

Abstract Selection

Referral pattern to the allergist for hay fever in a health-care system with open access to specialists. Francillon, C., Burnand, B., Frei, P., Duc, J., Lantin, J. P., Leimgruber, A., Pecoud, A. Division d'immunologie et d'allergie CHUV, Lausanne, Switzerland. *Allergy* (1995) December, Vol. 50 (12), pp. 959–63.

Little is known about referral patterns to the allergist for hay fever. In a system with open access to the specialist, we investigated the reasons for consulting an allergist in 126 patients who completed a questionnaire on their first visit. Both sexes were equally represented, the median age was 29 years, the duration of the disease and the duration of seasonal symptoms were nine years and 10 weeks (median), respectively, and 54 per cent of patients reported a history suggestive of asthma. The symptoms were highly variable; on average, 5.6 on a 10 cm visual analog scale. Most of the patients (94 per cent) had been treated for hay fever before. Only 30 per cent were referred by another physician, the rest being self-referred. The reasons for referral were investigated. The overall motivation to consult was related to symptom severity in 63 per cent of the patients; 37 per cent consulted for other reasons, including an expectation of greater 'know-how' on the part of the allergist concerning specific diagnosis, treatment, and advice or counselling. The stimulus triggering the consultation was clearly not related to symptoms or disease in 25 per cent of the cases. We conclude from these data that many patients are clearly interested in benefitting from the professional skill of a fully trained allergist. Author.

Selective recruitment of eosinophils by substance P after repeated allergen exposure in allergic rhinitis. Fajac, I., Braunstein, G., Ickovic, M. R., Lacroix, J., Frossard, N. Service de Physiologie, UFR Cochin-Port-Royal, Paris, France. *Allergy* (1995) December, Vol. 50 (12), pp. 970–5.

We have investigated the nasal response to substance P after pollen exposure in seasonal allergic rhinitis patients. Seven patients with strictly seasonal allergic rhinitis were studied during the pollen season, 24 h after nasal challenge with pollen. They received increasing doses of nebulized substance P (0 to 80 nmol) in each nostril. Responses were assessed by measurement of nasal airway resistance by posterior rhinomanometry and quantification of albumin, histamine, and inflammatory cells in the nasal lavage fluid. Nasal airway resistance increased in a dose-dependent manner after substance P challenge. Protein and albumin in nasal lavage fluids increased after administration of substance P: from 2.6 ± 0.3 to 6.8 ± 1.1 mg for protein ($p < 0.01$) and from 0.2 ± 0.1 to 3.1 ± 0.6 mg for albumin ($p < 0.02$). Expressed as a percentage of total protein, albumin increased from 10.5 ± 3.6 per cent to 39.9 ± 3.5 per cent ($p < 0.02$), suggesting occurrence of plasma leakage. No histamine release was observed after challenge with substance P. Total cell counts significantly increased from 11.4 ± 2.4 to $41.8 \pm 17.3 \times 10^3$ cells/ml after substance P ($p < 0.05$). Eosinophils were already numerous before substance P challenge ($2.1 \pm 0.7 \times 10^3$ cells/ml), and the number of eosinophils markedly increased in all patients after substance P (for the whole group, 25.8 ± 13.3 cells/ml, $p < 0.05$). In contrast, the number of neutrophils only slightly increased in five patients, and changes did not reach significance for the group as a whole. Our results show that substance P induces nasal obstruction and albumin extrusion in allergic rhinitis patients after repeated pollen exposure. These vascular phenomena are associated with recruitment of eosinophils. Since substance P is known to be released after nasal allergen challenge, our data suggests a role for substance P in the chronic eosinophilic inflammation of the nasal mucosa observed in symptomatic allergic rhinitis. Author.

Frontal sinus development as an indicator for somatic maturity at puberty? Ruf, S., Panzer, H. Department of Orthodontics, University of Giessen, Germany. *American Journal of Orthodontics Dentofacial Orthopathy* (1996) November, Vol. 110 (5), pp. 476–82.

The possibility of predicting the stage of somatic maturity by analyzing frontal sinus growth was evaluated. The study was performed on 53 adolescent boys, and the frontal sinus size development was assessed on lateral head films. The accuracy of the prediction procedure was tested by comparing the prediction stage with the longitudinal growth data for body height of the subjects. The results revealed that: If the only prediction was whether the pubertal growth peak in height has been passed (group B), the precision of the method was rather high (approximately 90 per cent). However, if the age of body height peak was to be predicted, the method accuracy was lower (approximately 55 per cent). No significant difference existed between the one and two-year prediction intervals. The study suggests that the somatic maturity stage may be predicted rather accurately by analyzing frontal sinus development on pre-existing lateral head films. Author.

Ion transport, ciliary activity, and mechanosensitivity of sinus mucosa: an in vitro study. Leuba, D., De Ribapierre, Y., Kucera, P. Service of Otorhinolaryngology, University Hospital Center, Lausanne, Switzerland. *American Journal of Physiology* (1996) September, Vol. 271 (3 Pt 1), pp. L349–58.

The hypothesis that relative movement between respiratory epithelium and surrounding fluid modulates both ciliary activity and mucosal secretion-absorption properties was tested. Fresh human (HM) and bovine sinus mucosae (BM) were mounted in transparent chambers perfused with defined media at 36 degrees C. The fluid advanced along the ciliated surface at 15–30 micron/s. Transepithelial transport of electrolytes was studied by using voltage-clamp technique. Ciliary beating frequency (CBF) was recorded by using laser reflectometry. Average transmucosal potential difference (apical side negative) and short-circuit current (Isc) were -0.5 mV and 17 microA.cm⁻² for HM and -1.4 mV and 28 microA.cm⁻² for BM. Average CBF was 900 beats/min. Ionic pathways included basolateral Na, K-ATPase, K⁺ channels and symports for Na-Cl and Na-glucose, and apical channels for Na⁺ (absorption) and for Cl⁻ and K⁺ (secretion). Increase of fluid velocity up to 300 microns/s induced significant increase of both Isc (63 per cent) and CBF (29 per cent). Such adaptations of transepithelial fluid transport and ciliary activity to hydrodynamic conditions might reflect a mechanism of coordination between the secretion of mucus electrolytes and mucociliary clearance. Author.

The view of the glottis at laryngoscopy after unexpectedly difficult placement of the laryngeal mask. Asai, T. Department of Anesthesiology, Kansai Medical University, Osaka, Japan. *Anaesthesia* (1996) November, Vol. 51 (11), pp. 1063–5.

In 12 patients to whom a non-depolarizing neuromuscular relaxant had been given and in whom placement of the laryngeal mask had failed unexpectedly, the view of the larynx at laryngoscopy and the ease of tracheal intubation were examined. The glottis was only partially seen at laryngoscopy in three patients and was not seen at all in another three patients. Tracheal intubation was difficult in three of them. It would appear that in some patients both placement of the laryngeal mask and tracheal intubation are difficult. It is thus inadvisable to paralyze patients electively and rely on the laryngeal mask to secure a clear airway when tracheal intubation is predicted to be difficult. Author.

Management of epistaxis: a national survey. Kotecha, B., Fowler, S., Harkness, P., Walmsley, J., Brown, P., Topham, J. Royal Sussex County Hospital, Brighton. *Annals of the Royal College of Surgeons in England* (1996) September, Vol. 78 (5), pp. 444–6.

A survey to assess variations in management and outcome of patients admitted with epistaxis was conducted. A questionnaire was sent to all consultant otolaryngologists working at NHS hospitals in England and Wales requesting information about management of patients admitted with epistaxis over a three month period. Data analysis of information provided by 102

consultants for a total of 933 patients was performed. The average number of patients admitted with epistaxis over a period of three months per consultant was 10.2. More than 70 per cent of the patients were aged 60 years or over. Approximately 75 per cent of the patients required nasal packing; the most common pack used was BIPP (Bismuth Iodine Paraffin Paste). Of the patients, 5.6 per cent required general anaesthesia, with less than one per cent requiring formal arterial ligation. The mean duration of stay in hospital was 2.9 days. Few complications were reported. Patients admitted with epistaxis were generally managed conservatively, with very few requiring surgical intervention. There was remarkable consensus in various aspects of management of patients admitted with epistaxis. Author.

Improving audiometric thresholds by changing the headphone position at the ear. Flottorp, G. Rikshospitalet, National Hospital, Oslo, Norway. *Audiology* (1995) September-October, Vol. 34 (5), pp. 221-31.

A 10-year noise project, consisting of annual hearing measurement, temporary threshold shift (TTS) measurements and examination of noise exposure in 250-300 employees, involved a study of the improvement in measured hearing threshold by changing the position of the headphone at the ear. Threshold measurements were performed at 11 frequencies ranging from 125 to 8,000 Hz, and consisted of 2,708 audiograms in the hearing control program and 551 audiograms in the TTS program. A new threshold determination at frequencies above 3,000 Hz was carried out after moving the earphone to a new position in 870 (32 per cent) of the cases in the hearing measurement program and 248 (45 per cent) of those in the TTS program. The indication for moving the phone is discussed. Improved thresholds in the range of 5-40 dB at 6,000 and 8,000 Hz were observed in 58-68 per cent of the cases, depending upon frequency and program (measurement of hearing and TTS). Consequences for standard threshold values and for diagnostic purposes are discussed. Author.

MRI evidence of high signal intensity and temporomandibular arthralgia and relating pain. Does the high signal correlate to the pain? Murakami, K., Nishida, M., Bessho, K., Iizuka, T., Tsuda, Y., Konishi, J. Department of Oral and Maxillofacial Surgery, Faculty of Medicine, Kyoto University, Japan. *British Journal of Oral Maxillofacial Surgery* (1996) June, Vol. 34 (3), pp. 220-4.

In order to investigate the relationship between various temporomandibular joint (TMJ) pain levels and the detection of high signal intensity (joint effusion) on T2 weighted magnetic resonance imaging (MRI), 19 consecutive patients who complained of unilateral painful TMJ hypomobility (closed locking) were involved in this study. All patients were clinically examined in a routine manner, and all patients rated their pain levels by a visual analogue scale and eight pain questionnaire prior MRI study. T1 and T2 weighted MRI was taken in sagittal section at unilateral affected joint side. The presence or absence of a high signal intensity spot within the TMJ compartment were judged by three examiners. The high signal intensity was detected in 10 joints, but not in nine joints. In between these two groups, the pain ratio was calculated and compared. The data showed that there was no significant statistical correlation between pain levels and the presence of high signals. This study disclosed that the MRI detection of high signal intensity in the closed locking TMJ did not directly relate to the presence of TMJ pain nor the increased pain level. These indicate the need of further larger studies. Author.

The effect of sphincter pharyngoplasty on the range of velar movement. Georgantopoulou, A. A., Thatte, M. R., Razzell, R. E., Watson, A. C. Department of Plastic Surgery, Royal Hospital for Sick Children, Edinburgh, UK. *British Journal of Plastic Surgery* (1996) September, Vol. 49 (6), pp. 358-62.

The aim of this study was to assess the mobility of the soft palate following sphincter pharyngoplasty in patients with velopharyngeal incompetence of variable aetiology. Pre- and postoperative videotape recordings of lateral view videofluoroscopy of 24 patients were retrospectively studied and compared with regard to the range of velar movement. Tracings of the velopharyngeal port were made on acetate paper directly from the television monitor and absolute angle measurements were taken. Analysis of the results showed a highly significant increase in the range of palatal movement postoperatively. There was no evidence of

correlation between the magnitude of the increase and the postoperative improvement in speech. The findings and their implications are discussed. Author.

A chronic microelectrode investigation of the tonotopic organization of human auditory cortex. Howard, M. A. 3rd, Volkov, I. O., Abbas, P. J., Damasio, H., Ollendieck, M. C., Granner, M. A. Division of Neurosurgery, University of Iowa Hospitals and Clinics, Iowa City, IA 52242, USA. *Brain Research* (1996) June 17, Vol. 724 (2), pp. 260-4.

We investigated the functional organization of human auditory cortex using a new chronic microelectrode technique. Tonotopic mapping data was obtained at the single unit level for the first time in humans. All sound-driven units were noted to have frequency-dependent response patterns. The majority of units (73 per cent) demonstrated sharply tuned excitatory best-frequency responses. Twenty seven per cent of units showed wide receptive fields, representing excitatory responses to almost the entire range of frequencies presented. A tonotopic pattern was observed with best frequencies systematically increasing as more medial-caudal recording sites were sampled. Author.

Correlation between computed tomographic density of lymph node metastases and response to cisplatin-based chemotherapy in patients with head and neck squamous cell carcinoma in an area in which betel quid chewing is prevalent. Wang, H. M., Ng, S. H., Wang, C. H., Liaw, C. C., Tsai, M. H., Lai, G. M. Department of Internal Medicine, Chang Gung Memorial Hospital, Lin-Kou Medical Center, Taipei, Taiwan, Republic of China. *Cancer* (1996) November 1, Vol. 78 (9), pp. 1972-9.

BACKGROUND: Identifying the factors predicting response to chemotherapy is important for patients with head and neck squamous cell carcinoma (HNSCC). It allows more rational selection of subsets of patients who may benefit from multidisciplinary treatment. Correlation of lymph node density in contrast-enhanced computed tomographic (CT) scans of HNSCC with response to chemotherapy was observed in the recent literature. This prospective study was designed to validate this clinical issue. **METHODS:** From January 1992 to March 1995, 71 patients with untreated HNSCC were included in this study in which the following criteria were met: 1) a lymph node >3 cm by physical examination or > or = 2 cm by scanographic examination; 2) clinically evaluable disease treated by cisplatin-based neoadjuvant chemotherapy; and 3) availability of a pretherapeutic contrast-enhanced CT scan showing the cross-sections of relevant lymph node metastases. The density of the largest lymph node was compared with that of the nuchal muscles by a radiologist blinded to the patient's therapeutic outcome. A lymph node was classified as hypodense if more than 33 per cent of the lymph node surface area was comprised of a hypodense zone, and isodense if less than a third of the lymph node surface area was comprised of a hypodense zone. **RESULTS:** Fifty-one patients (72 per cent) had the largest lymph node classified as hypodense, and 63 patients (89 per cent) were found to have extranodal spread (ENS) in the relevant lymph nodes. Fifty-nine patients were betel quid chewers. Lymph node density was not related to T classification, primary site, or histologic differentiation of the primary tumour. There was also no correlation between lymph node density and lymph node N classification. The lymph node chemotherapy response rate was 35 per cent (seven of 20) of the isodense group and 47.1 per cent (24 of 51) of the hypodense group ($p=0.36$). ENS was found to have no impact on the chemotherapy response. **CONCLUSIONS:** Computed tomographic density of lymph node metastases did predict chemotherapy response in the HNSCC patients in the current study from an area in which betel quid chewing is prevalent. Author.

Influence of maxillary constriction on nasal resistance and sleep apnea severity in patients with Marfan's syndrome. Cistulli, P. A., Richards, G. N., Palmisano, R. G., Unger, G., Berthon-Jones, M., Sullivan, C. E. Centre for Respiratory Failure and Sleep Disorders, Royal Prince Alfred Hospital, NSW, Australia. *Chest* (1996) November, Vol. 110 (5), pp. 1184-8.

BACKGROUND: Marfan's syndrome is associated with a high prevalence of obstructive sleep apnea (OSA). As this syndrome is associated with a characteristic constricted maxilla and high-arched palate, we reasoned that nasal airway constriction and resultant high nasal airway resistance (NAR) may contribute to

the development of OSA. Therefore, the aim of this study was to measure NAR in patients with Marfan's syndrome. In addition, we aimed to examine the influence of maxillary morphology on both NAR and the severity of OSA. **METHOD:** We measured NAR in 13 consecutive patients with Marfan's syndrome and 13 control subjects. NAR was measured by posterior rhinomanometry, and expressed as the inspiratory resistance at a flow of 0.5 L/s. Dental impressions were taken to evaluate maxillary arch morphology, allowing measurement of the following distances: intercuspid (ICD), interpremolar (IPD), intermolar (IMD), and maximum hard palate height (MPH). Ten of the patients and four of the control subjects had previously undergone nocturnal polysomnography. **RESULTS:** Mean NAR for the Marfan group was more than twice that in the control group (7.7 ± 1.2 vs 2.9 ± 0.4 cm H₂O/L/s; $p < 0.005$). The patients also had marked constriction of the maxillary arch compared with control subjects. Two of the lateral maxillary measurements were significantly inversely correlated with NAR. There were significant correlations between various maxillary arch measurements (MPH/ICD, MPH/IPD, MPH/IMD) and the apnea/hypopnea index. **CONCLUSION:** These data suggest that high NAR is a common feature of Marfan's syndrome. Maxillary constriction with a relatively high hard palate appears to be a major reason for the high NAR. The significant correlations between indexes of maxillary constriction and sleep apnea severity suggest that maxillary morphology may play an important role in the pathophysiology of OSA in Marfan's syndrome. Author.

Impediment of basilar membrane motion reduces overload protection but not threshold sensitivity: evidence from clinical and experimental hydrops. Braun, M. Physiological Music Research, Hamburg, Germany. *Hearing Research* (1996) August, Vol. 97 (1-2), pp. 1-10.

The mechanical function of the basilar membrane (BM) in the mammalian cochlea has been newly debated after the discovery of frequency selectivity of single hair cells. Decisive information on this matter can be expected from hydropic ears, since hydrops presumably alters cochlear mechanics by (1) impeding BM motion and (2) uncoupling outer hair cell (OHC) stereocilia from the tectorial membrane (TM). Therefore hearing in Meniere's disease (MD) was examined analysing data on epidemiology of MD types and audiogram types, 2f thresholds, over-recruitment, loudness intolerance, and otoacoustic emissions. Further, hearing in experimental hydrops (XH) was examined analysing data on: morphological changes on TM and OHCs in relation to hydrops duration; morphological and electrophysiological changes upon acoustic overstimulation. The results were unequivocal on two points: (1) co-occurrence of hydrops and normal hearing thresholds can appear both in MD and XH, (2) co-occurrence of non-hearing-loss hydrops and loudness hypersensitivity is typical both in MD and XH. The conclusion is that BM motion apparently is no necessary element in the chain of cochlear sound transmission but obviously is an auxiliary element for overload protection through resonant absorption. The results are further indicative of audiometric methods for an early detection of incipient MD. Author.

Age-related decreases in endocochlear potential are associated with vascular abnormalities in the stria vascularis. Gratton, M. A., Schmiedt, R. A., Schulte, B. A. Department of Otolaryngology and Communicative Sciences, Medical University of South Carolina, Charleston 29425, USA. *Hearing Research* (1996) May, Vol. 94 (1-2), pp. 116-24.

The density and diameter of stria capillaries were assessed in whole-mount preparations of the cochlear lateral wall from 18 gerbils aged in quiet for at least 36 months. Following morphometric analysis, histopathologic changes in selected regions of the lateral wall were examined by light and transmission electron microscopy. Alterations in stria vasculature were compared with the endocochlear potential (EP) measurements from the same ear. Vascular degeneration occurred in a segmental fashion in that regions of atrophic capillaries were found throughout the cochlea but primarily in the apical and lower basal turns and in the hook. The amount of stria with normal capillaries varied greatly among the aged ears, ranging from 19 to 87 per cent. The resting EP also varied markedly, ranging from 23 to 83 mV. Little correlation was found between vascular alterations and the corresponding EP value from individual cochlear turns. However, significant correlations were found

between the total stria area with normal vasculature and both the mean EP value and that recorded at either the round window or first turn in that ear. Author.

Mucosa-associated lymphoid tissue in middle ear and Eustachian tube in children. Matsune, S., Takahashi, H., Sando, I. Department of Otolaryngology, University of Pittsburgh School of Medicine, PA 15213, USA. *International Journal of Pediatric Otorhinolaryngology* (1996) February, Vol. 34 (3), pp. 229-36.

The presence of mucosal lymphoid follicles with germinal centers, so called mucosa-associated lymphoid tissue (MALT), in the Eustachian tube (ET) and middle ear (ME) was investigated in 23 human temporal bones containing the entire ET obtained from 23 children, three months to 10 years old at death. Greater numbers of MALTs were found in specimens from children with otitis media (OM) than from those without OM. MALT showed a wedge-shaped distribution through the ME and ET: in all three specimens that had MALTs in the ME, these tissues were seen throughout the ET; in all four specimens with MALTs in the bony portion of the ET, these tissues were present both in the tympanic and pharyngeal portions of the cartilaginous ET; all seven specimens that had MALTs in the tympanic half of the cartilaginous ET had MALTs in the pharyngeal portion of the cartilaginous ET as well. Furthermore, MALTs were noted in the pharyngeal portion of the ET in more than half of the specimens without OM but in none of the MEs of specimens without OM. These results support the hypothesis that persistent and recurrent inflammation in the nasopharynx spreads through the ET to play a role in the pathogenesis of chronic OM in children. Author.

One-stage tracheal reconstruction of congenital tracheal stenosis. Froehlich, P., Kearns, D. B., Seid, A. B., Pransky, S. M., Chappuis, J. P., Morgon, A. Department d'ORL, Hôpital E. Herriot, Lyon, France. *International Journal of Pediatric Otorhinolaryngology* (1996) February, Vol. 34 (3), pp. 245-52.

Congenital tracheal stenosis (CTS) is a condition difficult to manage and associated with a high mortality rate. The principles of one-stage laryngotracheoplasty have been adapted to the surgical management of CTS. Three children underwent a one-stage anterior tracheoplasty with costal cartilage grafting and without cardiopulmonary bypass. Extubation was performed within 13 days. One child developed granulation tissue one month post-operatively, and this was removed endoscopically. The three children were free of respiratory obstruction signs during follow-up ranging from eight months to three years. Postoperative endoscopies have shown growth of the grafted trachea. Author.

Bilateral congenital cholesteatoma. Nishizaki, K., Yamamoto, S., Fukazawa, M., Yuen, K., Ohmichi, T., Masuda, Y. Department of Otolaryngology, Okayama University Medical School, Japan. *International Journal of Pediatric Otorhinolaryngology* (1996) February, Vol. 34 (3), pp. 259-64.

We report a case of bilateral congenital cholesteatoma in a six-year old boy. Cholesteatoma was present in both ears around the tympanic isthmus (the only open passage from the tympanic cavity to the attic), extending to behind the horizontal portion of the facial nerve. This patient underwent a total of three canal wall up operations on each side to remove the cholesteatoma completely and improve hearing. This case fulfills the criteria proposed by Derlacki and Clemis in 1965. Bilateral congenital cholesteatoma is a rare condition, but the incidence of congenital cholesteatoma in children has increased recently for the following reasons: Reassessment of the criteria, the introduction of computed tomography, and increased awareness of congenital cholesteatoma. When operating on patients with bilateral cholesteatoma, the best method for preservation of hearing should be chosen. We discuss these problems in the present report. Author.

Tympanic membrane perforations in children. Oluwole, M., Mills, R. P. Department of Otolaryngology, Ninewells Hospital and Medical School, Dundee, UK. *International Journal of Pediatric Otorhinolaryngology* (1996) July, Vol. 36 (2), pp. 117-23.

We have assessed children with perforations of the pars-tensa presenting to an otolaryngology clinic over a seven-year period. We found that over 70 per cent of the perforations followed the insertion of a ventilation tube. Using a novel method of dividing the tympanic membrane into quadrants, we were able to assess the

sites and grade the size of perforations. The most common site of involvement, in all perforations, was the antero-inferior quadrant. With the exception of perforations following the use of T-tubes, we found little difference between the sites, sizes and hearing levels of ventilation tube and non-ventilation tube related perforations. Larger perforations resulted in a greater degree of hearing loss. Author.

Contrasting strategic approaches to the management of subglottic hemangiomas. Froehlich, P., Seid, A. B., Morgon, A. Department d'Oto-Rhino-Laryngologie et de Chirurgie Cervico-Faciale, Hôpital E. Herriot, Lyon, France. *International Journal of Pediatric Otorhinolaryngology* (1996) July, Vol. 36 (2), pp. 137–46.

The standards of treatment of subglottic hemangiomas are steroids and laser vaporization. If these methods do not provide a sufficient airway, a tracheotomy may be required. Analysis of the data available in the literature shows that there is a place for other therapeutic solutions. Open surgical excision could be one of them but is controversial. So far, it represented a 'last' resort procedure before tracheotomy. Our approach to open surgical excision is different. A prospective decision is taken in the initial therapeutic approach. Infants are considered candidates for excision in cases of large hemangiomas that extend beyond the limits of laser. Laser is, then, avoided in order not to damage the overlying mucosa. Interferon is not utilized because a rapid effect is not expected on the respiratory distress. Open surgical excision without tracheotomy is performed. A cricoid enlargement is associated at the end of the procedure. Risk for post-operative subglottic stenosis is limited. When conceived this way, open surgical excision seems effective to manage large life-threatening hemangiomas. Author.

Auditory brainstem response screening for hearing loss in high risk neonates. Watson, D. R., McClelland, R. J., Adams, D. A. Department of Otorhinolaryngology, Queen's University, Belfast, UK. *International Journal of Pediatric Otorhinolaryngology* (1996) July, Vol. 36 (2), pp. 147–83.

The present paper reports the findings of a seven year study evaluating the use of the auditory brainstem response (ABR) as the basis of a hearing screening procedure in a group of newborns at increased risk of hearing impairment. A Special Care Baby Unit (SCBU) population of 417 infants with diverse clinical backgrounds and treatment histories was tested for hearing impairment at birth using ABR audiometry. Some 332 passed the original screen at 30 dBnHL test level in both ears. Of the failure group, 18 did not survive and 32 had some degree of hearing impairment confirmed, nine of which were sensorineural in origin. An increased incidence of persistent middle ear disease was also

noted in the failure group. A detailed operational analysis demonstrates that provided appropriate pass/fail criteria are adopted, the ABR technique offers excellent sensitivity and specificity for the detection of significant hearing loss in the test population. Furthermore, the study establishes that implementation of an ABR-based screening programme could reduce the average age at detection of permanent hearing loss by seven months. A cost assessment shows that the introduction of such a targeted screening procedure could be done at a reasonable outlay. Author.

Early adenotonsillectomy for relief of acute upper airway obstruction due to acute tonsillitis in children. Sdralis, T., Berkowitz, R. G. Department of Otolaryngology, Royal Children's Hospital, Parkville, Victoria, Australia. *International Journal of Pediatric Otorhinolaryngology* (1996) March, Vol. 35 (1), pp. 25–9.

Early adenotonsillectomy (TA) for acute upper airway obstruction precipitated by acute tonsillitis was performed in 17 children admitted to the Royal Children's Hospital over a 15 year period. The age ranged from 13 to 83 months (mean 37 months) and surgery was performed from one to 11 days (mean 5.8 days) following admission. One child who underwent surgery within 24 h of admission had an intraoperative blood loss of 250 ml requiring transfusion, but there were no cases of post operative hemorrhage. Airway obstruction was relieved by surgery in all cases and patients were discharged one to six days (mean 2.4 days) later. Early TA should be considered for relief of upper airway obstruction due to acute tonsillitis after an initial 24 h of intravenous antibiotic therapy. Author.

The nasal volume of children as measured by Manometric Rhinometry. Porter, M. J., Williamson, I. G., Kerridge, D. H., Maw, A. R. ENT Department, St Michael's Hospital, Bristol, UK. *International Journal of Otorhinolaryngology* (1996) March, Vol. 35 (1), pp. 51–7.

A new method of measuring nasal volume has been developed called 'Manometric Rhinometry'. We describe the principle behind its use and present the results of measuring two groups of normal children aged four to 10. The total volume of the nasal cavity, paranasal sinuses and postnasal space in these children averaged 81 ml in four-year olds and 140 ml in 10-year olds when measured using an open cell foam plug. Where a rigid nasal tip was used the volume averaged 67 ml in four-year olds rising to 99 ml in eight-year olds. Correlation with age, weight, height and head circumference showed the greatest correlation with height ($r=0.66$). Multiple regression analysis did not add further explanatory power. Author.