all patients presenting with a cervical lymph node metastasis was 27 per cent. The five-year survival rate for patients with a detected primary in the head and neck was 31 per cent and the primary site was identified during the patient's life time in all but 36 patients (13 per cent). In 53 per cent of patients, the primary site was discovered during routine clinical examination, and in a further 16 per cent it was discovered at panendoscopy. Most diagnostic tests proved relatively unhelpful but 10 patients in our series had the primary site discovered by radiograph and nine of these had carcinoma of the lung. In the current study when the primary site was discovered it was in the head and neck region in 74 per cent of patients. Primary sites other than head and neck occurred in 11 per cent of the patients and no five-year survivors existed. Multivariate analysis suggested that open biopsy of the lymph node metastasis appeared to have an adverse effect on survival as did advanced age and advanced N stage. The late diagnosis of the primary site, if it proved to be in the head and neck region, on the other hand, had a positive association with survival. **CONCLUSIONS.** Patients presenting with a lymph node metastasis in the head and neck region from an unknown primary have a prognosis identical to that of other patients with head and neck squamous carcinoma with neck node metastases. The prognosis for patients in whom the primary site is never discovered or in whom the primary site is not head and neck, however, is disastrous. If the primary tumor proves to be in the head and neck region, treatment is worthwhile since almost a third of patients are cured of their disease. When the primary carcinoma is not in the head and neck region, treatment must be considered palliative. Author.

The role of cricopharyngeus muscle in pharyngoesophageal disorders. Goyal, R. K., Martin, S. B., Shapiro, J., Spechler, S. J. Center for Swallowing and Motility Disorders Harvard-Thorndike Laboratory-Charles A. Dana Research Institute, Boston, Massachusetts. *Dysphagia* (1993), Vol 8 (3), pp 252–8.

The cricopharyngeus muscle is generally thought to be responsible for the high pressure zone of the pharyngoesophageal (upper esophageal) sphincter. In this review we critically examined the evidence for the role of the cricopharyngeus muscle in the manometric pharyngoesophageal sphincter. The available studies show disparities between the anatomic location of the cricopharyngeus muscle and the manometric high pressure zone of the pharyngoesophageal sphincter. The cricopharyngeus muscle seems to correspond to the distal one-third of the sphincteric high pressure zone and the peak high pressure zone appears to be located proximal to the cricopharyngeus muscle. The discrepancy between the upper high pressure zone and the anatomic cricopharyngeus is important in understanding the role of the cricopharyngeus muscle in the pathophysiology and treatment of clinical disorders of the pharyngoesophageal sphincter. Author.

Mucosal malignant melanoma of head and neck: 48 cases treated at Istituto Nazionale Tumori of Milan. Guzzo, M., Grandi, C., Licitra, L., Podrecca, S., Cascinelli, N., Molinari, R. Division of Head and Neck Surgery, Istituto Nazionale Tumori, Milan, Italy. *European Journal of Surgical Oncology* (1993), August, Vol 19(4), pp 316–9.

A series of 48 cases of malignant mucosal melanomas treated at the Milan Cancer Institute from 1975 to 1990 is retrospectively reviewed. There were 34 males and 14 females, and their ages ranged from 21 to 79 years (mean, 58). The site of origin of the tumor was the nasal cavity in 26 cases, the oral cavity in 15, larynx in two, lip mucosa in two, pharynx in two and upper esophagus in one. At presentation, the neoplasm was limited to the primary site in 60.4 per cent of the patients. Most patients (34) were treated with surgery alone. Nine were treated with surgery combined with chemo- and/or radiotherapy and five with radiotherapy combined with chemotherapy and/or immunotherapy. Only when surgery was part of the

treatment (42 of 48 cases) the patients were rendered disease free, but no further relapse of disease was documented in only five of these patients. The observed two- and five-year survival rate of the entire group was 45 per cent and 21 per cent, respectively. The four-year disease-free survival rate was 7%. The median interval between therapy and the first relapse was 8.5 months (range, 1–66). In 44 per cent of the patients the first recurrence of the tumor was at the primary site. Author.

Mandible reconstruction with metallic endoprosthesis following Commando's operation for advanced head and neck cancer. Personal experience. Margarino, G., Scala, M., Gipponi, M., Mereu, P., Schenone, G., Galli, A., Adami, M., Estienne, M., Meszaros, P. Divisione di Oncologia Chirurgica, Istituto Nazionale per la Ricerca sul Cancro, Genoa, Italy. *European Journal of Surgical Oncology* (1993) August, Vol 19 (4), pp 320–6.

Invasion of the mandible is found in 22 to 29 per cent of advanced (Stage III–IV) head and neck cancers; only an aggressive surgical technique, such as Commando's operation with subsequent reconstruction of tissue defects, can give a chance of cure to these patients. The reconstruction is feasible both by means of microsurgical free-tissue transfers or with alloplastic materials and myocutaneous flaps. Between 1982 and 1991, 34 patients in Stage III ($n = 6$; 17.7 per cent) and IV ($n = 28$; 82.3 per cent) head and neck cancers underwent Commando's operation with different types of reconstruction in 30 patients: pectoralis myocutaneous flap ($n = 9$), osteo-myocutaneous flap with the underlying segment of the fifth rib ($n = 2$), myocutaneous flap plus prosthesis ($n = 17$), or prosthesis alone ($n = 2$). Two different prostheses were implanted: the linear A–O mandibular reconstruction plate ($n = 13$), and the Dumbach titanium cage ($n = 6$). In the group of patients in which the linear A–O mandibular reconstruction plate was used there were four cases of prosthesis dislodgement and major exposure and one case of prosthesis breakage while in patients who were given the Dumbach titanium cage there were four cases of major exposure. Prosthesis removal was required in five and two patients with linear A–O and Dumbach titanium cage prosthesis, respectively. Median survival was 14 months with 28 per cent five-year survival. In our experience, metallic prostheses with a shape and arrangement that allow a distribution of traction forces on a wider surface, with screws drilled in nonaligned points of the mandible, seem to be more reliable as they reduce the risk of dislodgement and breakage. Author.

A clinical and radiological study of maxillary antrum in lepromatous leprosy. Hahnar, C. Z., Kaur, S., Sharma, V. K., Mann, S. B. Department of Otorhinolaryngology, Postgraduate Institute of Medical Education and Research, Chandigarh. *Indian Journal of Leprosy* (1992) October–December, Vol 64 (4), pp 487–94.

Seventy consecutive patients having multibacillary leprosy were questioned about symptoms of nasal involvement and sinusitis. Complete otorhinolaryngeal examination was carried out in all these patients and they were subjected to radiographic examination of paranasal sinuses. Radiological abnormality of maxillary antrum was found in 40 (57 per cent) patients. Radiological changes were unilateral in 25 and bilateral in 15 patients. Localized or generalized mucosal thickening was the most common finding, followed by diffuse opacity. The development of radiological changes in maxillary antrum correlated with high bacterial density (BI 3+ and above), nasal deformity, and disease duration of more than two years. Author.

The perception of temporal modulations by cochlear implant patients. Busby, P. A., Tong, Y. C., Clark, G. M. Department of Otorhinolaryngology, University of Melbourne, Parkville, Victoria, Australia. *Journal of the Acoustical Society of America* (1993) July, Vol 94 (1), pp 124–31.

The perception of temporal modulations of pulsatile electric stimuli was measured in seven cochlear implant patients using the Cochlear Pty. Limited prosthesis. Four patients were postlingually deafened adults and three patients were young adults who were deafened very early in life. The first study measured detection thresholds for modulated pulse duration for a series of modulation frequencies and pulse rates. The shape of the detection thresholds as a function of modulation frequency, the temporal modulation transfer function, often resembled a low-pass filter with a 50–100 Hz cut-off frequency. Thresholds did not markedly vary across the different pulse rates for most patients. Thresholds were less than 10–20 per cent of the range of usable hearing for most patients. The second study compared detection thresholds for modulated pulse durations around different

reference pulse durations: 50, 100 and 300 microseconds. Detection thresholds were generally proportional to the different reference pulse durations. The third study measured difference limens for the discrimination of modulation depth. The difference limens were similar to the detection thresholds for the same reference pulse duration and pulse rate. The three patients deafened very early in life showed more within-group variation in performance, and their overall levels of performance were poorer than those of the postlingually deafened adults. Author.

Release of chemical mediators and inflammatory cell influx during early allergic reaction in the nose: effect of furosemide. Prat, J., Mullol, J., Ramis, I., Rosello-Catafau, J., Xaubet, A., Nerin, I., Gelpi, E., Picado, C. Servei de Pneumologia, Hospital Clinic, Facultat de Medicina, Universitat de Barcelona, Spain. *Journal of Allergy and Clinical Immunology* (1993) August, Vol 92(2), pp 248–54.

BACKGROUND: We evaluated the effect of furosemide on allergen-induced rhinitis in a double-blind, crossover, placebo-controlled experiment. **METHODS:** Fourteen patients with rhinitis who were allergic to house dust were nebulized with an intranasal dose of 20 mg of furosemide or placebo before allergen challenge with an extract of *Dermatophagoides pteronyssinus* (100 BU). Clinical evaluation and nasal lavages with normal saline solution were performed at baseline; after placebo-furosemide nebulization, and at 10, 30, and 60 mins after allergen challenge. Number of sneezes and a composite symptom score were recorded to evaluate clinical response. Prostaglandin E2 (PGE2), PGD2 peptide leukotrienes and 15-hydroxy, 5, 8, 11, 13-eicosatetraenoic acid (15-HETE) were measured by radioimmunoassay in nasal lavages. Cells were counted and classified as epithelial cells, neutrophils, eosinophils, and others. **RESULTS:** No differences in either clinical symptoms or cell influx after allergen challenge were found between furosemide and placebo groups. PGE2 levels did not change after provocation, and furosemide had no effect on its production. Ten minutes after antigen challenge there was a marked increase of PGD2 ($p < 0.01$), peptide leukotrienes ($p < 0.01$), and 15-HETE (not significant) on both study days. However, no significant differences in the release of eicosanoids were found between furosemide and placebo groups. **CONCLUSIONS:** Our observations in the nasal mucosa suggest that furosemide has no effect on the release of proinflammatory and bronchoconstrictor metabolites (PGD2, peptide leukotrienes, and 15-HETE). In contrast to bronchial asthma, allergen-induced rhinitis was not effectively prevented by furosemide. Author.

Estimation of nasal epithelial lining fluid using urea as a marker. Kaulbach, H. C., White, M. V., Igarashi, Y., Hahn, B. K., Kaliner, M. A. Allergic Diseases Section, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda 20892. *Journal of Allergy and Clinical Immunology* (1993) September, Vol 92 (3), pp 457–65.

BACKGROUND: The luminal surface of respiratory mucous membranes is lined with an epithelial lining fluid (ELF) layer. Previous attempts to determine ELF volumes in airways have used dyes or freely diffusible molecules such as urea, yet have not led to a universally accepted method. The nasal mucous membrane provides an accessible area to examine whether urea is an appropriate marker of respiratory ELF volume. **METHODS AND RESULTS:** Collection of undiluted nasal secretions after either glandular stimulation or induction of vascular permeability confirmed that plasma urea and nasal urea concentrations are equivalent. Baseline ELF volume was calculated as 800 microliters/nostril. The calculated molar concentrations of urea in ELF did not vary with either methacholine or histamine challenge. **CONCLUSIONS:** These data indicate the plasma, interstitial, glandular, and ELF urea concentrations are equivalent and, therefore, that urea is a useful marker of ELF volume in the nasal mucosa. Author.

Comparison of the secretory response of the nasal mucosa to methacholine and histamine. Baroody, F. M., Wagenmann, M., Naclerio, R. M. Department of Medicine (Division of Clinical Immunology), Johns Hopkins University School of Medicine, Baltimore, Maryland 21224. *Journal of Applied Physiology* (1993) June, Vol 74 (6), pp 2661–71.

To better understand the secretory response of the nasal mucosa, we must be able to accurately measure its physiological response. To this end, we developed a localized challenge technique using paper disks to stimulate the mucosa on one side and measure secretions from both sides to study both direct and reflex responses. Both meth-

acholine and histamine induced a dose-dependent increase in secretion weights on the challenge side, whereas only histamine induced a contralateral reflex. Repeated stimulation with histamine, but not methacholine, resulted in tachyphylaxis. Pretreatment with atropine resulted in inhibition of the contralateral secretory response to histamine and the ipsilateral response to methacholine with only partial inhibition of the ipsilateral histamine response. Terfenadine pretreatment resulted in the complete inhibition of both the ipsilateral and contralateral responses to histamine with no effect on methacholine-induced secretions. Ipsilaterally applied lidocaine had no effect on the histamine response but, when applied contralaterally, partially inhibited that response. Topical diphenhydramine applied ipsilaterally led to significant inhibition of the ipsilateral and contralateral secretory responses to histamine but had no effect when applied contralaterally. We conclude that methacholine and histamine have different effects on the nasal mucosa. We speculate that methacholine stimulates glands directly, whereas histamine includes both direct and neurogenic stimulation. Author.

Lateral rhinotomy approach for Mohs micrographic surgery of the anterior septum. Zilinsky, I., Borenstein, A., Tsur, H. Mohs Micrographic Surgical Unit, Department of Plastic Surgery, Chaim Sheba Medical Center, Tel Hashomer, Israel. *Journal of Dermatologic Surgery and Oncology* (1993) September, Vol 19 (9), pp 866–8.

BACKGROUND: Neoplasms of the nasal septum and internal alar surface are very difficult to treat. This is because of the complicated surface, proximity, to important anatomic structures, and technical difficulty—both to resection and follow up. Mohs micrographic surgery might be the ideal mode of treatment for such tumors; however, it is very difficult to accomplish through the nostril. **OBJECTIVE:** To resect the tumor on the nasal septum and internal alar surface using Mohs micrographic surgery. **METHODS:** Lateral rhinotomy was performed as a preparatory stage to Mohs micrographic surgery of the anterior septum and intranasal alar surface. **RESULTS:** The ala nasi was detached from the cheek, thus exposing the anterior nasal cavity—enabling direct access to the neoplasms and allowing excellent visualization. **CONCLUSION:** Lateral rhinotomy, as described in this article, is a simple office procedure and in most cases heals with no visible scar. Author.

Middle ear abnormalities during natural rhinovirus colds in adults. Elkhatieb, A., Hipskind, G., Woerner, D., Hayden, F. G. Department of Otolaryngology, Al-Azhar University, Cairo, Egypt. *Journal of Infectious Diseases* (1993) September, Vol 168 (3), pp 618–21.

To determine middle ear pressure (MEP) changes during natural rhinovirus colds, adults with illness for \leq three days were tested by digital tympanometer daily for five days (study 1) or every other day for seven days (study 2). Abnormal MEPs (< -50 or $> +20$ mm H₂O) were found in 72 per cent of 36 patients in study 1 ($p < 0.001$, vs baseline of 11 per cent) and 76 per cent of 55 patients in study 2 ($p < 0.001$, vs 15 per cent of 103 healthy controls). Major abnormalities ($> +100$ or < -100 mm H₂O) were found in 61 per cent of patients in study 1 ($p < 0.001$, vs baseline of 0) and 47 per cent in study 2 ($p < 0.001$, vs control of five per cent). MEP abnormalities usually resolved by day 14. Only one subject developed clinically apparent otitis media. Earache or respiratory symptom scores did not correlate with MEP abnormalities. These results indicate that natural rhinovirus colds in adults are frequently associated with marked but transient MEP abnormalities. Author.

Computerized measurement of ciliary beat frequency. Green, A., Austin, P. R., Logan, A., Smallman, L. A., Drake-Lee, A. B. Department of Medical Physics and Biomedical Engineering, Queen Elizabeth Hospital, Birmingham, UK. *Journal of Medical Engineering and Technology* (1993) March–April, Vol 17 (2), pp 65–70.

We describe how ciliary beat frequency (CBF) of human respiratory epithelium *in vitro* can be robustly and quickly measured. The proven-photometric technique has been improved by using a microcomputer to calculate and display the results. The software, which runs on an IBM-compatible PC, was developed using Borland Turbo Pascal and employs a fast Fourier transform routine to derive the CBF. Results are displayed almost as soon as a cell is identified under the microscope, and are in accordance with previous work. The technique can now be used diagnostically and for a variety of drug trials on respiratory epithelium. Author.

Improved detection of rhinoviruses in nasal and throat swabs by seminested RT-PCR. Ireland, D. C., Kent, J., Nicholson, K. G. Department of Microbiology, University of Leicester School of Medicine, UK. *Journal of Medical Virology* (1993) June, Vol 40 (2), pp 96–101.

A seminested RT-PCR (nRT-PCR) was used to detect picornavirus (PV) RNA in cell cultures inoculated with rhinoviruses (HRVs) and enteroviruses (EVs). PCR tests in which a primary 'touchdown' PCR was followed by secondary reactions using PV or HRV specific primers were able to differentiate HRVs of 48 serotypes from EVs. PVnRT-PCR and HRVnRT-PCR were then used to test nasal and throat swabs from adult subjects with naturally acquired respiratory virus infections. The swabs were also analyzed for respiratory viruses by cell culture techniques and the rates of PV identification by the two methods were compared. PVnRT-PCR was found to be at least five times more sensitive than cell culture for the detection of PVs in these clinical specimens. Paired acute and convalescent serum samples were tested for complement fixing antibodies to adenovirus, influenza A and B, respiratory syncytial virus, parainfluenza viruses 1, 2, and 3, *Mycoplasma pneumoniae*, and *Chlamydia psittaci*. An enzyme-linked immunosorbent assay (ELISA) was used to detect rises in antibody level to coronavirus types 229E and OC43. The overall rate of pathogen identification in 159 swabs from adult asthmatics increased from 28 per cent when only cell culture and serology were used to 57 per cent when these methods were supplemented by PVnRT-PCR. Author.

Detection of low level of human papilloma virus type 16 DNA sequences in cancer cell lines derived from two well-differentiated nasopharyngeal cancers. Huang, E. S., Gutsch, D., Tzung, K. W., Lin, C. T. Institute of Biomedical Sciences, Academia Sinica, Taipei. *Journal of Medical Virology* (1993) July, Vol 40 (3), pp 244–50.

Human papilloma virus type 16 (HPV16) related sequences were detected in two EBV-negative nasopharyngeal carcinoma (NPC) cell lines derived from two well-differentiated NPC by polymerase chain reaction. E2 and E6 related sequences of HPV16 were demonstrated using two pairs of primers derived from these two regions. DNA sequence analysis of amplified products excluded the possibility of laboratory viral DNA contamination. Author.

Use of antibiotics in preventing recurrent acute otitis media and in treating otitis media with effusion. A meta-analytic attempt to resolve the brouhaha. Williams, R. L., Chalmers, T. C., Stange, K. C., Chalmers, F. T., Bowlin, S. J. MetroHealth Clement Center, Cleveland, OH. *Journal of the American Medical Association* (1993) September 15, Vol 270 (11), pp 1344–51.

OBJECTIVE—To determine the efficacy of antibiotics for prophylaxis of recurrent otitis media and treatment of otitis media with effusion (OME) in children. **DATA SOURCES**—MEDLINE from 1966 through April 1993, textbooks, Current Contents, and bibliographies of selected articles. **STUDY SELECTION**—Thirty-three studies initially identified were reviewed by three blinded reviewers assessing study quality and suitability for inclusion. Twenty-seven met inclusion criteria for the meta-analyses. **DATA EXTRACTION**—We abstracted quantitative data and calculated rate differences (RDs) using tympanometry as the preferred outcome measure. **DATA SYNTHESIS**—Nine studies of antibiotic prophylaxis of recurrent otitis media with 958 subjects had an RD of 0.11 (95 per cent confidence interval (CI), 0.03 to 0.19) favoring antibiotic treatment. Twelve studies of short-term patient outcomes of OME with 1697 subjects had an RD favoring antibiotics of 0.16 (95 per cent CI, 0.03 to 0.29), while eight studies using the ear as the outcome measure with 2052 ears studied had an RD of 0.25 (95 per cent CI, 0.10 to 0.40). No significant difference was shown between placebo and antibiotics (RD, 0.06; 95 per cent CI, -0.03 to 0.14) in the eight studies of longer-term outcome of OME. Subgroup analyses by antibiotic grouping, duration of treatment and duration of disease did not show significant differences. **CONCLUSIONS**—Antibiotics appear to have beneficial but limited effect on recurrent otitis media and short-term resolution of OME. Longer-term benefit for OME has not been shown. The findings are limited by the failure of most studies to consider potential confounders and by inability to identify groups of patients most likely to benefit. Author.

Hereditary motor-sensory neuropathy (Charcot-Marie-Tooth disease) with nerve deafness: a new variant. Hamiel, O. P., Raas-Rothschild, A., Upadhyaya, M., Frydman, M., Sarova-Pinhas, I., Brand, N., Passwell, J. H. Department of Pediatrics and Genetics, Sheba Medical Center, Tel-Hashomer, Israel. *Journal of Pediatrics* (1993) September, Vol 123 (3), pp 431–4.

Hereditary motor-sensory neuropathy with sensorineural deafness is described in a family; the neurologic features and deafness were apparent in early childhood and infancy. The clinical syndrome in the family was not closely linked to the Duffy blood group, nor was duplication demonstrated at the disease-associated locus 17 p11.2. This family may represent a different form of this heterogeneous disease. Author.

A study of pharyngeal symptoms caused by bronchofiberscopy. Mori, K., Saito, Y., Suga, Y., Takahashi, T., Yokoi, K., Miyazawa, N., Tanaka, A. Department of Thoracic Diseases, Tochigi Cancer Center, Utsunomiya. *Japanese Journal of Clinical Oncology* (1993) June, Vol 23 (3), pp 162–5.

We investigated the occurrence of pharyngeal symptoms in 100 patients who had undergone bronchofiberscopies by conducting a post-examination survey of the patients. Eighty-four patients complained of having a problem. Seventy-five patients, including 26 with dysphagia, complained of pharyngeal symptoms. The proportion with pharyngeal symptoms whose symptoms appeared on the day of examination was a high 89.4 per cent. In 70.6 per cent of cases, the duration of symptoms was less than four days. The pharyngeal symptoms were particularly common among patients who had undergone a bronchofiberscopy on a previous occasion or whose examination lasted for 15 min or more. A greater dysphagia incidence was noted among patients who had required an endotracheal tube ($p = 0.03$) and among those whose examination had lasted for 15 min or more ($p = 0.01$). Based on the results, we are now studying methods of alleviating pharyngeal symptoms, including dysphagia. Author.

Neurofibromatosis 2 in the pediatric age group. Mautner, V. F., Tatagiba, M., Guthoff, R., Samii, M., Pulst, S. M. Krankenhaus Ochsenzoll, Hamburg, Germany. *Neurosurgery* (1993) July, Vol 33 (1), pp 92–6.

Bilateral acoustic neurofibromatosis or neurofibromatosis 2 (NF2) is an autosomal dominant disease predisposing to the formation of multiple tumors in the central and peripheral nervous system. Vestibular schwannomas (VSS) are considered to be the hallmark of the disease, but other tumors and ocular findings occur as well. In patients that do not carry the NF2 mutation, VSS usually occur in the fifth or sixth decade of life. VSS in patients with NF2 are often bilateral and become symptomatic in the third or fourth decade of life. In order to define the early manifestations of NF2, we examined nine children who either had one parent with NF2 or had multiple skin or spinal tumors suggestive of NF2. In addition to neurological, dermatological, and ocular examinations, all patients were studied by gadolinium-enhanced magnetic resonance imaging of the brain and spine. None of the children exhibited symptoms or signs due to VSS. However, VSS were detected during the neuroradiological work-up in six children. Seven children developed symptoms or signs due to skin or spinal tumors. Slit lamp examination detected cataracts in four patients as young as 10 years of age. The diagnosis of NF2 in the pediatric age group requires a high degree of suspicion and should be considered in children with multiple central nervous system or skin tumors without cafe-au-lait spots or Lisch nodules. Because VSS are unlikely to produce the signs seen at the time of admission, careful examination of the skin and eyes is necessary and should be followed by gadolinium-enhanced magnetic resonance imaging of the brain and spine. First-degree relatives need to be examined as well. Author.

Intraoral presentation of anaplastic large-cell Ki-1 lymphoma in association with HIV infection. Hicks, M. J., Flaitz, C. M., Nichols, C. M., Luna, M. A., Gresik, M. V. M. D. Anderson Cancer Center, Dental Branch—University of Texas, Houston. *Oral Surgery, Oral Medicine, Oral Pathology* (1993) July, Vol 76(1), pp 73–81. Persons infected with human immunodeficiency virus have an increased risk for development of high-grade, non-Hodgkin's lymphomas. Anaplastic large-cell Ki-1 lymphoma is a recently described lymphoid neoplasm characterized by cellular pleomorphism, a sinusoidal growth pattern, and Ki-1 epitope reactivity. This type of lymphoma is often mistaken for metastatic carcinoma, melanoma, or malignant histiocytosis. Although persons with acquired immunodeficiency syndrome frequently have non-Hodgkin's lymphoma at extranodal sites, the oral cavity and mandible, in particular, are unusual locations. We report two cases of anaplastic large-cell Ki-1 lymphoma that occurred in persons with the human immunodeficiency virus and with initial presentation as soft tissue

masses of the posterior mandible. Immunocytochemical studies were positive for Ki-1 (CD30) in both cases. In situ hybridization for Epstein-Barr virus-deoxyribonucleic acid was positive with tumor cells in both cases. Flow cytometry on paraffin, formalin-fixed tissue revealed tetraploidy and high proliferative fractions that are characteristic of high-grade lymphomas. Intraoral presentation of rapidly enlarging, soft tissue masses may represent a high-grade non-Hodgkin's lymphoma in persons with the human immunodeficiency virus. Although rare, anaplastic large-cell Ki-1 lymphoma should be considered and requires immunocytochemical study to eliminate the possibility of other malignant conditions associated with the acquired immunodeficiency syndrome. Author.

Risk factors for oropharyngeal candidiasis in patients who receive radiation therapy for malignant conditions of the head and neck. Epstein, J. B., Freilich, M. M., Le, N. D. British Columbia Cancer Agency, Canada. *Oral Surgery, Oral Medicine, Oral Pathology* (1993) August, Vol 76 (2), pp 169-74.

Twenty-seven consecutive patients receiving radiation to the head and neck were followed to assess risk factors for the development of candidiasis. One-third of the patients developed oral candidiasis during radiation therapy. Xerostomia was shown to correlate with risk of oropharyngeal infection ($p = 0.033$). The presence and use of oral prostheses were shown to correlate with oral colonization of *Candida albicans* before radiation therapy ($p = 0.011$). Alcohol use and smoking represent risk factors for oral colonization by *Candida* during radiation therapy ($p = 0.023$ and $p = 0.045$ respectively). These factors must be assessed in future studies of oropharyngeal candidiasis in radiation therapy. Author.

Osteomyelitis of the mandible in Tehran, Iran. Analysis of 88 cases. Taher, A. A. Baqiet Ulla University Hospital, Tehran, Iran. *Oral Surgery, Oral Medicine, Oral Pathology* (1993) July, Vol 76 (1), pp 28-31.

This study involved 88 cases of different types of osteomyelitis of the mandible. Sixty-nine patients had osteomyelitis after trauma, eight patients after radiotherapy, six after dental infection, and six had other causes. Thirty-three patients had septicemic infection. Multiple types of aerobic and nonaerobic microorganisms were isolated from the infection sites. Types of treatment and their results are discussed. Author.

Dural invasion by craniofacial and calvarial neoplasms: MR imaging and histopathologic evaluation. Ahmadi, J., Hinton, D. R., Segall, H. D., Couldwell, W. T., Stanley, R. B. Department of Radiology, University of Southern California School of Medicine, Los Angeles 90033. *Radiology* (1993) September, Vol 188 (3), pp 747-9.

The authors prospectively correlated results of magnetic resonance (MR) imaging and histologic examination of the dura in 17 patients with craniofacial and calvarial neoplasms and possible intracranial extension. Contrast material-enhanced MR imaging revealed dural enhancement in 14 patients and no enhancement in three. In four cases, the dura deep to the tumor appeared as a continuous band of enhancement and there was a thin unbroken hypointense zone between the dura and the tumor. Histologic examination in these four patients revealed only dural inflammation without neoplastic

spread. In 10 patients, there was a break in the continuity of the enhancement of the underlying dura or a portion of the dura and overlying enhancing tumor could not be separated on MR images. The hypointense zone was focally absent in nine of these cases, and in all 10 there was invasion of the dura by adjacent tumor. Among the other three patients, in whom dural enhancement was not discernible, one had dural invasion by tumor while the other two did not. Author.

Cogan's syndrome manifesting as sudden bilateral deafness: diagnosis and management. Cote, D. N., Molony, T. B., Waxman, J., Parsa, D. Tulane University Department of Otolaryngology, New Orleans, La. *Southern Medical Journal* (1993) September, Vol 86 (9), pp 1056-60.

Cogan's syndrome is an uncommon entity of nonsyphilitic interstitial keratitis with vestibulo-auditory disturbances. Although it is unusual, Cogan's syndrome should be considered in the differential diagnosis of patients with sudden hearing loss, even when they lack ophthalmologic symptoms. Systemic manifestations are not uncommon and, along with serologic and hematologic abnormalities, may help in making the diagnosis, which requires a high index of suspicion. Treatment with steroids has largely been based on symptoms. We suggest using the C-reactive protein level as a monitor of subclinical disease activity; it is therefore beneficial in the adjustment of steroid therapy. We have described the case of a 41-year-old woman who sought treatment for an upper respiratory infection syndrome and severe vertigo. Evaluation included hematologic and serologic studies, lumbar puncture, and CT and MRI scans. Abnormal findings consisted of an elevated white blood cell count and an ESR of 112 mm/hr. Six days later, profound, bilateral sensorineural hearing loss developed suddenly. Intensive corticosteroid and vasodilator therapies were instituted, but there was no improvement in hearing levels. Ten days later eye pain and redness developed, and ophthalmologic evaluation revealed an interstitial keratitis consistent with Cogan's syndrome. Steroid eye drops and oral prednisone therapy promptly relieved the eye symptoms. Steroid tapering was associated with diffuse joint pain and swelling consistent with a systemic vasculitis. After rheumatologic consultation, steroid dosage was titrated to the CRP level and ESR, and vasculitic symptoms resolved. Hearing levels did not improve, and the patient had cochlear implantation. Thirteen cases of bilateral sudden deafness due to Cogan's syndrome have been reported previously. This is the first case in which there were no immediate eye symptoms. Author.

Combined transection of the trachea and esophagus following cervical blunt trauma. Ayabe, H., Tsuji, H., Akamine, S., Tagawa, Y., Kawahara, K., Tomita, M. First Department of Surgery, Nagasaki University School of Medicine, Japan. *Thoracic and Cardiovascular Surgery* (1993) June, Vol 41 (3), pp 193-5.

The successful management of a patient with combined transection of the cervical trachea and esophagus following blunt trauma is reported. This type of injury was rare in the past, but is gradually increasing at the present time because of the increased use of motorcycles. Immediate primary closure of the transected trachea and esophagus offers the best chance for a good result. Author.