

## Abstract Selection

**Cell kinetics of head and neck squamous cell carcinomas. Prognostic implications.** Nylander, K., Anneroth, G., Gustafsson, H., Roos, G., Stenling, R., Zackrisson, B. Department of Oral Pathology, University of Umea, Sweden. *Acta Oncologica* (1994) Vol. 33 (1), pp. 23–8.

Forty-three squamous cell carcinomas of the head and neck region were *in vivo* labelled with the thymidine analogue iododeoxyuridine. Combined flow cytometric (FCM) and immunohistochemical (IHC) analysis was performed, and the following parameters calculated: labelling index (LI), S-phase time (TS) and potential tumour doubling time (Tpot). Complete FCM and IHC analyses could successfully be performed in 31 cases, showing a median LI of 13.6 per cent with FCM and 9.1 per cent with IHC. A correlation achieved between LI/FCM and LI/IHC was due to the aneuploid cases, whereas the diploid cases showed no such correlation. Data indicated that Tpot calculated with LI from IHC (Tpot/IHC) might be a prognostic factor, in contrast to Tpot determined using LI/FCM. Author.

**Surgery and postoperative radiotherapy and radiotherapy alone in T3-T4 cancers of the pyriform sinus. Treatment results and patterns of failure.** Slotman, B. J., Kralendonk, J. H., Snow, G. B., Tiwari, R. M., Karim, A. B. Department of Radiation Oncology, Free University Hospital, Amsterdam, The Netherlands. *Acta Oncologica* (1994), Vol. 33 (1), pp. 55–60.

Fifty-four patients with T3–T4 squamous cell carcinomas of the pyriform sinus were treated between 1976 and 1990. Surgery with postoperative radiotherapy ( $n = 32$ ) was the treatment of choice. Radical radiotherapy was used in patients with contraindications for surgery or with inoperable tumours and in patients who refused surgery. The local control rate was significantly higher in the combined treatment group (31/32; 97 per cent) than in the group treated with radical radiotherapy (14/22; 64 per cent) which consisted of more advanced cases. In patients who received radical radiotherapy, the highest local control rates were recorded with doses of 70 Gy and above and with the use of two fractions per day. There was no significant difference in regional control and survival rates between the treatment groups. New approaches are indicated to improve the prognosis of hypopharyngeal cancer. Author.

**A comparative study of the incidence of sore throat with the laryngeal mask airway.** Dingley, J., Whitehead, M. J., Wareham, K. Department of Anaesthesia, Singleton Hospital, Swansea. *Anaesthesia* (1994) March, Vol. 49 (3), pp. 251–4.

In a prospective study of 150 patients randomly assigned to three groups, we have compared the incidence and duration of sore throat after a standard anaesthetic regimen using three different methods of airway management: facemask; laryngeal mask, and laryngeal mask with insertion aid. The insertion aid is currently being developed by Portex Ltd and is intended both to facilitate accurate placement of the laryngeal mask and to reduce trauma during insertion. All the patients were women undergoing short operative procedures requiring minimal postoperative analgesia. The incidence of sore throat was significantly less with a facemask (8 per cent) than with the laryngeal mask when used without the insertion aid (28.5 per cent) ( $P < 0.02$ ). When using the insertion aid the incidence was 18 per cent and this was not statistically different from the facemask. The presence of blood on the laryngeal mask (22 per cent) was less likely when the insertion aid was used (four per cent) ( $P < 0.02$ ). Author.

**Azelastine nasal spray in the management of seasonal allergic rhinitis.** Meltzer, E. O., Weiler, J. M., Dockhorn, R. J., Widlitz, M. D., Freitag, J. J. Allergy and Asthma Medical Group and Research Centre, San Diego, CA. *Annals of Allergy* (1994) April, Vol. 72 (4), pp. 354–9.

Azelastine is a novel, investigational, antiallergic medication that

inhibits the generation, release, and/or end-organ activity of multiple mediators of the inflammatory process *in vitro* and *in vivo*. Azelastine is capable of inhibiting both early-phase and late-phase allergic responses in animals and humans. In this two-day trial in patients with seasonal allergic rhinitis, we evaluated the onset of action, duration of effect, and safety and efficacy of azelastine nasal solution (Astelin N.S.) in an outdoor, highly allergenic environment. Two hundred ninety-four patients who satisfied entry criteria were randomized to azelastine 2 sprays/nostril q24h or q12h, oral chlorpheniramine maleate 12 mg q12h, or placebo in this multicentre, double-blind, parallel-group study. Rhinitis symptoms were analyzed individually and combined as total and major symptom complexes. For both azelastine treatment groups, the overall mean percent improvements in the total and major symptom complex severity scores were statistically significant ( $P < \text{or} = 0.05$ ) versus placebo. Improvements in rhinitis symptoms were observed by the second hour after administration of azelastine and lasted up to 24 hours. The therapeutic effect of azelastine was apparent for all rhinitis symptoms, not just one or a few symptoms. Seventy-three per cent of the patients treated with azelastine reported overall improvement upon global assessment of their symptoms. Adverse effects with azelastine were generally mild or moderate. Azelastine nasal spray, administered either once or twice daily, was effective in treating the symptoms of seasonal allergic rhinitis and demonstrated a rapid onset of action with a duration of response lasting 12 to 24 hours. Author.

**Prospective evaluation of cell kinetics in head and neck squamous carcinoma: the relationship to tumour factors and survival.** Cooke, L. D., Cooke, T. G., Forster, G., Jones, A. S., Stell, P. M. Department of Surgery, Glasgow Royal Infirmary, UK. *British Journal of Cancer* (1994) April, Vol. 69 (4), pp. 717–20.

Tumour growth rates were measured in 105 patients using *in vivo* incorporation of bromodeoxyuridine (BrdU) and investigated for any relationship to tumour factors or survival. The median labelling index (LI) was 8.7 per cent, the duration of S-phase (Ts) was 14 h and the potential doubling time (Tpot) was 5.9 days. The labelling index in aneuploid tumours was significantly higher than that in diploid tumours. However the total labelling index (TLI) did not differ significantly between aneuploid and diploid tumours, and so it would seem likely that the difference in LI is due to the dilutional effect of benign tissue upon the calculation of LI in diploid tumours. The total labelling index, duration of S-phase and potential doubling time were not related to the tumour factors examined (site, T stage, N stage, stage grouping). Interim survival analysis was carried out and there was no difference in survival between those patients with high values for TLI, Ts, and Tpot and those with low values. Author.

**Risk of new primary cancer in patients with oropharyngeal cancer.** Soderholm, A. L., Pukkala, E., Lindqvist, C., Teppo, L. Department of Oral and Maxillofacial Surgery, Helsinki University Hospital, Finland. *British Journal of Cancer* (1994) April, Vol. 69 (4), pp. 784–7.

The relative risk of subsequent cancers was evaluated for a total of 9,092 patients with lip and oropharyngeal cancer recorded between 1953 and 1989 in the nationwide Finnish Cancer Registry. The observed numbers of patients were compared with those expected on the basis of the incidence rates in the Finnish population. There were 1,130 patients (12 per cent) with a new cancer. The standardized incidence ratio (SIR) of contracting a new primary cancer was 1.2 for lip cancer patients (95 per cent CI 1.1–1.3) and 1.4 for patients with oropharyngeal cancer (95 per cent CI: 1.2–1.4). Among lip cancer patients, a statistically significant excess risk was found for subsequent cancers in the oropharyngeal area (SIR 1.9, 95 per cent CI: 1.1–3.1), larynx (SIR 2.0, 95 per cent CI: 1.2–2.9) and lung (SIR 1.4, 95 per cent CI: 1.3–1.6), i.e. for cancers with tobacco aetiology.

Among patients with oropharyngeal cancer there was an excess of lip cancer (SIR, 3.5, 95 per cent CI: 1.5–6.9), lung cancer (SIR 1.8, 95 per cent CI: 1.3–2.3) and leukaemia (SIR 2.3, 95 per cent CI: 1.0–4.3). Radiotherapy for the first primary did not increase the risk of new cancer. Author.

**Squamous cell carcinoma of the pinna: a six-year study.** Thomas, S. S., Matthews, R. N. Manor Hospital, Nuneaton, Warwickshire. *British Journal of Plastic Surgery* (1994) March, Vol. 47 (2), pp. 81–5.

Over a six-year period, 54 sequential lesions of squamous cell carcinoma of the pinna were studied in 44 patients with regard to the side, clinical features and their duration, TNM clinicopathological classification, treatment and follow-up. Treatment delay, types of surgical procedures, anaesthesia and postoperative complications were all analysed. The overall incidence of residual and recurrent cancer was 25.92 per cent. The regional lymph node recurrence was 9.26 per cent, though only 5.56 per cent, had clinically persistent cancer. Six patients subsequently died; two of these deaths were due to the cancer. Author.

**The utility of nasal bone radiographs in nasal trauma.** Logan, M., O'Driscoll, K., Masterson, J. Department of Radiology, St Vincent's Hospital, Elm Park, Dublin, Ireland. *Clinical Radiology* (1994) March, Vol. 49 (3), pp. 192–4.

A prospective study was performed to assess the value of nasal bone radiographs taken in the accident and emergency department. The study population consisted of 100 consecutive patients who had nasal bone radiographs in our accident and emergency (A&E) department following trauma. We looked at the casualty officers', radiologists' and ENT surgeons' assessment of the cases. Thirty months later we reviewed the patients' notes to identify the number who sought medico-legal reports on their injury in that interval. We found sporting injuries to be the commonest mechanism of injury, followed closely by accidental falls. The remaining third was made up predominantly of cases of personal assault and road traffic accidents. Only two patients had a naso-pharyngeal history recorded on their visit to A&E. Thirty-five patients were referred to ENT out-patients, only 24 kept their appointment. Thirty-one of the 35 ENT referrals were felt to have a fracture demonstrated on their radiographs. However, 19 of those discharged were also thought to have an X-ray-proven fracture. Thirty months later only two patients had requested a medico-legal report. We demonstrate that the decisions regarding treatment of nasal trauma are based on clinical findings and that nasal bone radiography has no place in the decision-making process and should therefore be abandoned. Author.

**Mucosal antral cysts observed within a London inner-city population.** MacDonald-Jankowski, D. S. Department of Dental Radiology, King's College School of Medicine and Dentistry, London. *Clinical Radiology* (1994) March, Vol. 49 (3), pp. 195–8.

Mucosal antral cysts (MACs) appear as dome-shaped soft-tissue opacities and have prevalences of between 1.6 per cent and 8.7 per cent on otherwise normal panoramic radiographs. The aim of this survey was to define the prevalence in the inner-city population in London. A 14 per cent prevalence for MACs was observed in the panoramic radiographs of 1,000 consecutive patients attending King's College Hospital dental casualty department sited in inner London, which is higher than those reported for other populations. MACs were not significantly associated with the presence of signs and symptoms of periapical areas of bone loss. The differential diagnosis and management of these lesions are discussed. Author.

**Heritable features of the auditory oddball event-related potential: peaks, latencies, morphology and topography.** O'Connor, S., Morzorati, S., Christian, J. C., Li, T. K. Department of Psychiatry, Indiana University School of Medicine, Indianapolis. *Electroencephalography and Clinical Neurophysiology* (1994) March, Vol. 92 (2), pp. 115–25.

Baseline auditory ERP data from a larger study of the genetic determinants of the response to alcohol were collected from 59 monozygotic (MZ) twin pairs and from 39 same-sex dizygotic (DZ) twin pairs who drank socially. Three methods for measuring genetic influence on the ERPs were applied. First, based on maximum-likelihood estimates, the heritability of conventional peak amplitude and latency of N1 and P3 components was computed for each of 16 lead locations using tests of the significance of heritability based on intraclass correlations. P3 amplitude provided the strongest results, distributed symmetrically over caudal leads, and implied gene

dominance as the mode of genetic transmission for the P3 component. A substantial genetic influence on N1 latency suggested a mixture of additive and dominance effects in the left fronto-temporal regions. N1 amplitude measures trended towards significant heritability, but none was observed for P3 latency. The second method used the maximum of the cross-correlation function to compare wave form shape in a lead-by-lead analysis of data from cotwins. Genetic influence was apparent in both target and non-target ERP responses, with a fronto-central topography of significant results. The third method reduced all spatial and temporal ERP differences from a pair of twins to a single scalar number for each response. Distributions of this global measure revealed significant genetic influence on both non-target and target ERPs. A post hoc analysis of the effect of gender on the heritability of N1 or P3 peaks and latencies revealed no statistically significant observations in this sample of young adult twins. Author.

**Protection from noise-induced hearing loss by prior exposure to a nontraumatic stimulus: role of the middle ear muscles.** Ryan, A. F., Bennett, T. M., Woolf, N. K., Axelsson, A. Department of Surgery/Otolaryngology, University of California, School of Medicine, San Diego. *Hearing Research* (1994) January, Vol. 72 (1–2), pp. 23–8.

Recent evidence suggests that prior exposure to a moderate-level acoustic stimulus can reduce damage due to later exposure to the same stimulus at high intensity (Canlon *et al.*, (1988) *Hearing Research* 34, 197–20). To test the role of the middle ear muscles (MEMs) in this phenomenon, Mongolian gerbils were conditioned by exposure to a two-octave band of noise (1414–5656 Hz) at 81 dB SPL for three weeks. Either immediately afterward, or following a one week rest period, they were exposed to the same stimulus at 110 dB SPL for one hour. The ABR thresholds of these animals were compared to those seen in animals exposed at 110 dB SPL without conditioning. The MEMs of one ear in each subject were cut, to determine their role in any noise trauma protection effects. In the unoperated ears, conditioning without a recovery period did not alter the effects of the 110 dB stimulus. Conditioning followed by a one week recovery period reduced both temporary (TTS) and permanent (PTS) threshold shift. MEM section had no effect on either TTS or PTS in unconditioned subjects, and did not alter the reduction in TTS or PTS seen with conditioning. It is concluded that the noise trauma resistance provided by acoustic conditioning is not mediated by the MEMs. Author.

**Influence of plasma GSH level on acute radiation mucositis of the oral cavity.** Bhattathiri, V. N., Sreelekhha, T. T., Sebastian, P., Remani, P., Chandini, R., Vijayakumar, T., Nair, M. K. Departments of Radiotherapy, Cancer Research and Cancer Surgery, Regional Cancer Centre, Trivandrum, India 695 011. *International Journal of Radiation Oncology, Biology and Physics* (1994) Vol. 29 (2), pp. 383–386.

**PURPOSE:** To see how pretreatment plasma GSH level influences the severity of acute radiation mucositis of the oral cavity during therapeutic irradiation in patients with oral cancer. **METHODS AND MATERIALS:** Thirteen patients with squamous cell carcinoma of the oral cavity form the subject material. Radical radiotherapy (60 Gy in 25 fractions over five weeks) was given using telecobalt. Pretreatment plasma GSH level was measured by Beutler's method. The normal tissue reaction during radiotherapy was monitored and graded. **RESULTS:** The GSH levels ranged from 10.6–90.5  $\mu\text{m/l}$  (mean 30.6  $\mu\text{m/l}$ ). Those who had higher GSH levels developed less severe mucositis. The mean GSH levels in the groups with different severity of reactions were: Grade 2 (four patients) = 50.7  $\mu\text{m/l}$ ; Grade 3 (five patients) = 26.1  $\mu\text{m/l}$ ; Grade 4 (two patients) = 20.4  $\mu\text{m/l}$  and Grade 5 (two patients) = 13.6  $\mu\text{m/l}$ . **CONCLUSION:** Plasma GSH estimation has the potential to predict individual sensitivity to acute radiation mucositis and may particularly be useful in hyperfractionated regimes. The study also affirms the radioprotective role of GSH and suggests that this effect is either due to protection against membrane lipid peroxidation (since GSH does not enter the cell freely) or DNA damage (fractionated radiotherapy may permit freer entry of GSH into cell).

**Lymphocyte infiltration and thickness of the nasal mucous membrane in perennial and seasonal allergic rhinitis.** Calderon, M. A., Lozewicz, S., Prior, A., Jordan, S., Trigg, C. J., Davies, R. J. Department of Respiratory Medicine and Allergy, St. Bartholomew's Hospital, London, England. *Journal of Allergy and Clinical Immunology* (1994) March, Vol. 93 (3), pp. 635–43.

We have used immunocytochemical techniques to study infiltration by lymphocytes in biopsy specimens of the nasal mucosal membrane in 24 atopic patients and 10 normal volunteers. Twelve patients had perennial rhinitis and 12 had seasonal allergic rhinitis (SR) to grass pollen. Biopsy specimens were taken both in and out of the pollen season in patients with SR. Biopsy specimens were strained with the indirect immunoperoxidase technique and monoclonal antibodies to CD3, CD4, CD8, CD22, and CD25. T-helper cells (CD4+) and CD24+ cells were significantly more numerous in patients exposed to allergen (those with perennial rhinitis and SR in season) compared with normal volunteers, whereas values for SR out of season were intermediate. The thickness of the nasal epithelium was significantly ( $P < 0.05$ ) greater in biopsy specimens from patients with perennial rhinitis (mean, 51.43 microns) than in those from patients with SR in season (median, 32.44 microns). These results suggest that in allergic rhinitis, natural exposure to allergen is accompanied by increased infiltration of the nasal mucous membrane by T-helper and CD25+ cells. author.

**The effect of terfenadine on unilateral nasal challenge with allergen.** Wagenmann, M., Baroody, F. M., Kagey-Sobotka, A., Lichtenstein, L. M., Naclerio, R. M. Johns Hopkins University School of Medicine, Department of Medicine (Division of Clinical Immunology), Baltimore, Maryland. *Journal of Allergy and Clinical Immunology* (1994) March, Vol. 93 (3), pp. 594–605.

To investigate the role of H1 receptor-mediated effects in allergic rhinitis, we challenged 12 allergic volunteers with allergen two hours after administration of either placebo or 60 mg of terfenadine. Filter paper discs were used for the unilateral administration of allergen and the collection of nasal secretions. Secretion weights, levels of histamine in recovered nasal secretions, and nasal airway resistance (NAR) were measured for each nostril separately, and the number of sneezes was counted. After placebo treatment, allergen challenge led to significant increases in ipsilateral and contralateral secretion weights, ipsilateral histamine levels, ipsilateral NAR, and sneezing. Contralateral histamine levels were not elevated. H1 antagonism with terfenadine markedly reduced the number of sneezes and partially decreased ipsilateral and contralateral secretion weights, without affecting the increase in NAR. Terfenadine premedication also lowered the amount of histamine in ipsilateral secretions after allergen challenge. Performing identical nasal challenges with a 10-fold lower dose of antigen produced similar results. Previous studies showed that terfenadine had no effect on methacholine provocation and completely abolished ipsilateral and contralateral secretion weights after histamine challenge. We conclude that sneezing after allergen challenge is caused almost exclusively by a reflex initiated through H1 receptors and that H1 antagonism has no influence on allergen-induced increases in NAR. Unilateral allergen challenge leads to bilateral increases in secretion weights, which are only partially inhibited by terfenadine, suggesting the involvement of mediators other than histamine in the nasosinal reflex. As reported earlier, terfenadine also decreases allergen-induced histamine release after challenge with the highest dose of antigen. Author.

**Optical immunoassay for streptococcal pharyngitis: evaluation of accuracy with routine and mucoid strains associated with acute rheumatic fever outbreak in the intermountain area of the United States.** Daly, J. A., Korgenski, E. K., Munson, A. C., Llausas-Magana, E. Primary Children's Medical Centre, University of Utah School of Medicine, Salt Lake City 84113. *Journal of Clinical Microbiology* (1994) February, Vol. 32 (2), pp. 531–2.

The Strep A OIA (BioStar, Inc., Boulder, Colo.) rapid detection system is an intriguing technology that utilizes an immunoassay relying on changes in reflected light to directly detect group A streptococcal antigen from specimens. In this evaluation, 424 routine pediatric throat specimens and 20 simulated oropharyngeal specimens with added mucoid (M type 3, 18) strains were cultured and tested by the Strep A OIA. The respective sensitivities and specificities were as follows: Strep A OIA versus enhanced broth culturing, 84.2 and 95.7 per cent; and streptococcus-SXT agar (BBL Microbiology Systems, Cockeysville, Md.) culturing versus enhanced broth culturing, 82.9 and 98.6 per cent. The Strep A OIA is an 8-min, technologist-friendly, accurate technique with an 89.4 per cent agreement with traditional culturing. Author.

**Acute bleeding caused by rupture of the thyroid gland following blunt neck trauma: case report.** Rupprecht, H., Rumenapf, G., Braig, H., Flesch, R. Department of Surgery, University Hospital,

Erlangen, Germany. *Journal of Trauma* (1994) March, Vol. 36 (3), pp. 408–9.

We describe a case of blunt neck trauma that resulted in extensive rupture of a normal thyroid gland. Our experience shows that lesions of the thyroid gland must be taken into diagnostic consideration after blunt neck trauma, even in the absence of obvious signs of injury. Author.

**The overlooked blunt component in penetrating neck injuries: three case reports.** Lebos, M. R., Saadia, R. Department of Surgery, University of the Witwatersrand, Johannesburg, Republic of South Africa. *Journal of Trauma* (1994) March, Vol. 36 (3), pp. 410–1.

Three cases of penetrating neck injury associated with an unsuspected blunt carotid injury are reported. Attention is drawn to the possibility of this rare association, that can cause irreversible damage, if overlooked. Early angiogram and possibly duplex Doppler scanning are warranted to prevent neurologic sequelae. Author.

**The medical appropriateness of tympanostomy tubes proposed for children younger than 16 years in the United States.** Kleinman, L. C., Kosecoff, J., Dubois, R. W., Brook, R. H. Department of Pediatrics, Harvard Medical School, Boston, MA. *Journal of the American Medical Association* (1994) April, Vol. 271 (16), pp. 1250–5.

**OBJECTIVE:** To describe the clinical reasons tympanostomy tubes are proposed for children and to assess their appropriateness. **DESIGN:** Analysis of data previously collected prospectively by a national utilization review (UR) firm during a two-step UR process to assess the medical appropriateness of tympanostomy tube placement. Nurses interviewed otolaryngologists' and primary care physicians' office staff to collect clinical data. For a randomly selected subsample of cases found inappropriate, we reviewed subsequent interviews of the otolaryngologists by physician reviewers, who looked for possible extenuating clinical circumstances or additional clinical data that might have changed the appropriateness category. **SETTING:** Otolaryngologists' practices from 49 states and the District of Columbia. **PATIENTS:** All 6,611 children younger than 16 years who were insured by three clients of the UR firm and whose proposal to receive tympanostomy tubes were reviewed by this system from January 1, 1990, through July 31, 1991. The insurance companies in the study insured 5.6 million Americans at the time of the study. **MAIN OUTCOME MEASURE:** The medical appropriateness of tympanostomy tube surgery according to explicit criteria developed by an expert panel using the RAND/University of California–Los Angeles modified Delphi method. **RESULTS:** A total of 6,429 (97 per cent) of the cases were proposed for recurrent acute otitis media, otitis media with effusion, or both. Making generous clinical assumptions, 41 per cent of the proposals for these reasons had appropriate indications, 32 per cent had equivocal indications, and 27 per cent had inappropriate ones. Considering the additional information available from the subsample review, the proportion appropriate was 42 per cent, equivocal 35 per cent, and inappropriate 23 per cent. **CONCLUSION:** About one-quarter of tympanostomy tube insertions for children in this study were proposed for inappropriate indications and another third for equivocal ones. Author.

**The silent sinus syndrome. A cause of spontaneous enophthalmos.** Soparkar, C. N., Patrinely, J. R., Cuaycong, M. J., Dailey, R. A., Kersten, R. C., Rubin, P. A., Linberg, J. V., Howard, G. R., Donovan, D. T., Matoba, A. Y., et al. Cullen Eye Institute, Department of Ophthalmology, Baylor College of Medicine, Houston, Texas 77030. *Ophthalmology* (1994) April, Vol. 101 (4), pp. 772–8.

**PURPOSE:** Spontaneous enophthalmos and hypoglobus, in the absence of other symptoms and unrelated to trauma or surgery, may be alarming to both physician and patient. The authors describe the clinicopathologic features of a benign syndrome ('silent sinus syndrome') with this constellation of features and discuss the possible pathophysiology. **METHODS:** A multicentre retrospective search for similar clinical cases was performed. All clinical records, computed tomographs, and pathology reports for each case were reviewed at one centre. A literature search for similar cases also was conducted. **RESULTS:** Nineteen cases of a new syndrome are presented. This syndrome affects individuals at approximately the fourth decade of life (average age, 36 years; range, 29–46 years); is characterized by bone resorption and remodelling of the orbital floor due to otherwise asymptomatic maxillary sinus disease; is associated with ipsilateral maxillary sinus hypoplasia; and is not fully explained by any previously described, classic cystic lesion of the

maxillary antrum. **CONCLUSION:** Enophthalmos and hypoglobus unassociated with prior trauma, surgery, or other symptoms may represent 'silent sinus syndrome', which is ipsilateral maxillary sinus hypoplasia and orbital floor resorption. Author.

**The use of the startle reflex measurement in patients with various types of fixation of the ossicular chain.** Mulder, J. J., Vantrappen, G., Snik, A. F., Manni, J. J. ENT Department, University Hospital, Nijmegen, The Netherlands. *Scandinavian Audiology* (1993), Vol. 22 (4), pp. 257–60.

The results of startle and acoustic stapedius reflex measurements can be used to subclassify various types of fixation of the ossicular chain. Reflex measurements were performed on a group of subjects with normal hearing and on a group of patients with surgically verified ossicular chain fixation. In 97 per cent of the subjects with normal hearing ( $n = 30$ ), reproducible impedance changes were observed as part of a startle reaction and four different reaction patterns could be distinguished. In a subgroup of subjects with normal hearing who had a relatively, statistically significant, high acoustic reflex threshold, a characteristic response was found which was most probably caused by contraction of the tensor tympani muscle only. The same response was detected in 77 per cent of the patients ( $n = 22$ ) with otosclerosis. In the remaining 23 per cent, no middle ear impedance changes occurred as part of a startle reaction. In five out of six patients with fixation of the malleus, no response was observed. Although the startle reflex measurement is a valuable tool for distinguishing between stapes fixation and multiple ossicular chain fixations, the results are not conclusive. Author.

**Sinusitis in bone marrow transplantation.** Yee, S., Stern, S. J., Hearnberger, H. G., Suen, J. Y. Department of Otolaryngology—Head and Neck Surgery, University of Arkansas for Medical

Sciences, Little Rock 72205-7199. *Southern Medical Journal* (1994) April, Vol. 87 (4), pp. 522–4.

Bone marrow transplantation has become a beneficial and curative technique used in treatment of patients with different hematologic conditions. It has become widely used at our institution for hematologic malignancies and certain resistant solid tumours. However, this treatment can result in immunosuppression, with an increased chance of infection. The purpose of this study was to review the causes of infections and determine the number of patients diagnosed with sinusitis. In the retrospective study, we evaluated the cases of bone marrow transplant patients for incidence and cause of fever. Sixty-eight per cent of patients had fever after transplant; of these, 59 per cent had fever of unknown origin. Only one per cent of the patients with fever were diagnosed with sinusitis. In the evaluation of fever, sinusitis was not usually suspected and therefore was not included in the differential diagnosis. With such a high percentage of fever of unknown origin in this growing patient population, appropriate pretreatment evaluation of each case to rule out sinusitis should be considered. Author.

**Ciliary disorientation: a possible variant of primary ciliary dyskinesia.** Rutman, A., Cullinan, P., Woodhead, M., Cole, P. J., Wilson, R. Department of Thoracic Medicine, Royal Brompton National Heart and Lung Institute, London. *Thorax* (1993) July, Vol. 48 (7), pp. 770–3.

Random ciliary orientation has recently been proposed as a variant of primary ciliary dyskinesia. We report a 12-year-old boy with all the features of primary ciliary dyskinesia and absent nasal mucociliary clearance in whom repeated biopsies of the nasal epithelium showed normal ciliary beat frequency. The only abnormality discovered was disorientation of the central microtubules of his cilia. Author.