

Abstract Selection

A double-blind study of hyposensitization with an alginate-conjugated extract of *Dermatophagoides pteronyssinus* (Conjuvac) in patients with perennial rhinitis. II. Immunological aspects. Pastorello, E. A., Ortolani, C., Incorvaia, C., Farioli, L., Italia, M., Pravettoni, V., Harris, R. J., Watson, H. K., Corrado, O. J., Davies, R. J., *et al.* 1st Department of Internal Medicine, University of Milan, Italy, UK. *Allergy* (1990) Oct, Vol. 45 (7), pp. 505–14.

In a 2-year double-blind placebo controlled study an immunological evaluation was carried out on 33 patients (15 males, 18 females, mean age 29.2 years) with mite-induced perennial rhinitis who were submitted to specific immunotherapy (IT) with an alginate-conjugated extract of *D. pteronyssinus*. The behaviour of IgE, IgG, IgG1 and IgG4 antibodies specific to *D. pteronyssinus* and its major allergen Der p1 was characterised by assessment of their changes in serum, and changes in IgG in nasal secretions during the treatment. The placebo-treated patients did not show any significant variation in the levels of specific antibodies, while in the actively treated patients we found: a statistically significant decrease (P less than 0.005) of specific IgE, a statistically significant increase of specific IgG (P less than 0.005), IgG1 (P less than 0.005) and IgG4 (P less than 0.005) in serum and a statistically significant increase (P less than 0.001) of specific IgG in nasal secretions. The IgG response showed an early relative predominance of the IgG1 subclass and a late absolute predominance of IgG4 subclass, that confirmed the model of IgG4 restriction in prolonged allergen stimulation. No correlation was found between immunological and clinical data. Author.

Asymptomatic congenital cytomegalovirus infection. Audiologic, neuroradiologic, and neurodevelopmental abnormalities during the first year. Williamson, W. D., Percy, A. K., Yow, M. D., Gerson, P., Catlin, F. I., Koppelman, M. L., Thurber, S. Department of Pediatrics, Baylor College of Medicine, Houston, Tex. *American Journal of Diseases of Children* (1990) Dec, Vol. 144 (12), pp. 1365–8.

Twenty-eight infants with asymptomatic congenital cytomegalovirus infection and 13 control infants were followed up prospectively. Congenital sensorineural hearing loss was documented by auditory brainstem responses in four infected infants (two had mild bilateral loss, one had mild unilateral loss, and one had extreme unilateral loss) but in no controls. Four infected infants had diffuse periventricular radiolucencies on computed tomographic scan; none had calcifications or ventriculomegaly. No differences between groups were noted on neurologic examination results or on the Bayley mental Developmental Index; however, one infected infant had a severely delayed Bayley Psychomotor Developmental Index score. In addition, the mean Mental Developmental Index score of the four infected infants with diffuse periventricular radiolucencies was significantly below that of the remaining infected infants (93 +/- 8 vs 109 +/- 13). These data suggest that asymptomatic congenital cytomegalovirus infection may be associated with a broad range of audiologic, subtle neuroradiologic, and neurodevelopmental differences in early infancy. Author.

Diagnostic aspects and syndromal associations of short trachea with bronchial intubation. Wells, T. R., Wells, A. L., Galvis, D. A., Senac, M. O. Jr., Landing, B. H., Vachon, L. A. Department of Pathology and Laboratory Medicine, Children's Hospital of Los Angeles, CA 90027. *American Journal of Diseases of Children* (1990) Dec, Vol. 144 (12), pp. 1369–71.

Conditions with disproportionately short trachea, with a reduced number of tracheal cartilage rings and a high level of tracheal bifurcation, have been reported. We have seen accidental bronchial intubation in nine patients with short trachea. This risk can be reduced by recognition of conditions associated with short trachea, by awareness that methods for calculating endotracheal tube length from body length can overpredict tube length for patients with short trachea, and when feasible, by use of preintubation chest roentgenograms showing air bronchograms to establish the thoracic level of tracheal bifurcation. Twelve patients with short trachea, four with bronchial intubation, and six conditions not previously associated with short trachea, are reported. Three of the patients also had laryngeal hypoplasia. Author.

Increased overbite and craniomandibular disorders—a clinical approach. Helling, E. Department of Orthodontics, Karolinska Institutet, Huddinge, Sweden. *American Journal of Orthodontics and Dento-Facial Orthopedics* (1990) Dec, Vol. 98 (6), pp. 516–22.

This study investigated the effect of a maxillary fixed lingual arch with anterior bite plane on adult patients with craniomandibular disorders (CMD) and increased overbite. The sample comprised 11 patients with an increased overbite (greater than 5 mm) and a normal or Class II molar relationship. The main CMD symptoms were daily tension headache in the region of anterior temporal muscles and/or pain or clicking in the temporomandibular joint. Previous treatment with stabilization splints, removal bite plates, or occlusal grinding had not given satisfactory results. When the maxillary lingual arch with anterior bite plane was fitted, molar separation was approximately 4 mm, and occlusal contact occurred only between the acrylic bite plane and the lower six anterior teeth. The permanent appliance could be removed only by the orthodontist. All patients reported relief of CMD symptoms 1 to 2 weeks after initiation of treatment. After a mean time of 3 months, a flatter curve of Spee, molar contact, and reduced overbite could be seen in all cases. The excessive overbite had decreased approximately 3.4 mm. Subsequent treatment involved orthodontic or prosthetic therapy to normalize and stabilize the sagittal and vertical dimensions. After an average posttreatment observation period of 2 years, all patients remained free of CMD pain. Author.

Swallowing patterns in human subjects with and without temporomandibular dysfunction. Williamson, E. H., Hall, J. T., Zwemer, J. D. Department of Orthodontics, School of Dentistry, Medical College of Georgia, Augusta. *American Journal of Orthodontics and Dento-Facial Orthopedics* (1990) Dec, Vol. 98 (6), pp. 507–11.

Recent clinical impressions have suggested that tongue-thrust swallowing may often occur in patients with internal derangement of the temporomandibular joint(s) and may represent an unconscious effort to avoid temporomandibular joint (TMJ) dysfunction by minimizing noxious stimuli from the joints. The purpose of this study, therefore, was to determine the swallowing patterns in human subjects with and without TMJ dysfunction. The swallowing patterns of 25 adult orthodontic patients already known to have TMJ dysfunction and 25 adult control subjects without such dysfunction were examined with the aid of kinesiographic and electromyographic recordings taken while the subjects were sipping water. Analysis of the data revealed that 19 patients with TMJ dysfunction used a tongue-thrust open-jaw swallowing pattern, while only nine control subjects used such a swallowing pattern. Furthermore, six of the patients with TMJ dysfunction had an anterior open bite, while none of the control subjects had an anterior open bite. The results suggest that patients with aberrant swallowing patterns should be examined for temporomandibular joint dysfunction. Author.

The laryngeal mask airway in paediatric anaesthesia. Johnston, D. F., Wrigley, S. R., Robb, P. J., Jones, H. E. Department of Otolaryngology, Guy's Hospital, London. *Anaesthesia* (1990) Nov, Vol. 45 (11), pp. 924–7.

Forty-eight children, aged between 2 and 10 years, admitted as day cases for otological surgery were allocated at random into two groups. The first group was anaesthetized using a standard facemask, and the second with a laryngeal mask airway. The laryngeal airway produced a satisfactory airway in all children, and was inserted on the first attempt in 67% of patients. Hypoxia was significantly less frequent in the laryngeal airway group (p less than 0.05), and there were significantly fewer interruptions to surgery than in the facemask group (p less than 0.001). Patient safety, operating and anaesthetic conditions were all considered superior in the laryngeal airway group. Author.

Postoperative sore throat: topical hydrocortisone. Stride, P. C. Department of Anaesthetics, Queen Elizabeth Hospital, Edgbaston, Birmingham. *Anaesthesia* (1990) Nov, Vol. 45 (11), pp. 967–71.

Forty patients undergoing tracheal intubation and controlled ventilation of the lungs for elective surgical procedures were studied. They

were allocated randomly into one of two groups. The tracheal tubes used for group A patients were lubricated before insertion with water-soluble 1% hydrocortisone cream. Those for group B patients were lubricated with KY jelly. The incidence of postoperative sore throat was found to be significantly greater in group A. Topical 1% hydrocortisone cream is therefore ineffective in the prevention of postoperative sore throat. Author.

Irradiated homologous costal cartilage for augmentation rhinoplasty. Lefkowitz, G. Division of Plastic Surgery, Lenox Hill Hospital, New York, NY. *Annals of Plastic Surgery* (1990) Oct, Vol. 25 (4), pp. 317–27.

Although the ideal reconstructive material for augmentation rhinoplasty continues to challenge plastic surgeons, there exists no report in the literature that confines the use of irradiated homologous costal cartilage, first reported by Dingman and Grabb in 1961, to dorsal nasal augmentation. The purpose of this paper is to present a retrospective analysis of the author's experience using irradiated homologous costal cartilage in augmentation rhinoplasty. Twenty-seven dorsal nasal augmentations were performed in 24 patients between 16 and 49 years of age with a follow-up ranging from 1 to 27 months. Good-to-excellent results were achieved in 83.3% (20 of 24). Poor results requiring revision were found in 16.7% (4 of 24). Complication rates included 7.4% infection (2 of 27) and 14.8% warping (4 of 27). The resorption rate was zero. These results compare favorably with other forms of nasal augmentation. Advantages and disadvantages of irradiated homologous costal cartilage are discussed. Author.

Anterior ethmoid anatomy facilitates dacryocystorhinostomy. Blaylock, W. K., Moore, C. A., Linberg, J. V. Department of Ophthalmology, West Virginia University School of Medicine, Morgantown. *Archives of Ophthalmology* (1990) Dec, Vol. 108 (12), pp. 1774–7.

The ethmoid air cell labyrinth lies adjacent to the medial orbital wall, extending even beyond the sutures of the ethmoid bone. Its anatomic relationship to the lacrimal sac fossa is important in lacrimal surgery. We evaluated computed tomographic scans of 190 orbits with normal ethmoid anatomy to define the anatomic relationship of anterior ethmoid air cells to the lacrimal sac fossa. In 93% of the orbits, the cells extended anterior to the posterior lacrimal crest, with 40% entering the frontal process of the maxilla. This anatomic relationship may be used to facilitate the osteotomy during dacryocystorhinostomy. During a 10-year period (310 cases), one of us routinely entered the anterior ethmoid air cells to initiate the osteotomy during dacryocystorhinostomy. This technique has helped to avoid lacerations of the nasal mucosa. Author.

Use of phenytoin in the prevention of motion sickness. Chelen, W., Kabrisky, M., Hatsell, C., Morales, R., Fix, E., Scott, M. Air Force Institute of Technology, Wright-Patterson AFB, Dayton, OH 45433. *Aviation, Space and Environmental Medicine* (1990) Nov, Vol. 61 (11), pp. 1022–5.

In a placebo-controlled double-blind crossover pilot study of acute Coriolis-induced motion sickness treatment/prevention in humans employing an anticonvulsant dose of phenytoin, a mean increase in tolerance to motion stress from 4.87 min (SD = 5.55) to 46.87 min (SD = 32.6) was obtained. This represents a greater than fourfold improvement in efficacy over any currently available single agent and is more than twice as effective as the scopolamine/dexadrine combination. There were none of the usual side effects of blurred vision, dizziness, dry mouth, or sedation. Author.

Audiologic management of bilateral external auditory canal atresia with the bone conducting implantable hearing advice. Dunham, M. E., Friedman, H. I. Department of Surgery (Otolaryngology), University of South Carolina School of Medicine, Charleston. *Cleft Palate Journal* (1990) Oct, Vol. 27(4), pp. 369–73.

The hearing impairment associated with congenital external auditory canal atresia has been managed with early bone conduction hearing aid placement and surgical reconstruction in selected patients. However, many patients do not wear a bone conduction hearing aid because of physical or social considerations and surgical reconstruction of the external auditory canal and middle ear may be difficult or contraindicated. This report details the use of implantable bone conducting hearing devices in five children with bilateral external auditory canal atresia. Each patient had bilateral conductive hearing impairment with normal bone conduction thresholds. Four of the five patients had associated craniofacial anomalies including three cases of microtia. The

average preoperative sound field speech reception threshold improved from 63 dB to 13 dB with the implant. Patients experienced a definite preference for the implanted hearing device over the bone conduction hearing aid. Author.

Comparison of the in-vivo and in-vitro response to ragweed immunotherapy in children and adults with ragweed-induced rhinitis. Hedlin, G., Silber, G., Naclerio, R., Proud, D., Lamas, A. M., Eggleston, P., Adkinson, N. F. Jr. Karolinska Institute, Huddinge University Hospital, Sweden. *Clinical and Experimental Allergy*. (1990) Sep, Vol. 20 (5), pp. 491–500.

In order to compare results of allergen immunotherapy in paediatric and adult populations, 22 children with a history of ragweed hay fever were matched with an equal number of adults for skin sensitivity to ragweed and all were given a 1-year course of immunotherapy with a partially purified ragweed extract. Biological responses were measured by nasal challenges with ragweed before therapy was started, after 12 weekly injections and when the maintenance dose had been reached and also by methacholine bronchoprovocation tests before and after 12 months of therapy. Skin-test sensitivity to ragweed and control allergens, and ragweed-specific IgE and IgG antibody responses were measured at the same intervals as the challenges and at the end of the study. The effect of the therapy on clinical symptoms was not evaluated. Before therapy the groups of adults and children were comparable by all indices, except for TAME esterase activity in nasal washes during ragweed nasal challenge which was significantly lower in children. During treatment, mediators released during sequential nasal challenges declined to undetectable levels in most patients and changes in nasal ragweed sensitivity were comparable in both groups. Ragweed IgE increases after 12 weeks of therapy and IgG levels at maintenance therapy tended to be higher in the children, but neither difference was statistically significant. At the end of the study IgE and IgG antibody levels were comparable in both groups. Results of methacholine inhalation tests did not change significantly in either group. The decrease in skin sensitivity to ragweed was similar in both groups. We conclude that ragweed immunotherapy leads to immunological and biological consequences that are comparable in children and adults. Author.

Crossreactivity of IgE antibodies from sera of subjects allergic to both ryegrass pollen and wheat endosperm proteins: evidence for common allergenic determinants. Donovan, G. R., Baldo, B. A. Kolling Institute of Medical Research, Royal North Shore Hospital, St Leonards, NSW, Australia. *Clinical and Experimental Allergy* (1990) Sep, Vol. 20 (5), pp. 501–9.

Positive RAST (greater than 5% radioactive uptakes) to wheat endosperm proteins were found in approximately one-quarter of subjects who had both a positive skin prick and RAST (greater than 10% radioactive uptake) to ryegrass pollen proteins. Immunoblotting of proteins electrophoretically transferred to nitrocellulose membrane after SDS-PAGE of ryegrass pollen and wheat endosperm proteins confirmed the crossreactive properties of the sera identified by RAST testing. Immunoadsorption of serum IgE onto nitrocellulose membrane, to which ryegrass pollen or wheat endosperm proteins had been adsorbed, removed IgE from crossreactive sera reactive to both ryegrass pollen and wheat endosperm proteins. Elution of the adsorbed IgE from the nitrocellulose membrane after immunoadsorption and probing blotted strips of both ryegrass pollen and wheat endosperm proteins supported the results obtained from the immunoadsorption experiments. This data provides evidence that the crossreactivity of IgE antibodies in sera reacting with both ryegrass pollen and wheat endosperm proteins involves common or related determinants and has implications for the clinical management of these allergic subjects. Author.

Evaluation of Basidiomycete and Deuteromycete (Fungi Imperfecti) extracts for shared allergenic determinants. O'Neil, C. E., Horner, W. E., Reed, M. A., Lopez, M., Lehrer, S. B. Tulane Medical Center, Department of Medicine, New Orleans, LA 70112. *Clinical and Experimental Allergy* (1990) Sep, Vol. 20 (5), pp. 533–8.

Aqueous extracts of select members of the Basidiomycetes and Deuteromycetes (Fungi Imperfecti) were evaluated for the presence of shared allergenic determinants using skin prick and radioallergosorbent test (RAST) inhibition. Twenty adults were perennial symptoms of rhinitis, with or without asthma, were skin-prick tested with six species of Deuteromycetes and seven species of basidiomycetes. Positive weal-and-flare reactivity to *Pleurotus ostreatus* was associated with *Alternaria alternata*, *Fusarium solani* and *Epicoccum purpurascens*. Positive skin reactivity to *Calvatia cyathiformis* was also associated with *A. alternata* and *F. solani*. *Coprinus quadrifidus* was associated only with *F. solani*,

and *Psilocybe cubensis* was only associated with *Aspergillus fumigatus*. No other skin test associations were demonstrated. For every allergen tested by RAST inhibition, significant dose-dependent homologous inhibition was demonstrated. Although the ability of an individual heterologous extract to inhibit the direct RAST varied, inhibition was generally minimal. In the most extreme example, no heterologous allergen inhibited the *A. alternata* RAST. However, the *Armillaria tabescens* RAST was inhibited 52.6%, 38.1% and 25.1% by *A. fumigatus*, *E. purpureus*, and *Penicillium notatum*, respectively, suggesting significant cross-reactivity. These results suggest that, although shared allergenic determinants exist between select species of Basidiomycetes and Deuteromycetes, crossreactivity is minimal and its clinical significance is not clear. These data confirm that for reliable diagnosis of fungal allergy, representatives of both major groups must be used. Author.

Refinements in free flaps for head and neck reconstruction Banis, J. C. Jr., Swartz, W. M. Division of Plastic Surgery, University of Louisville School of Medicine, Kentucky. *Clinics in Plastic Surgery* (1990) Oct, Vol. 17 (4), pp. 673–82

The decade of adolescence of microsurgical techniques of head and neck reconstruction has led to a further clarification of the indications and methods for microsurgical reconstruction of head and neck defects. A review of the defects and the variety of flaps available for reconstruction leads to an increased understanding of the advantages and disadvantages of these various methods. When assessing a defect in the head and neck for microsurgical reconstruction, the surgeon should consider the various advantages of the flap to be used and weigh them against the disadvantages. The specialty has long since passed the point when one or two donor flaps could be considered to answer all of the reconstructive questions. We must now thoughtfully consider all the available options before settling on a course of treatment. Author.

Endotracheal tube cuff pressure assessment: pitfalls of finger estimation and need for objective measurement. Fernandez, R., Blanch, L., Mancebo, J., Bonsoms, N., Artigas, A. Servei de Medicina Intensiva, Hospital de Sabadell, Facultat de Medicina, Universitat Autònoma de Barcelona, Sabadell, Spain. *Critical Care Medicine* (1990) Dec, Vol. 18 (12), pp. 1423–6.

Estimation of endotracheal (ET) cuff pressure by finger palpation is one of the methods currently used in the clinical setting. We compared the accuracy of this method with instrumental intracuff pressure measurement in tracheal model tests by 20 members of our ICU team. Four different ET tubes at three different pressure levels were examined. Accuracy for the estimated method by finger palpation was 60% for high pressures, 58% for normal pressures, and 73% for low pressures. We observed differences in terms of sensitivity, specificity, and positive predictive power between different tubes reflecting differences in tube characteristics and interobserver variability. We conclude that precise intracuff pressure measurement is mandatory to prevent complications or over- or underinflation. Author.

On the pathophysiology of tinnitus; a review and a peripheral model. Eggermont, J. J. Department of Psychology, University of Calgary, Alberta, Canada. *Hearing Research* (1990) Sep, Vol. 48 (1–2) pp. 111–23

In this paper I investigate the consequences of the assumption that tinnitus is the result of correlated neural activity in auditory nerve fibers under 'no sound' conditions. Two possible pathological conditions capable of causing this correlation are ephaptic excitation of one nerve fiber by neighboring nerve fibres and synchronization of the various synapses in individual hair cells. The first condition is likely to be found in cases suffering from acoustic neuroma where the myelin sheath of the auditory neurons is damaged. The second condition is attributed to a spontaneous excess influx of K⁺ or Ca²⁺(+)-ions into the hair cell resulting in transient hair cell depolarizations causing synchronous transmitter release at all hair cell synapses. This condition is postulated in noise trauma and ototoxic drug damage of the inner hair cell membrane. The model produces the excess of short interspike intervals found in auditory nerve fiber recordings in animal models of tinnitus as well as the theoretically required correlation in the activity of neighboring neurons. Author.

Computed tomography in nasopharyngeal carcinoma: Part I: T-stage conversion with CT-staging. Olmi, P., Cellai, E., Chiavacci, A., Fallai, C., Giannardi, G., Fagnoli, R., Villari, N. Department of Radiotherapy, Università di Firenze, Italy. *International Journal of Radiation Oncology, Biology and Physics* (1990) Nov, Vol. 19 (5), pp. 1171–5.

Two hundred and seventeen consecutive patients were treated with radiotherapy alone, with curative intent, from 1970 to 1985 at the Radiotherapy Unit of the University and Hospital of Florence. The distribution according to T and N staging with polytomography was compared to patients (106 out of 217) who had CT scans done at presentation. T1 cases were less frequent (6.6% vs 27%) in the CT-staged series, whereas T3 showed a higher incidence (30.2% vs 12.6%). The advantages of CT over conventional tomography was quantitated in a subset of 97 patients who underwent both staging procedures. Site-by-site, CT displayed a higher percentage of involvement than polytomography: parapharyngeal spread 18% vs 2%, oropharynx 16% vs 8%, choanae and nasal cavities 28% vs 13%, ethmoid and maxillary sinus 29% vs 13%. Information provided by CT caused a T-stage conversion in 23 out of 97 cases (23%): 4 out of 11 T1, 16 out of 44 T2, 3 out of 16 T3. Author.

Prognostic factors of nasopharyngeal carcinoma: a multivariate analysis. Tang, S. G., Lin, F. J., Chen, M. S., Liaw, C. C., Leung, W. M., Hong, J. H. Department of Radiation Oncology, Chang Gung Memorial Hospital, Taipei, Taiwan. *International Journal of Radiation Oncology, Biology and Physics* (1990) Nov, Vol. 19 (5), pp. 1143–9. Between 1979 and 1985, 561 patients with nasopharyngeal carcinoma were reviewed to determine prognostic factors that may influence survival. Sex ($p = 0.294$) and histopathology ($p = 0.677$) had no correlation to the actuarial survival, whereas the site of cervical metastasis ($p = 0.001$) and the radiation doses to the nasopharynx and regional lymph nodes ($p = 0.03$) were both significant when one used univariate analyses. Cox's multivariate regression model revealed that the presence rather than the site of distant metastases was the single most important independent factor influencing the treatment outcome (p less than 0.0001). The addition of chemotherapy, on the other hand, did not show a survival benefit even when one took available confounding factors into account. There are, however, survival advantages associated with: (a) young age (less than or equal to 40 years), (b) asymptomatic status, (c) Stage I or II lesions, and (d) biopsy via nasopharynx instead of neck nodes. These favorable prognostic factors may be used for therapeutic guidance and end-result reporting. Author.

Computed tomography in nasopharyngeal carcinoma: Part II: Impact on survival. Cellai, E., Olmi, P., Chiavacci, A., Giannardi, G., Fagnoli, R., Villari, N., Fallai, C. Department of Radiotherapy, Università di Firenze, Italy. *International Journal of Radiation Oncology, Biology and Physics* (1990) Nov, Vol. 19 (5), pp. 1177–82.

Two hundred and seventeen consecutive patients affected by nasopharyngeal carcinoma (NPC) were treated with radiotherapy alone, with curative intent, from 1970 to 1985 at the Radiotherapy Unit of the University and Hospital of Florence. A group (A) of 111 patients staged with conventional clinical and radiological method was compared to a second group (B) of 106 patients who underwent CT staging before treatment. Group B showed better 5-year NED survival and local control; only the differences in local control were significant (p less than 0.01). As to primary control statistically significant differences were observed in T2 and T4 cases. We feel that CT could have contributed to the improvement, probably through a more reliable display of the primary extent and a more adequately planned radiotherapeutic treatment. With CT staging we could not increase our skills in prognostically separating stages according to UICC criteria (1978); in Group B only T2 patients presented significant differences in primary control when compared to T3 and T4 patients. However, a multivariate analysis of prognostic factors showed that nodal involvement, primarily, and histology, secondarily, were the most important factors; T stage showed a minor influence on prognosis. Author.

Evolution and progression in malignant lymphoma of Waldeyer's ring: histopathological and immunohistochemical studies of three cases of total tonsillectomy. Takagi, T., Mikata, A. Division of Hematology-Chemotherapy, Chiba Cancer Center Hospital. *Japanese Journal of Clinical Oncology* (1990) Sep, Vol. 20 (3), pp. 281–5.

Histopathological and immunohistochemical studies were performed in three patients with malignant lymphoma of Waldeyer's ring (ML-WR) who underwent total tonsillectomies. Residual reactive follicles mixed with neoplastic follicles were present beneath the surface epithelium of the crypts at the base of the tonsils. The neoplastic follicles were growing expansively and fusing with each other until finally, the process resulted in a diffuse proliferation pattern. Both of the tumor and follicular center cells (FCCs) in the reactive follicles were positive for LN-1; accordingly, the ML-WR tumor cells were considered to originate from FCCs. Anti-S-100 positive follicular dendritic cells (FDCs)

were much scarcer in the neoplastic follicles of the tonsils than in the neoplastic follicles of the lymph nodes. FDCs may have a role to play in regulating the proliferation pattern of tumor cells in ML-WR. Author.

Mucocele of the sphenoidal sinus. Report of six cases and review of the literature. Barat, J. L., Marchal, J. C., Bracard, S., Auque, J., Lepoivre, J. Service de Neurochirurgie, Hopital Saint-Julien, Nancy. *Journal of Neuroradiology* (1990) Vol. 17 (2), pp. 135–51.

Six personal cases of mucocele of the sphenoidal sinus are reported, and 124 cases from the literature are reviewed. Sphenoidal sinus mucocele is a benign and rare lesion which has long been unrecognized. Clinical features include fronto-orbital pain, oculomotor palsies, loss of visual acuity, exophthalmos and anosmia. Our series is of particular interest since four of our six patients presented with endocrine disorders. Recent advances in neuroradiological methods should rapidly lead to the correct diagnosis. Treatment consists of aspiration and drainage of the mucocele via a trans-sphenoidal approach. The results are good, and ophthalmoplegia usually subsides. In our experience, endocrine disorders do not always respond to treatment. The prognosis of sphenoidal sinus mucocele depends on the preoperative duration of the loss of visual acuity. Author.

Lack of influence of beta-lactamase-producing flora on recovery of group A streptococci after treatment of acute pharyngitis. Tanz, R. R., Shulman, S. T., Sroka, P. A., Marubio, S., Brook, I., Yogeve, R. Division of General Academic and Emergency Pediatrics, Children's Memorial Hospital, Chicago, IL 60614. *Journal of Pediatrics* (1990) Dec, Vol. 117 (6), pp. 859–63.

Because production of beta-lactamase by normal pharyngeal flora could account for penicillin treatment failure, we studied the effect of anaerobic and aerobic beta-lactamase-producing bacteria on bacteriologic outcome in acute group A beta-hemolytic streptococcal (GABHS) pharyngitis. We compared 10-day courses of orally administered phenoxymethyl penicillin and amoxicillin-clavulanic acid, using a randomized, single-blind treatment protocol. Eligible patients were 2 to 16 years of age and had culture-proven acute GABHS pharyngitis: 89 patients (43 penicillin, 46 amoxicillin-clavulanic acid) were compliant with therapy. Beta-Lactamase-producing organisms were isolated before therapy from the throats of 67% of patients treated with penicillin and 63% treated with amoxicillin-clavulanic acid. Throat cultures after completion of therapy were positive for GABHS in 7 (7.9%) of 89 patients. The initial GABHS T type persisted (treatment failure) in only 4 (4.5%) of 89 patients, including 3 (6.5%) of 46 who received amoxicillin-clavulanic acid and in 1 (2.3%) of 43 who received penicillin (not statistically significant). Bacteriologic treatment failure was unrelated to recovery of beta-lactamase-producing bacteria at the time of enrolment or after treatment. We conclude that beta-lactamase production by normal pharyngeal flora does not fully explain the failure of penicillin therapy for acute streptococcal pharyngitis. Using an antibiotic effective against beta-lactamase-producing bacteria will not eliminate the problem of bacteriologic treatment failure. Author.

Clinical role of respiratory virus infection in acute otitis media. Arola, M., Ruuskanen, O., Ziegler, T., Mertsola, J., Nanto-Salonen, K., Putto-Laurila, A., Viljanen, M. K., Halonen, P. Department of Pediatrics, Turku University, Finland. *Pediatrics* (1990) Dec, Vol. 86 (6), pp. 848–55.

The clinical characteristics of acute otitis media in relation to coexisting respiratory virus infection were studied in a 1-year prospective study of 363 children with acute otitis media. Respiratory viruses were detected using virus isolation and virus antigen detection in nasopharyngeal specimens of 42% of the patients at the time of diagnosis. Rhinovirus (24%) and respiratory syncytial virus (13%) were the two most common viruses detected. Adenovirus, parainfluenza viruses, and coronavirus OC43 were found less frequently. The mean duration of preceding symptoms was 5.9 days before the diagnosis of acute otitis media. Ninety-four percent of the children had symptoms of upper respiratory tract infection. Fever was reported in 55% and earache in 47% of cases. Patients with respiratory syncytial virus infection had fever,

cough, and vomiting significantly more often than patients with rhinovirus infection or virus-negative patients. No significant differences were found in the appearance of the tympanic membrane and outcome of illness between virus-negative and virus-positive patients with acute otitis. Most patients respond well to antimicrobial therapy despite the coexisting viral infection. If the symptoms of infection persist, they can be due to the underlying viral infection, and viral diagnostics preferably with rapid methods may be clinically useful in these patients. Author.

Sphenchoanal polyps: evaluation with CT and MR imaging. Weissman, J. L., Tabor, E. K., Curtin, H. D. Department of Radiology, University of Pittsburgh School of Medicine, Eye and Ear Hospital, PA 15213. *Radiology* (1991) Jan, Vol. 178 (1), pp. 145–8.

A sphenchoanal polyp is a solitary mass of low attenuation on computed tomographic (CT) scans that arises from the sphenoid sinus and extends through the sphenoid ostium, across the sphenoid recess, and into the choana (the boundary between the nasal cavity and nasopharynx). More often, however, a choanal polyp is an antrochoanal polyp, which arises from the maxillary antrum, protrudes through the middle meatus, extends into the nasal cavity, and continues back to the choana. Contiguous axial or coronal magnetic resonance and CT images help clearly differentiate the rare sphenchoanal polyp from the more common antrochoanal polyp. The sinus of origin is important to identify, as the surgical approach depends on the target sinus. Author.

Airway evaluation in children with use of ultrafast CT: pitfalls and recommendations. Brody, A. S., Kuhn, J. P., Seidel, F. G., Brodsky, L. S. Department of Radiology, Children's Hospital of Buffalo, NY 14222. *Radiology* (1991) Jan, Vol. 178 (1), pp. 181–4.

Ultrafast computed tomographic (CT) evaluation of the airway can be performed with either 50-msec low-resolution images (cine CT) or 100-msec high-resolution images (high-resolution CT). To determine the best imaging strategy for ultrafast CT of the pediatric airway, the authors prospectively compared ultrafast CT and endoscopy in 20 children. Both studies were performed in 11 patients; cine CT alone was performed in six and high-resolution CT alone in three. Six patients had normal anatomy. Six patients had focal tracheal stenoses, four had tracheomalacia or laryngomalacia, one had a laryngoesophageal cleft, one had irregularity and narrowing in the subglottic area, one had laryngeal papillomas, and one had focal stenosis with stoma granuloma. Cine CT results agreed with those of endoscopy in 10 of 17 cases. In five cases focal stenosis was misinterpreted with cine CT as tracheomalacia. High-resolution CT results agreed with those of endoscopy in 10 of 14 cases. The results of a technique that combined high-resolution CT for the entire airway and cine CT at selected areas agreed with those of endoscopy in 10 of 11 cases; only a tracheoesophageal cleft was missed with the combined technique. For the greatest diagnostic accuracy with ultrafast CT in evaluation of the pediatric airway, both cine and high-resolution modes should be used. Author.

Pharynx: value of oblique projections for radiographic examination. Taylor, A. J., Dodds, W. J., Stewart, E. T. Department of Radiology, Medical College of Wisconsin, Milwaukee. *Radiology* (1991) Jan, Vol. 178 (1), pp. 59–61.

The utility of oblique views for augmenting standard posteroanterior and lateral double-contrast radiography of the pharynx was examined. Over an 8-month period, two oblique views were added to the standard posteroanterior and lateral views of the pharynx during routine upper gastrointestinal studies in 102 patients divided into two groups. Group 1 consisted of 81 patients without suspected pharyngeal or esophageal disease who demonstrated what was considered to be normal anatomy on all radiographic views. Group 2 consisted of 21 patients who were known or suspected to have pathologic abnormality of the pharynx. The members of this latter group each demonstrated various abnormal pharyngeal anatomy on the standard views. In just over half of these cases the oblique projection contributed significant information not obtained with conventional views. Therefore, the authors conclude that oblique images are a beneficial addition to the diagnostic evaluation of patients highly suspected of having pharyngeal disease. Author.