

## Abstract Selection

**Destructive cysts of the maxillary sinus affecting the orbit.** Kaltreider, S. A., Dortzbach, R. K. Department of Ophthalmology, University of Wisconsin Clinical Sciences Center, Madison. *Archives of Ophthalmology* 1988 Oct, Vol. 106 (10), pp. 1398–402.

Symptomatic maxillary sinus cysts are diagnosed less frequently than similar cysts of the frontal and ethmoidal sinuses and are rarely reported in the ophthalmic literature. Patients with cysts of the maxillary sinus may present to the ophthalmologist with proptosis, enophthalmos, diplopia, ptosis, epiphora, and, rarely, decreased visual acuity. Four patients with maxillary sinus mucoceles are presented; one of these patients had a concurrent retention cyst in the orbit. Clinical history, radiologic findings, and histopathologic mechanisms are discussed. Mucocele is a recognized complication of the Caldwell-Luc procedure and midface trauma. Blockage of the sinus ostia was the cause previously proposed to explain antral mucocele development. Clinical and histopathologic features may support more than one single mechanism for the pathogenesis of maxillary sinus cysts. Maxillary sinus mucocele or retention cysts should be considered in the differential diagnosis of exophthalmos or enophthalmos following blowout fracture of the orbital floor. Author.

**A cheek splitting approach to the posterior oral cavity: a case report.** Wood, G. A. Department of Oral & Maxillofacial Surgery, Glan Clwyd Hospital, North Wales. *British Journal of Oral and Maxillofacial Surgery* 1988 Aug, Vol. 26 (4), pp. 326–9.

A cheek splitting incision giving good access to lesions of the posterior region of the mouth is described. The incision is particularly useful when the CO<sub>2</sub> laser is being used for the resection of malignant neoplasms. For cosmetic reasons the incision is most suitable in elderly patients. Author.

**Reconstruction of the palate using bilateral temporalis muscle flaps: a case report.** Phillips, J. G., Peckitt, N. S. Maxillofacial Unit, Glan Clwyd Hospital, Bodelwyddan, Nr Rhyl. *British Journal of Oral and Maxillofacial Surgery* 1988 Aug, Vol. 26 (4), pp. 322–5.

The functional deformity following removal of the maxilla is considerable. Rehabilitation used to be very difficult with prostheses or traditional flaps. Temporalis muscle flaps have been described for reconstruction following hemi-maxillectomy, but not total maxillectomy. A case is now presented to illustrate the use of bilateral temporalis muscle flaps following almost total removal of the maxilla at a Le Fort I level. Author.

**Early changes in parathyroid function after high-dose irradiation of the neck.** Holten, I., Petersen, L. J. Department of Clinical Physiology, Finsen, Institute, Copenhagen, Denmark. *Cancer* 1988 Oct 15, Vol. 62 (8), pp. 1476–8.

Hyperparathyroidism (HPT) will develop years later in a number of patients irradiated to the neck for benign diseases. Twenty-nine patients with malignant diseases were studied for 3 years after irradiation with cancer therapeutic doses to the neck. The serum concentration of parathyroid hormone (iPTH) showed an increasing trend suggesting that HPT also might develop in these patients. Author.

**An alternative approach to management of Fogarty catheter disruption associated with endobronchial foreign body extraction.** Ross, M. N., Haase, G. M. Department of Pediatric Surgery, Children's Hospital, Denver. *Chest* 1988 Oct, Vol. 94 (4), pp. 882–4.

The Fogarty balloon catheter is a useful adjunct in removing aspirated foreign bodies, but its use is not without risks. A case is presented of Fogarty catheter disruption while attempting to remove a foreign body. The resulting debris in the distal airway was inaccessible to bronchoscopic retrieval. An effective treatment plan is outlined to deal with this problem. Author.

**Screening of velopharyngeal closure based on nasal airflow rate measurements.** Laine, T., Warrren, D. W., Dalston, R. M. Morr, K. E. Oral-Facial and Communicative Disorders Program, University of North Carolina, Chapel Hill 27514.

*Cleft Palate Journal* 1988 Jul, Vol. 25 (3), pp. 220–5.

Although sophisticated techniques for estimating velopharyngeal port area during speech are available, clinicians continue to seek approaches for screening patients with suspected velar inadequacy. The aim of the present study is to determine the sensitivity and specificity of predicting velopharyngeal dysfunction based on nasal airflow measurements. The pressure-flow technique was used to measure velopharyngeal orifice area and nasal airflow rate in 211 subjects with cleft palate or velar dysfunction, or both. The data demonstrate that nasal airflow rates above 125 cc/sec are almost always associated with velar dysfunction. Sensitivity and specificity of this index were high (0.85 and 0.96, respectively). A correct diagnosis was made in 93 per cent of the cases. As expected, errors in judgment occurred most frequently in subjects with borderline velopharyngeal inadequacy. Author.

**Relative contributions of the nasal septum and airways to total nasal capsule volume in normal and cleft lip and palate fetal specimens.**

Kimes, K. R., Siegel, M. I., Mooney, M. P., Todhunter, J. Department of Anthropology, University of Pittsburgh, PA 15260. *Cleft Palate Journal* 1988 Jul, Vol. 25 (3), pp. 282–7. ISSN: 0009-8701.

The present study examines the relative contributions of the nasal septum and airway volumes to the total volume of the fetal nasal capsule. For comparative purposes, 29 human fetal specimens (20 "normal" and 9 with cleft lip and palate (CLP)) were celloidin embedded, sectioned, and stained with hematoxylin and eosin. The specimens ranged from 8 to 21 weeks in postmenstrual age.

Photomicrographs of the serial sections allowed selected anatomic structures to be computer digitized, reconstructed as three-dimensional computer representations, and quantified. Various nasal capsule component measurements were compared with overall nasal capsule size values, producing relative size indices. Significant differences ( $p$  less than 0.05) were noted between the "normal" and CLP fetal samples in the relative sizes of the nasal capsule, airways, and septum. Relative mean CLP nasal capsule volume was 14 per cent smaller than normal, relative mean CLP airway volume was approximately 43 per cent smaller than that of the normal specimens, whereas relative mean CLP septum volume was approximately 45 per cent larger. Aspect ratios (i.e. height:width ratios) were utilized for shape analysis of the nasal septal cartilage and indicated that the CLP septal shape was one of increased width relative to height compared with normal specimens. Results were consonant with clinical impressions of nasal capsule deficiency in the CLP nasal capsule and revealed some new structural associations in the fetal nasal capsule. Author.

**Heterogeneity of dominant high-frequency sensorineural deafness.** Higashi, K. Department of Otolaryngology, School of Medicine, Akita University, Japan. *Clinical Genetics* 1988 Jun, Vol. 33 (6), pp. 424–8.

There are several types of autosomal dominantly inherited sensorineural hearing loss (AD-SNHL), differentiated by audiograms. It is generally accepted that there are similarities in audiograms among members of the same family with dominant deafness. It has been supposed that AD-SNHL must be divided into several types according to their audiograms or clinical courses. Eighteen families with AD-SNHL are dealt with in this study. By measuring the slope of audiograms and superimposing audiograms, AD high-frequency sensorineural hearing loss can be divided into four types. The first type has the steepest audiograms, the second has somewhat less steep audiograms, the third has gently sloping audiograms, and the fourth has audiograms close to horizontal. In each type "The audiograms breed true", i.e. the audiograms even of members of different families having the same

type do not overlap within the limits of error in audiometry. These four types of dominant high-frequency sensorineural deafness appear to be discrete clinical entities. Author.

**Anatomic and position-induced increased radiopharmaceutical uptake in the cervical spine on bone imaging.** Black, R. R., Fernandez-Ulloa, M. University of Cincinnati Medical Center, E.L. Saenger Radioisotope Laboratory, Ohio 45267-0577. *Clinical Nuclear Medicine* 1988 Jul, Vol. 13 (7), pp. 483-5.

The finding of increased radiopharmaceutical (RP) in the cervical spine was noted in a patient when placed in the full forward flexion position. When imaged in the neutral position, this finding was not noted. A series of 10 consecutive patients demonstrated this finding. The positioning of the cervical spine erroneously manifested increased RP uptake, which may mimic disease and should be taken into account when positioning the cervical spine for routine imaging. Author.

**Interactions of age, gender, and sensorineural hearing loss on ABR latency.** Jerger, J., Johnson, K. Division of Audiology and Speech Pathology, Baylor College of Medicine, Houston, Texas. *Ear and Hearing* 1988 Aug, Vol. 9 (4), pp. 168-76.

The interactive effects of gender, age, and degree of sensorineural hearing loss on the absolute latency of wave V of the auditory brain stem response were analyzed in 325 subjects with cochlear loss. Norms based on these data were then applied to an analysis of the wave V latencies of 87 subjects with retrocochlear loss. Results in the cochlear group revealed interactions between gender and age and between gender and degree of hearing loss. The interactive effect between gender and degree of loss was observed for wave V, but not for waves III or I. Separate gender norms for absolute wave V latency, based on empirical boundaries encompassing 99 per cent of the cochlear group, resulted in a 90 per cent correct identification rate in the 87 subjects with retrocochlear lesion. Author.

**Pitch perception of complex tones and human temporal-lobe function.** Zatorre, R. J. Montreal Neurological Institute and Hospital, McGill University, Quebec, Canada. *Journal of the Acoustical Society of America* 1988 Aug, Vol. 84 (2), pp. 566-72.

Sixty-four patients with unilateral temporal-lobe excisions as well as 18 normal control subjects were tested in a missing fundamental pitch perception task. Subjects were required to indicate if the pitch of a pair of tones rose or fell. The excisions encroached upon Heschl's gyri in some cases, whereas, in others, this region was spared. All subjects included for study were able to perform well on a control task in which complex tones including a fundamental were presented. Stimuli for the experimental task, which was procedurally identical with the control task, consisted of several harmonic components spanning the same spectral range, but without a fundamental. Only subjects with right temporal lobectomy in whom Heschl's gyri were excised committed significantly more errors than the normal control group on this task. Patients with left temporal-lobe lesions or with anterior right temporal-lobe excisions were unimpaired. These results suggest that Heschl's gyri and surrounding cortex in the right cerebral hemisphere play a crucial role in extracting the pitch corresponding to the fundamental from a complex tone. Author.

**Efficacy of continuous treatment with astemizole and terfenadine in ragweed pollen-induced rhinoconjunctivitis.** Juniper, E. F., White, J. Dolovich, J. Department of Medicine, McMaster University, Hamilton, Ontario, Canada. *Journal of Allergy and Clinical Immunology* 1988 Oct, Vol. 82 (4), pp. 670-5.

Astemizole and terfenadine were compared for clinical efficacy in a double-blind randomized trial during the ragweed pollen season. Sixty adults, with a history of ragweed-induced rhinoconjunctivitis, were matched according to sensitivity to ragweed pollen. Half took astemizole, 10 mg./day, and the rest took terfenadine, 60 mg. twice daily. Medications were started 1 week before and continued daily until 1 week after the ragweed pollen season (7 weeks). If the trial medication was insufficient to keep symptoms well controlled, a steroid nasal spray and/or eye drops were used in the minimum dose that would ensure symptoms were not troublesome. Subjects completed a diary of nocturnal and daytime nasal and eye symptoms and recorded the amount of concomitant medications used. Astemizole showed greater efficacy than terfenadine in controlling rhinorrhoea; in addition, the astemizole group used less nasal spray. Other nasal symptoms, eye symptoms, and use of eye drops were

similar in the two groups. Skin test sensitivity to serial dilutions of histamine and ragweed extract was determined 1 and 7 weeks after the start of the trial medication. More tachyphylaxis to histamine was shown by the subjects taking terfenadine, as demonstrated by a larger increase in skin sensitivity over the study period. However, a similar change was not observed for ragweed skin sensitivity. These results suggest that when the medication is started before and continued daily throughout the pollen season, astemizole is more efficacious than terfenadine in controlling nasal symptoms, but there is little difference for eye symptoms. (Abstract truncated at 250 words) Author.

**Efficacy of azelastine in perennial allergic rhinitis: clinical and rhinomanometric evaluation.** Meltzer, E. O., Storms, W. W., Pierson, W. E., Cummins, L. H., Orgel, H. A., Perhach, J. L., Hemsworth, G. R. Allergy and Asthma Medical Group and Research Center, San Diego, Calif. 92123. *Journal of Allergy and Clinical Immunology* 1988 Sep, Vol. 82 (3 Pt 1), pp. 447-55.

Azelastine is a chemically novel medication that has been demonstrated to be clinically effective for asthma and seasonal allergic rhinitis. In a 10-week, multicenter, double-blind, placebo-controlled, crossover study, the efficacy and safety of azelastine, 1 mg. and 2 mg. twice daily, were evaluated in 192 patients with symptoms of perennial allergic rhinitis. Patients maintained daily symptom and adverse-experience diaries and were evaluated every 2 weeks by the investigators. Pseudoephedrine, 30 mg., was provided as backup medication. Amelioration of most individual symptoms and a decrease in the total symptom scores were observed with both dosages of azelastine; greater improvement with 2 mg. twice daily than with 1 mg. twice daily, was observed. Nasal congestion, as a symptom and as reflected by rhinomanometric assessment, was the least improved parameter. Backup decongestant medication decreased during treatment with azelastine and increased during the placebo regimen. There were no major adverse effects Author.

**Double-blind, placebo-controlled immunotherapy with mixed grass-pollen allergoids. II. Comparison between parameters assessing the efficacy of immunotherapy.** Bousquet, J., Maasch, H., Martinot, B., Hejjaoui, A., Wahl, R., Michel, F. B. Clinique des Maladies Respiratoires, Centre Hospitalier Universitaire, France. *Journal of Allergy and Clinical Immunology* 1988 Sep, Vol. 82 (3 Pt 1), pp. 439-46.

Specific immunotherapy is effective in alleviating symptoms in grass pollen-induced rhinitis, but there are no clear data demonstrating a correlation between symptom-medication scores and objective parameters. Twenty-five patients taking part in a double-blind, placebo-controlled immunotherapy with mixed grass pollen-formalinized allergoids were studied. All patients had the same investigations. Symptom-medication scores were significantly ( $p$  less than 0.005, Mann-Whitney U test) reduced in the treated group by comparison to the placebo-treated patients. Nasal challenges performed with threefold increasing numbers of orchard grass-pollen grains demonstrated that patients treated with allergoid tolerated a significantly ( $p$  less than 0.005, Wilcoxon W test) greater number of grains after treatment, whereas there was no mean difference in the placebo-treated patients. There was a significant ( $p$  less than 0.005, Spearman rank-correlation) correlation between nasal challenges and symptom scores during the season. The skin prick test end point was significantly ( $p$  less than 0.001, Wilcoxon W test) reduced after treatment in the allergoid-treated group and remained unchanged in the placebo-treated group. There was a significant ( $p$  less than 0.001) correlation between the skin prick test end point and symptom scores during the season. Serum grass-pollen IgG titrated by a solid-phase radioimmunoassay with *Staphylococcus A* protein was significantly less than 0.01, Wilcoxon W test) increased after treatment with allergoid, but there was no significant correlation between IgG titer and symptom scores during the season. Serum grass-pollen IgE increased ( $p$  less than 0.04, Wilcoxon W test) in the treated group but there was no correlation with symptom scores. Author.

**Tryptase levels in nasal-lavage fluid as an indicator of the immediate allergic response.** Castells, M., Schwartz, L. B. Department of Medicine, Medical College of Virginia, Virginia Commonwealth University, Richmond 23298-0263. *Journal of Allergy and Clinical Immunology* 1988 Sep, Vol. 82 (3 Pt 1), pp. 348-55.

To examine mast cell involvement in allergic rhinitis, levels of tryptase, a specific marker for mast cell activation, and histamine, a

marker of mast cell and basophil activation, were measured in nasal-lavage fluid after nasal-allergen challenge. Twelve atopic subjects with allergic rhinitis and five nonatopic subjects were challenged with timothy grass or ragweed pollen at increasing doses of allergen. Tryptase and histamine levels were determined by an ELISA and radioenzyme assay, respectively; clinical responses were measured by assessment of sneezing, rhinorrhea, nasal congestion, and ocular tearing or itching. A positive clinical response was observed in seven of the atopic subjects and in none of the nonatopic subjects. Tryptase levels increased at least sevenfold higher than baseline levels in 100 per cent of the atopic clinical responders and reached a maximum at the same dose of allergen where clinical symptoms were maximal. In contrast, histamine levels were only threefold or greater elevated in five of seven atopic clinical responders at this dose of allergen. (Histamine levels were lower in one subject and were only 50 per cent higher in another subject than the corresponding baseline value.) Histamine levels and symptom scores were maximal at the same dose of allergen in only four of seven clinical responders. Overlap of peak mediator levels in subjects without a clinical response with those of the clinical responders occurred only in the case of histamine. Tryptase levels in nasal-lavage fluid appear promising as a useful indicator of allergic reactions and indicate that mast cell activation is the major factor in the immediate nasal-allergic response. Author.

**Heterotopic brain tissue in the oral cavity.** Gonzalez-Garcia, M., Avila, C. G., Lopez-Arranz, J. S., Garcia, J. G. Department of Oral and Maxillofacial Medical and Surgical Pathology, University of Oviedo Medical Faculty, Spain. *Oral Surgery, Oral Medicine, Oral Pathology* 1988 Aug, Vol. 66 (2), pp. 218–22.

A most rare phenomenon of heterotopic brain in the soft palate, containing elements of choroid plexus, is presented. The principal theories regarding the pathogenesis of this malformation are presented and discussed. Its most frequent sites, the treatment to be followed, and the nomenclature to be employed in this type of lesion are also analyzed. Author.

**The swallowed foreign body: is it in the nasopharynx?** Parker, A. J., Bingham, B. J., Osborne, J. E. Department of Otolaryngology, Bristol Royal Infirmary, UK. *Postgraduate Medical Journal* 1988 Mar, Vol. 64 (749), pp. 201–3.

Children with a history of a suspected swallowed radio-opaque foreign body should undergo radiographic examination of the nasopharynx even in the absence of symptoms and signs. Failure to identify and remove an object at this site can result in potentially fatal consequences. Author.

**Fungal sinusitis: diagnosis with CT and MR imaging.** Zinreich, S. J., Kennedy, D. W., Malat, J., Curtin, H. D., Epstein, J. I., Huff, L. C., Kumar, A. J., Johns, M. E., Rosenbaum, A. E. Russell, E. Morgan Department of Radiology and Radiological Science, Johns Hopkins Medical Institutions, Baltimore, MD 21205. *Radiology* 1988 Nov, Vol. 169 (2), pp. 439–44.

Of 293 patients who underwent computed tomography (CT), surgery, and pathologic examination for chronic sinusitis, 25 had a

diagnosis of fungal sinusitis at pathologic examination. Of these, 22 had foci of increased attenuation at CT (in four patients the mean representative CT number (Hounsfield unit) was 122.2 HU (SD, 8.2 HU)), and three did not. Of the 22, 19 patients (76 per cent) met the CT criterion of this study (there was a 12 per cent false-positive and a 12 per cent false-negative diagnostic rate). Six of the 19 patients and one additional patient underwent magnetic resonance (MR) imaging, and all demonstrated remarkably hypointense signal characteristics on T2-weighted images. The findings at MR imaging therefore appear more characteristic of fungal sinusitis than the findings at CT. Furnace atomic absorption spectrometry showed increased concentrations of iron and manganese in mycetoma compared with their concentrations in bacterially infected mucus. This finding and the presence of calcium in the fungal concretion may explain the hypointense T2-weighted signal on MR images. Author.

**Use of MR imaging for quantitative evaluation of resection for temporal lobe epilepsy.** Jack, C. R. Jr., Sharbrough, F. W., Marsh, W. R. Department of Diagnostic Radiology, Mayo Clinic, Rochester, MN 55905. *Radiology* 1988 Nov, Vol. 169 (2), pp. 463–8.

The postoperative magnetic resonance imaging studies of 40 patients who underwent surgery for medically refractory temporal lobe epilepsy were reviewed. A method for quantifying the resection of four specific medial temporal lobe structures—amygdala, uncus, hippocampal formation, and parahippocampal gyrus—was used to correlate postoperative seizure control with the degree to which those structures had been resected. Satisfactory postoperative seizure control was found to be strongly dependent (P less than .01) on the performance of at least partial resection of all four medial temporal lobe structures. The total amount of tissue removed did not necessarily correlate with the clinical outcome in individual cases, however, as long as some portion of all four medial structures had been resected. Two complicating factors—the presence of posterior or bilateral independent electroencephalographic foci and a history of meningoencephalitis—each negatively influenced surgical outcome (P less than .01). In cases with a complicating factor and inadequate medial resection, the outcome was invariably poor. Author.

**Potential hearing loss resulting from MR imaging.** Brummett, R. E., Talbot, J. M., Charuhas, P. Department of Otolaryngology, Oregon Health Sciences University, Portland 97201. *Radiology* 1988 Nov, Vol. 169 (2), pp. 539–40.

To determine if the loud noise generated by magnetic resonance (MR) imaging equipment is capable of inducing hearing loss, the hearing of 24 patients was tested before and after MR imaging. Fourteen patients were imaged without ear protection, and six (43 per cent) suffered a temporary mild loss of hearing (less than or equal to 15 dB at at least one frequency). Ten patients were imaged with ear protection, and only one experienced any hearing loss. Therefore, the noise generated by MR imagers may cause temporary hearing loss, and earplugs can prevent this loss. All threshold changes had returned to within 10 dB of baseline by 15 minutes after completion of the second audiometric test. Author.