

Abstract Selection

Type of mutation in the neurofibromatosis type 2 gene (NF2) frequently determines severity of disease. Ruttledge, M. H., Andermann, A. A., Phelan, C. M., Claudio, J. O., Han, F. Y., Chretien, N., Rangaratnam, S., MacCollin, M., Short, P., Parry, D., Michels, V., Riccardi, V. M., Weksberg, R., Kitamura, K., Bradburn, J. M., Hall, B. D., Propping, P., Rouleau, G. A. Centre for Research in Neuroscience, Montreal General Hospital Research Institute, Canada. *American Journal of Human Genetics* (1996) August, Vol. 59 (2), pp. 331–42.

The gene predisposing to neurofibromatosis type 2 (NF2) on human chromosome 22 has revealed a wide variety of different mutations in NF2 individuals. These patients display a marked variability in clinical presentation, ranging from very severe disease with numerous tumours at a young age to a relatively mild condition much later in life. To investigate whether this phenotypic heterogeneity is determined by the type of mutation in NF2, we have collected clinical information on 111 NF2 cases from 73 different families on whom we have performed mutation screening in this gene. Sixty-seven individuals (56.2 per cent) from 41 of these kindreds revealed 36 different putative disease-causing mutations. These include 26 proposed protein-truncating alterations (frameshift deletions/insertions and nonsense mutations), six splice-site mutations, two missense mutations, one base substitution in the 3' UTR of the NF2 cDNA, and a single 3-bp in-frame insertion. Seventeen of these mutations are novel, whereas the remaining 19 have been described previously in other NF2 individuals or sporadic tumours. When individuals harbouring protein-truncating mutations are compared with cases with single codon alterations, a significant correlation ($p < .001$) with clinical outcome is observed. Twenty-four of 28 patients with mutations that cause premature truncation of the NF2 protein, schwannomin, present with severe phenotypes. In contrast, all 16 cases from three families with mutations that affect only a single amino acid have mild NF2. These data provide conclusive evidence that a phenotype/genotype correlation exists for certain NF2 mutations. Author.

Mild impairment of neuro-otological function in early treated congenital hypothyroidism. Bellman, S. C., Davies, A., Fuggle, P. W., Grant, D. B., Smith, I. Great Ormond Street Hospital for Children NHS Trust, London. *Archives of Diseases in Childhood* (1996) March, Vol. 74 (3), pp. 215–8.

Pure tone audiometry, tympanometry, acoustic stapedial reflex thresholds (ASRTs), and auditory evoked brain stem responses (AEBRs) were carried out in 38 children with early treated congenital hypothyroidism aged 10–12 years, together with tests of vestibular function (electronystaggraphy, rotational, and caloric tests). Sensorineural hearing loss with thresholds of greater than 15 dB was detected in 18 children (10 at 8 kHz only); only two children had more than 40 dB hearing loss, each in one ear. Raised ASRTs were found in eight children and two children had abnormal AEBRs. Of the 29 children tested, 12 had an abnormality of vestibular function. Although not significant at the five per cent level, there was a tendency for the abnormalities to be more prevalent and severe in the children with more severe hypothyroidism, as judged by pretreatment plasma thyroxine. It is concluded that (i) mild abnormality of hearing is still common in children with congenital hypothyroidism despite early treatment but this is much less severe than that found before neonatal screening and (ii) mild abnormalities of vestibular function may be common in early treated congenital hypothyroidism. Author.

Efficacy of a portable acustimulation device in controlling seasickness. Bertolucci, L. E., DiDario, B. Maven Laboratories, Inc., Citrus Heights, CA 95621, USA. *Aviation, Space, and Environmental Medicine* (1995) December, Vol. 66 (12), pp. 1155–8.

BACKGROUND: Nausea and vomiting caused by motion sickness are serious and sometimes debilitating symptoms for

commercial and recreational seafarers. **HYPOTHESIS:** In order to treat these symptoms, a portable device, the Relief Band, was designed to deliver acustimulation to the Neiguan (P6) acupuncture point. **METHOD:** Nine volunteers used the device on a placebo point or the P6 active point on the open seas outside the San Francisco Bay. Motion sickness symptoms were graded from one ('feel fine') to five ('intermittent vomiting, with or without nausea'). **RESULTS:** Five subjects with motion sickness initially positioned the device at the placebo site and reported minimal symptom improvement (3.6 ± 0.6 to 3.4 ± 1.1) (mean, \pm SD), whereas the other four subjects initially used the device in the P6 position and reported decreased symptoms (4.3 ± 1.0 to 1.0 ± 0.2). The position of the Relief Band was then switched; in the four subjects who switched to the placebo position, symptoms worsened (1.0 ± 0.2 to 4.0 ± 1.4); whereas, in the five subjects where the device was switched to the P6 position, symptoms improved in each subject (3.4 ± 1.1 to 1.0 ± 0.7) ($p < 0.01$). **CONCLUSIONS:** Motion sickness symptoms were suppressed by portable acustimulation in field studies of seasickness. The Relief Band may be an alternative to drug treatments of the nausea and vomiting of seasickness. Author.

Three-dimensional MP-RAGE – an alternative to conventional three-dimensional FLASH sequences for the diagnosis of viscerocranial tumours? Held, P., Fellner, C., Fellner, F., Geissler, A., Gmeinwieser, J. Klinikum der Universität Regensburg, Institut für Röntgendiagnostik, Germany. *British Journal of Radiology* (1995) December, Vol. 68 (816), pp. 1316–24.

Imaging with three-dimensional (3D) sequences is a frequently used magnetic resonance (MR) technique in the assessment of ear, nose and throat (ENT) tumours near the skull base. Few reports on the contrast behaviour of 3D magnetization prepared rapid gradient echo (MP-RAGE) sequences and their application in ENT tumours exist in the published literature. This paper discusses whether 3D MP-RAGE is an alternative to conventional 3D gradient echo (3D GE) sequences for the diagnostic evaluation of the visceral cranium. Measurements were performed with a Magnetom SP 63 MR system (Siemens) at 1.5 T. Ten healthy volunteers were examined using 3D FLASH sequences with varied flip angles (90° , 70° , 40° , 20° , 10°) and using 3D MP-RAGE to optimize the signal-to-noise ratio (SNR) of muscle, fat and gland tissue. After this optimization 25 patients with ENT tumours near the skull base were examined with 3D FLASH 40° , 3D MP-RAGE 10° (both before and after application of contrast medium) and with 3D FISP 70° (without contrast medium). SNR and contrast-to-noise ratio (CNR) of tumour, inflammatory disease, brain (white and grey matter), compact bone, fat and muscle were calculated. The advantages of 3D MP-RAGE over 3D FLASH 40° include decreased imaging time with decreased motion artifacts and a relatively high contrast between tumour and surrounding tissues. The tissue contrast yielded by the T1/T2* weighted 3D gradient echo sequence FISP with a flip angle of 70° was not as good as that yielded by 3D MP-RAGE with and without contrast together. In conclusion a combination of contrast enhanced and unenhanced 3D MP-RAGE sequences is the technique of choice for the examination of ENT tumours near the base of the skull. Author.

Randomised, double blind, placebo controlled trial of penicillin V and amoxycillin in treatment of acute sinus infections in adults. Lindbaek, M., Hjortdahl, P., Johnsen, U. L. Department of General Practice, University of Oslo, Norway. *British Medical Journal* (1996) August 10, Vol. 313 (7053), pp. 325–9.

OBJECTIVES: To compare the effectiveness of penicillin V and amoxycillin with placebo in treatment of adult patients with acute sinusitis. **DESIGN:** Randomised, double blind, placebo controlled trial. **SETTING:** Norwegian general practice. **SUBJECTS:** 130 adult patients with a clinical diagnosis of acute sinusitis confirmed by computed tomography. **MAIN OUTCOME MEASURES:**

Subjective status after three and 10 days of treatment, difference in clinical severity score between day 0 and day 10 as evaluated by the general practitioner, difference in score from computed tomography on day 0 and day 10, and duration of sinusitis. **RESULTS:** Amoxicillin and penicillin V led to significantly faster and better recovery than placebo. By day 10, 71 patients receiving antibiotic treatment—(86 per cent) considered themselves to be recovered or much better compared with 25 (57 per cent) receiving placebo. The mean (95 per cent confidence interval) reductions in clinical severity scores by day 10 were 5.4 (5.0 to 5.8) for penicillin V, 5.5 (4.9 to 6.0 for amoxicillin, and 3.4 (2.8 to 4.0) for placebo. For the antibiotic groups combined the number of patients with the greatest degree of improvement on computed tomography (scale 0–16)—that is, score 5–16 on day 10—was 31/83 (37 per cent) compared with 10/44 (23 per cent) receiving placebo. The median duration of the sinusitis was nine days in the amoxicillin group, 11 days in the penicillin V group, and 17 days in the placebo group. **CONCLUSION:** Penicillin V and amoxicillin are significantly more effective than placebo in the treatment of acute sinusitis. Author.

Rethinking the logic and techniques of primary tip rhinoplasty. A perspective of the evolution of surgery of the nasal tip. Tebbetts, J. B. Division of Plastic and Reconstructive Surgery, University of Texas Southwestern Medical Center, Dallas, USA. *Clinical Plastic Surgery* (1996) April, Vol. 23 (2), pp. 245–53.

Historically, destructive tip-shaping and positioning techniques, although effective to some degree, have created large numbers of secondary deformities. Tip grafts, necessary in secondary rhinoplasty, have been applied widely in primary rhinoplasty, introducing additional variables and a significant reoperation rate. Nondestructive tip-shaping and positioning techniques offer the surgeon a wider range of alternatives, more control and predictability, and a lower reoperation rate. We are making major changes in the way we think about primary tip rhinoplasty. Most importantly, we are learning (or relearning) that preservation of normal anatomy and structural integrity is a surgical principle epitomised in primary rhinoplasty, and that when we can achieve the desired result using that normal anatomy and preserving its structural integrity, the long-term result is more predictable. Author.

Cochlear implants in children: principles, practice and predictions. O'Donoghue, G. M. Queen's Medical Centre NHS Trust, Nottingham, England. *Journal of the Royal Society of Medicine* (1996) June, Vol. 89 (6), pp. 345P–7P.

An audit was undertaken of the first 36 children who had received cochlear implants in Nottingham. These children had previously derived no benefit from prolonged trials of powerful hearing aids. Following implantation, all children could hear warble tones at all audiometric frequencies from 500 to 4000 Hz at sound pressure levels between 30 and 50 dB. The majority of children implanted below the age of five years developed intelligible spoken language after three years. The outcomes for children born deaf and those who acquired deafness under the age of three years were substantially similar. The best results were obtained in those children who were implanted before the age of five years or in whom the deafness was of short duration. The needs of implanted children continue over many years. A small number of dedicated, well-funded multidisciplinary teams are needed to meet the growing demand nationally. Author.

Increasing incidence of penicillin- and ampicillin-resistant middle ear pathogens. Rodriguez, W. J., Schwartz, R. H., Thorne, M. M. Children's National Medical Center, Washington, DC, Department of Infectious Disease 20010-2970, USA. *Pediatric Infectious Diseases Journal* (1995) December, Vol. 14 (12), pp. 1075–8.

During a 13 month period ending in January, 1995, we obtained 159 samples of middle ear exudate through tympanocentesis ($n = 155$) or acute spontaneous otorrhea ($n = 4$) from 151 children enrolled in therapeutic trials of acute otitis media in a pediatric practice in Northern Virginia. Their ages ranged from <1 to >6 years of age (mean, 35 months; median, 22 months). Precise diagnostic criteria for acute otitis media always included bulging outward of all or part of the eardrum, opacification of the eardrum regardless of colour and impaired mobility to positive and negative pressure via the pneumatic otoscope. Bacterial pathogens were isolated from middle ear fluid in 95 per cent of these

children: *Streptococcus pneumoniae* was recovered from 61 (37 per cent); *Haemophilus influenzae* from 45 (27 per cent); *Moraxella catarrhalis* from 41 (25 per cent); Group A streptococcus from six (four per cent); *Staphylococcus aureus* from four (two per cent); and no growth or microbes of uncertain significance from eight (five per cent). Six of the patients had mixed bacterial cultures; two of the six had at least one ampicillin-resistant bacteria, and a third had two ampicillin-resistant bacteria. Eight patients who failed to improve with antimicrobial treatment had a second tympanocentesis performed or developed spontaneous drainage; on that follow-up culture three of eight cultures had different microorganisms; and five of the eight bacterial specimens were resistant to ampicillin or penicillin. Twenty-one per cent of the *S. pneumoniae* strains recovered from the middle ear were resistant to penicillin. Sixty-two per cent of the *H. influenzae* and 98 per cent of the *M. catarrhalis* isolates were resistant to ampicillin. Overall bacteria resistant to penicillin or ampicillin were recovered in 54 per cent of middle ear fluid from 46 patients who had received a beta-lactam antibiotic in the preceding month as well as in 57 per cent of middle ear fluids from 105 patients who had not. The empiric use of amoxicillin for treatment of acute otitis media should be reexamined in our community particularly in those who appear ill, have a high fever or have severe unremitting otalgia. Author.

Is pre-operative patient assessment effective? A prospective trial of 100 patients. Banerjee, A. R., Reilly, P. G., Marshall, J. N., Nunez, D. Department of Otolaryngology/Head and Neck Surgery, Leicester Royal Infirmary. *Annals of the Royal College of Surgeons (England)* (1996) May, Vol. 78 (3 Suppl), pp. 119–21.

The working patterns of clinical postgraduate trainees are being scrutinised in preparation for the implementation of new, structured and shortened postgraduate specialist training programmes. Current practice in the National Health Service dictates, in all branches of surgery, the evaluation of elective admissions undergoing procedures under general anaesthetic by a junior trainee (SHO or HO) who then arranges the appropriate preoperative investigations. This doctor acts as a 'generalist' in that he is primarily concerned with the patient's general fitness for the operation as well as with the specific condition to be treated. The anaesthetist also evaluates the patient prior to the operation. In his case his sole concern is to whether or not the patient is fit for a general anaesthetic. This prospective study investigated the extent of duplication in preoperative elective patient assessment by both the otolaryngology trainee and the anaesthetist in order to answer the question: are both assessments necessary? The medical records of 100 consecutive adult elective admissions to the Leicester Royal Infirmary Otolaryngology Department which provides inpatient services to a catchment population of 900,000 were reviewed. The case histories obtained by clinicians blind to the study were classified as positive or negative for relevant features. The case histories obtained by the otolaryngology trainee and anaesthetist showed a level of disagreement which was nine per cent greater than chance. It appears that there is a low level of duplication in preoperative elective otolaryngology patient assessment and both otolaryngology trainee and anaesthetic examination are of value. Author.

Multiple schwannomas and meningiomas associated with irradiation in childhood. Sznajder, L., Abrahams, C., Parry, D. M., Gierlowski, T. C., Shore-Freedman, E., Schneider, A. B. Department of Medicine, University of Illinois at Chicago, USA. *Archives of Internal Medicine* (1996), September 9, Vol. 156 (16), pp. 1873–8.

OBJECTIVE: To determine the pattern of neural tumours (schwannomas, vestibular schwannomas (acoustic neuromas), and meningiomas) that developed in 3013 people who received radiation treatment with X-ray beam therapy for benign conditions of the head and neck area before their 16th birthday. **METHODS:** The surgical and pathology reports and pathology slides were reviewed for all neural tumours in the cohort. Patients with more than one neural tumour were compared with those with one neural tumour and those no neural tumours. **RESULTS:** There were seven patients with multiple neural tumours and 63 with single neural tumours. The distribution of tumours in these two groups differed. The group with multiple tumours had more spinal nerve root schwannomas, while the group with single tumours had more cranial nerve schwannomas. Six of the seven

patients did not meet the diagnostic criteria for neurofibromatosis type 2. **CONCLUSIONS:** Our findings suggest that host factors that increase susceptibility to radiation may be involved in the development of the multiple neural tumours. Clinically, patients with multiple neural tumours who do not meet the diagnostic criteria for neurofibromatosis type 2 should be questioned about radiation exposure. If exposure is confirmed, then screening for other radiation-related tumours should be initiated. Author.

Maxillectomy – to reconstruct or obturate? Results of a UK survey of oral and maxillofacial surgeons. Ali, A., Fardy, M. J., Patton, D. W. Morriston Hospital NHS Trust, Swansea, UK. *British Journal of Oral Maxillofacial Surgery* (1995), August, Vol. 33 (4), pp. 207–10.

Post-maxillectomy defects may be restored either by surgical reconstruction or by prostheses and there is continuing controversy about the most appropriate method of rehabilitation in any particular case. A questionnaire was designed to assess the current practices of oral and maxillofacial surgeons in the UK after resection of the maxilla for malignant disease. Maxillectomies were carried out by 83 per cent of surgeons; most surgeons do one to five cases a year; 38 per cent of surgeons do reconstruct surgically, but only in 10 per cent of cases. Only 65 per cent of surgeons have access to the services of a restorative dentist; this did influence 19 per cent of surgeons' decision about whether to reconstruct surgically or restore by prosthetic means. Author.

Prediction of outcomes in 150 patients having microvascular free tissue transfers to the head and neck. Simpson, K. H., Murphy, P. G., Hopkins, P. M., Batchelor, A. G. Academic Department of Anaesthesia, St James's University Hospital, Leeds, UK. *British Journal Plastic Surgery* (1996) July, Vol. 49 (5), pp. 267–73.

Medical records of 150 patients who had undergone microvascular free tissue transfer to the head and neck (85 per cent for malignancy) were retrospectively assessed to identify predictors of postoperative outcomes and complications. Five per cent of flaps failed and 20 per cent required re-exploration. Surgical and medical problems occurred in 23 per cent and 67 per cent patients respectively; mortality was 4.7 per cent. One hundred and thirty-two records were analysed by logistic regression. Mortality and stroke were commoner in patients with previous myocardial infarction or steroid medication. Chest infection was commoner in men and with increasing age. Hypoxaemia was associated with bronchodilator therapy. Thromboembolism was commoner in patients on diuretics. Nutritional problems were more frequent in patients on opioids, with low weight or hypertension. Donor site infection was related to haemoglobin concentration, cerebrovascular disease, hypertension, opioid consumption or previous radiotherapy. Recipient site infection was associated with hypertension. Flap failure was related to nitrate or bronchodilator treatment. Re-exploration was associated with opioid or bronchodilator therapy. It was concluded that several factors predicted complications and death following microvascular surgery the head and neck. Author.

Cervical necrotising fasciitis with pharyngeal perforation: treatment and reconstruction. Yii, N. W., Quinn, S. J., Andersson, L. C., Niranjan, N. S., Kenyon, G. S. Department of Plastic and Reconstructive Surgery, Royal London Hospital, London, UK. *British Journal of Plastic Surgery* (1996) June, Vol. 49 (4), pp. 237–41.

We present a case of life-threatening necrotising fasciitis of the neck with acute pharyngeal perforation following a parapharyngeal abscess caused by tonsillitis. The joint occurrence of cervical necrotising fasciitis and acute pharyngeal perforation has not been previously reported. A new way of reconstructing the pharyngeal defect using an islanded submental perforator flap is presented. Author.

A combined flap technique for earlobe reconstruction in one stage. Alconchel, M. D., Rodrigo, J., Cimorra, G. A. Department of Plastic and Reconstructive Surgery and Burns Unit, Hospital Miguel Servet, Zaragoza, Spain. *British Journal of Plastic Surgery* (1996) June, Vol. 49 (4), pp. 242–4.

Many of the techniques available for earlobe reconstruction require that the rest of the ear is in continuity with retroauricular skin and they usually need two stages; in some cases a graft is also required. We present a method to create an earlobe in one stage

and without grafts, illustrated by one case report. The technique is a combination of the flap techniques of Davis and Zenteno Alanis, using an extended retroauricular flap together with an anterior ear flap. Author.

The sternocleidomastoid myocutaneous flap: a reappraisal. Yugueros, P., Woods, J. E. Service of Plastic and Reconstructive Surgery, Mayo Clinic, Rochester, MN 55905, USA. *British Journal of Plastic Surgery* (1996) March, Vol. 49 (2), pp. 93–6.

The sternocleidomastoid myocutaneous flap was described 40 years ago. However, its reliability has been a matter of discussion, mainly because of its random blood supply and subsequent tendency to necrosis. This paper describes the use of the sternocleidomastoid island myocutaneous flap, superiorly based, in 10 patients with good results. In these patients, the superior thyroid artery was sacrificed and the skin paddle was incised directly over the muscle, as described by Ariyan. We believe this approach assures the usefulness of the flap and justifies its expanded utilisation. Author.

Do antimicrobials increase the carriage rate of penicillin resistant pneumococci in children? Cross sectional prevalence study. Arason, V. A., Kristinsson, K. G., Sigurdsson, J. A., Stefansdottir, G., Molstad, S., Gudmundsson, S. Department of Family Medicine, Solvangur Health Centre, University of Iceland, Hafnarfjordur, Iceland. *British Medical Journal* (1996) August 17, Vol. 313 (7054), pp. 387–91.

OBJECTIVE: To study the correlation of antimicrobial consumption with the carriage rate of penicillin resistant and multiresistant pneumococci in children. **DESIGN:** Cross sectional and analytical prevalence study. **SETTING:** Five different communities in Iceland. **MAIN OUTCOME MEASURE:** Prevalence of nasopharyngeal carriage of penicillin resistant pneumococci in children aged under seven years in relation to antibiotic use as determined by information from parents, patient's records, and total sales of antimicrobials from local pharmacies in four study areas. **RESULTS:** Total antimicrobial sales for children (6223 prescriptions) among the four areas for which data available ranged from 9.6 to 23.2 defined daily doses per 1000 children daily (1.1 to 2.6 courses yearly per child). Children under two consumed twice as much as two to six year olds (20.5 v 10.9 defined daily doses per 1000 children daily). Nasopharyngeal specimens were obtained from 919 children, representing 15–38 per cent the peer population groups in the different areas. Pneumococci were carried by 484 (52.7 per cent) of the children, 47 (9.7 per cent) of the isolates being resistant to penicillin or multiresistant. By multivariate analysis age (< two years), area (highest antimicrobial consumption), and individual use of antimicrobials significantly influenced the odds of carrying penicillin resistant pneumococci. By univariate analysis, recent antimicrobial use (two to seven weeks) and use of co-trimoxazole were also significantly associated with carriage of penicillin resistant pneumococci. **CONCLUSIONS:** Antimicrobial use, with regard to both individual use and total antimicrobial consumption in the community, is strongly associated with nasopharyngeal carriage of penicillin resistant pneumococci in children. Control measures to reduce the prevalence of penicillin resistant pneumococci should include reducing the use of antimicrobials in community health care. Author.

Pathologic changes of the trachea after percutaneous dilatational tracheotomy. van Heurn, L. W., Theunissen, P. H., Ramsay, G., Brink, P. R. Department of Surgery and Pathology, De Wever Hospital, Heerlen, the Netherlands. *Chest* (1996) June, Vol. 109 (6), pp. 1466–9.

The tracheas of 12 patients who had undergone autopsies after percutaneous dilatational tracheotomy (PDT) were analysed macroscopically and microscopically. The puncture site of the trachea varied from just below the cricoid cartilage (two patients) to below the third ring (three patients). A fracture of one or more tracheal rings was present in 11 patients, of whom two had a fractured cricoid. Destruction of one or more tracheal rings was present in all eight patients cannulated for more than 10 days and was related to duration of cannulation ($p < 0.005$). Protrusion of the anterior wall into the tracheal lumen with tracheal stenosis was seen in two patients. Improvements to the PDT technique are discussed to avoid complications. Author.

Adult croup. Tong, M. C., Chu, M. C., Leighton, S. E., van Hasselt, C. A. Department of Surgery, Chinese University of Hong Kong, Prince of Wales Hospital, Hong Kong. *Chest* (1996) June, Vol. 109 (6), pp. 1659–62.

Adult croup is a distinct disease entity that probably represents a heterogeneous clinical syndrome. Three cases of adult laryngotracheitis characterised by upper airway infection and progression to airway obstruction are illustrated. Close observation and prompt decisions regarding airway intervention are critical in effective management, and complete resolution is expected. Author.

Outcome of laryngeal paralysis in neonates: a long term retrospective study of 113 cases. de Gaudemar, I., Roudaire, M., Francois, M., Narcy, P. Department of Otolaryngology and Head and Neck Surgery Service ORL. Robert Debre Hospital, Paris, France. *International Journal of Pediatric Otorhinolaryngology* (1996) January, Vol. 34 (1–2), pp. 101–10.

Between 1985 and 1990, 113 children were diagnosed as having congenital vocal cord paralysis. Most of them were still being followed up in June 1994. Fifty two had bilateral paralysis, 61 had unilateral paralysis: 41 were on the left side and 20 on the right side. Forty two were idiopathic, 29 were associated with neurologic disorders, six were associated with heart malformations. Fifteen children were born after difficult delivery. Among the newborns with unilateral paralysis that occurred after an abnormal delivery, 73 per cent recovered spontaneously; likewise 70 per cent of the neurologic group and 74 per cent of the idiopathic group recovered spontaneously. The prognosis of bilateral paralysis was worse with only 52 per cent of spontaneous recovery in the neurologic disorders group and the idiopathic group. Seven per cent of the children underwent a surgical procedure. They were all decannulated or extubated. In view of our experience the prognosis is poor for bilateral idiopathic laryngeal paralysis or those with neurological context. Author.

Long-term effect of perinatal and postnatal asphyxia on developing human auditory brainstem responses: brainstem impairment. Jiang, Z. D., Tierney, T. S. Department of Physiology, University of Oxford, England. *International Journal of Pediatric Otorhinolaryngology* (1996) January, Vol. 34 (1–2), pp. 111–27.

Long-term effect of perinatal and postnatal asphyxia on the developing auditory brainstem was investigated in children, particularly those who exhibited residual neurodevelopmental deficits, by analysing the central components of brainstem auditory evoked responses (BAER). The major abnormalities in the BAER were a reduction of wave V amplitude, followed by a decrease in V/I amplitude ratio, while abnormalities in interpeak intervals were relatively rare. These findings suggest that asphyxia could result in residual neural dysfunction of the brainstem but does not appear to exert any major long-term effect on neuronal transmission. BAER abnormalities occurred more frequently in the children with residual neurodevelopmental deficits than those without these deficits after perinatal asphyxia. The occurrence of BAER abnormalities was related to the duration as well as the degree of asphyxia. No significant difference was found in the abnormalities of the central BAER components between the children after perinatal asphyxia and those after postnatal asphyxia, suggesting that perinatal and postnatal asphyxia exerts a similar long-term effect on the developing central nervous system. Author.

Paradoxical vocal cord dysfunction in an infant with stridor and gastroesophageal reflux. Heatley, D. G., Swift, E. University of Wisconsin Hospital and Clinics, Madison 53792, USA. *International Journal of Pediatric Otorhinolaryngology* (1996) January, Vol. 34 (1–2), pp. 149–51.

This article presents the case history of a four month old infant diagnosed with Paradoxical Vocal Cord Dysfunction (PVCD) secondary to gastroesophageal reflux. The child presented with

intermittent stridor which responded promptly to treatment of her reflux. This is believed to be the youngest person with PVCD reported in the literature and supports the concept that PVCD may be associated with multiple etiologies. Author.

The functional role of the adenoids in speech. Finkelstein, Y., Berger, G., Nachmani, A., Ophir, D. Department of Otolaryngology, Head and Neck Surgery, Meir Hospital, Kfar Saba, Israel. *International Journal Pediatric Otorhinolaryngology* (1996) January, Vol. 34 (1–2), pp. 61–74.

Illustrative cases are presented showing a variety of interrelationships between the adenoids and the activity of the velopharyngeal valve in speech. The cases presented were selected from a group of 1000 patients referred because of suspected velopharyngeal diseases. When appropriate, complete velopharyngeal assessment was made including otolaryngological speech and hearing examination, polysomnography, nasendoscopy, multiview videofluoroscopy and cephalometry. New observations are described which further elucidate the mechanism by which the adenoids may change the mechanism of velopharyngeal valving and consequently speech patterns. In conclusion, procedures involving the adenoids and tonsils and surgical correction of velopharyngeal valve abnormalities to improve respiratory function must be performed in a manner which ensures preservation of normal speech activity. Similarly, surgical correction of velopharyngeal valve abnormalities to improve speech activity must preserve its respiratory function. The velopharyngeal valve and the adenotonsils must be considered together whenever diagnosis and a therapeutic intervention of either of them is considered. A clinical method for patient evaluation, patient management and the development of a rational therapeutic approach is presented. Author.

Early diagnosis and stage classification of vocal cord abductor paralysis patients with multiple system atrophy. Isozaki, E., Naito, A., Horiguchi, S., Kawamura, R., Hayashida, T., Tanabe, H. Department of Neurology, Tokyo Metropolitan Neurological Hospital, Japan. *Journal of Neurology, Neurosurgery, and Psychiatry* (1996) April, Vol. 60 (4), pp. 399–402.

OBJECTIVES: Vocal cord abductor paralysis (VCAP) is a life threatening complication which may cause nocturnal sudden death in patients with multiple system atrophy. However, the early diagnosis of VCAP is often difficult to make on routine laryngoscopy performed during wakefulness, as stridor, which is the sole symptom of VCAP in the early stage, develops only during sleep. The aim was to investigate laryngeal dysfunction in patients with multiple system atrophy while awake and asleep. **METHODS:** Seven patients with multiple system atrophy with nocturnal stridor and five control patients were studied. Vocal cord movement was analysed by laryngoscopy while the patients were awake and also during sleep induced by intravenous diazepam. **RESULTS:** When awake, for the seven patients with multiple system atrophy normal movement of the vocal cords occurred in three, mild abduction restriction in three, and paradoxical movement with high pitched inspiratory stridor. In controls, there were no differences in the vocal cord movement between wakefulness and sleep. From these findings, VCAP could be divided into four stages: stage 0 (normal) with normal vocal cord movement during both wakefulness and sleep, stage 1 (mild VCAP) with normal movement during wakefulness and paradoxical movement during sleep, stage 2 (moderately severe VCAP) with abduction restriction during wakefulness and paradoxical movement during sleep, and stage 3 (severe VCAP) with an almost midline position for the vocal cords during both wakefulness and sleep. **CONCLUSIONS:** Laryngoscopy during sleep can disclose subclinical VCAP, making an early diagnosis of VCAP in patients with multiple system atrophy. Stage 2 of VCAP seems to be a suitable stage for tracheostomy in patients with multiple system atrophy. Author.