

Abstract Selection

Speed of onset of action of Tilarin. Donnelly, A., Bernstein, D. I., Goldstein, S., Grossman, J., Schwartz, H. J., Casale, T. B. Department of Internal Medicine, University Hospital, Iowa City, IA, USA. *Allergy* (1996), Vol. 51 (28 Suppl), pp. 14–19.

Two studies have been carried out specifically to examine the speed of onset of action of intranasal nedocromil sodium one per cent (Tilarin) for the relief of symptoms due to ragweed allergic rhinitis. One, a multicentre placebo-controlled comparative study using a QID regimen, one spray per nostril, was designed to assess the speed of onset of action of nedocromil sodium during the first week of treatment in patients with rhinitis symptoms, and to evaluate the efficacy and safety of nedocromil sodium during six weeks of treatment (1). A one-week baseline, the start of which was timed to coincide with the start of the ragweed season, was followed by six weeks double-blind trial treatment; only patients ($n = 166$) who were symptomatic at the end of baseline were included in the double-blind phase. Non-parametric analyses of all variables including a summary score (stuffy nose, runny nose, itchy nose and sneezing) showed that the onset of action of nedocromil sodium occurred on the first day of treatment. Further, patients using nedocromil sodium had less symptoms during the 10 days of peak pollen, at which time physician assessment showed reduced mucosal oedema and nasal discharge, and both patient and clinician opinions favoured nedocromil sodium. No significant adverse events were reported during this six-week study. In the second study (2), 104 patients were randomly allocated to receive either nedocromil sodium or placebo, QID. They then spent 10 hours per day for two consecutive days in Iowa City Park during the peak of the ragweed season. Only patients showing significant symptoms of seasonal allergic rhinitis (SAR) during three hourly baseline assessments were included. Over the two-day period, symptom scores for stuffy nose, runny nose, itchy nose and sneezing, and global symptom summary scores, were recorded at 19 hourly time points. At home in the evening, patients recorded symptom scores for the post-exposure period. In comparison with placebo, nedocromil sodium significantly improved rhinitis symptoms within two hours, and this reduction in SAR symptoms was maintained throughout the two-day exposure period. Post exposure symptom summary scores were also significantly lower in patients treated with nedocromil sodium than in those patients treated with placebo. Overall, very few adverse events were reported, none of them serious. In conclusion, nedocromil sodium one per cent nasal spray acts rapidly, within two hours on the first day of treatment, to reduce ongoing symptoms of SAR. Relief of rhinitis symptoms is maintained throughout the peak pollen period with nedocromil sodium QID, which appears to be a safe and well tolerated treatment for ragweed SAR. Author.

A clinical overview of Tilarin. Knottnerus, I. G., Riley, P. A. Eisons plc, Pharmaceutical Division, Loughborough, Leicestershire, UK. *Allergy* (1996), Vol. 51 (28 Suppl), pp. 28–34.

Tilarin is a nasal spray containing one per cent nedocromil sodium, a non-toxic pyranquinoline dicarboxylate compound with potent antiallergic anti-inflammatory properties. As a first-line topical treatment for seasonal allergic rhinitis (SAR) the pharmacokinetics of nedocromil sodium nasal formulation are such that it rivals sodium cromoglycate for safety. Less than eight per cent of the total dose of nedocromil sodium is systemically absorbed from the nasal mucosa, and this is reversibly bound to plasma proteins and is cleared rapidly from the circulation. Nedocromil sodium is eliminated unmetabolized in the urine and faeces, with an elimination half-life of 5.3 ± 0.9 minutes. No significant adverse effects have been reported following intranasal administration of one per cent nedocromil sodium four times daily, to a total of 964 patients with allergic rhinitis during clinical trials. Laboratory studies have shown that nedocromil sodium has a more wide-ranging pharmacological anti-inflammatory profile than sodium cromoglycate and this is manifest in its clinical efficacy in allergic asthma and rhinoconjunctivitis. Analysis of pooled data from a

series of double-blind, placebo-controlled group comparative studies in SAR patients demonstrated that, despite a significantly lower use of rescue antihistamines than with placebo treatment (31 per cent reduction; $p = 0.005$), four times daily dosage with nedocromil sodium one per cent nasal spray significantly reduced daily symptoms of rhinitis ($p < 0.001$) and was considered effective by the majority of patients ($p < 0.001$). Specific examples of the therapeutic efficacy of nedocromil sodium compared with placebo in patients with grass or ragweed pollen SAR can be found in the literature. One ragweed study (1) included four times daily sodium cromoglycate four per cent nasal spray as an active comparator and showed a consistent, if non-significant, trend in favour of nedocromil sodium one per cent, which was the more effective drug in comparison to placebo. An Italian paediatric study (2) compared nedocromil solution one per cent nasal spray with placebo in 149 children of whom 72 per cent were under 12 years of age. After one week, the clinicians observed a significant reduction ($p = 0.03$) in sneezing with nedocromil sodium and after four weeks, patient ($p < 0.01$) and clinician ($p < 0.001$) opinions favoured the active treatment. Overall, the clinical profile of topical nedocromil sodium in SAR demonstrates fast relief of existing symptoms, sustained efficacy with four times daily use during peak pollen challenge, and a reduced need for concomitant symptomatic therapies. Nedocromil sodium one per cent nasal spray is well tolerated, with minimal side-effects, and is acceptable to a wide age-range of patients. Author.

Clinical implications of the pharmacological profile of Tilarin. Davies, R. J. St Bartholomews Hospital, London, UK. *Allergy* (1996), Vol. 51 (28 Suppl), pp. 8–13.

The pharmacological activity of nedocromil sodium is extensive and the compound should affect a variety of inflammatory processes by preventing activation of the involved cells or blocking release of their mediators. Some *in vitro* actions of nedocromil sodium are particularly relevant to the mechanisms of allergic rhinitis, and the response of the nasal epithelium to pollutants such as ozone. The effects of nedocromil sodium on mucosal mast cells, eosinophils, sensory nerves and nasal epithelial cells can each be linked to its potential clinical effectiveness by our own biopsy studies from patients with active allergic rhinitis. Nedocromil sodium has been shown to modulate production of a number of powerful cytokines, such as GM-CSF and TNF alpha, which are produced by the human nasal epithelium, as well as by involved inflammatory cells and lymphocytes, and which orchestrate the inflammatory response to allergen or to pollutant provocation. So, in addition to inhibiting activated mast cells and eosinophils, nedocromil sodium acts on the nasal epithelium itself to prevent further accumulation of these cells and thus to break the inflammatory chain of events. On this evidence of its preclinical activity, nedocromil sodium promises to become a very useful topical treatment for allergic rhinitis. Author.

Combined left-sided recurrent laryngeal and phrenic nerve palsy after coronary artery operation. Tewari, P., Aggarwal, S. K. Department of Anaesthesiology, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, India. *Annals of Thoracic Surgery* (1996) June, Vol. 61 (6), pp. 1721–1722.

BACKGROUND. Ice/saline slush used along with cold cardioplegia for heart arrest in cardiac operations can cause hypothermic damage to certain structures, an important one being the left phrenic nerve, damage of which results in raised left hemidiaphragm and delayed recovery of the patient. In coronary artery bypass grafting, opening of the pleura and collection of the ice/saline slush in the pleural cavity increases the incidence of injury. **METHODS.** Three of our nonconsecutive patients underwent coronary artery bypass grafting with cold cardioplegia and open pleura, with collection of ice/saline slush in the pleural cavity for a sufficiently long time. **RESULTS.** Simultaneous involvement of left recurrent laryngeal nerve along with left phrenic nerve was

found in all patients without any concurrent topical injury around the larynx. The recurrent laryngeal nerve took eight to 10 months to recover. **CONCLUSIONS:** The left recurrent nerve as it arches around aorta lies in the thorax very close to the parietal pleura and may be prone to hypothermic injury by ice/slush collecting in the pleural cavity during cardiac operations. Judicious use of ice/saline slush had helped in eliminating the problem to some extent. Author.

The maxillofacial surgeon and cranial base surgery. Vaughan, E. D. Regional Centre for Maxillo-Facial Surgery, Walton Hospital, Liverpool. *British Journal of Oral Maxillofacial Surgery* (1996), February, Vol. 34 (1), pp. 4–17.

The paper reviews the role of the maxillofacial surgeon, surgical approaches and osteotomies available to allow comprehensive access to cranial base tumours. Maxillofacial reconstruction using free vascularized flaps to rehabilitate the patients is highlighted. Such reconstruction may also require vascularized bone grafts. The range of microvascular free tissue transfer in cranial base surgery is discussed. The need not to merely reconstruct but to rehabilitate the patient is stressed. The benefits of the latest imaging and navigation systems are outlined. Author.

The free revascularized rectus abdominis myocutaneous flap for the repair of tumour related defects in the head and neck area. Schliephake, H., Schmelzeisen, R., Neukam, F. W. Department of Oral and Maxillofacial Surgery, University Medical School, Medizinische Hochschule Hannover, Germany. *British Journal of Oral Maxillofacial Surgery* (1996), February, Vol. 34 (1), pp. 18–22. The present work reviews a series of 11 consecutive patients who have received free revascularized rectus abdominis myocutaneous flaps for primary reconstruction of soft tissues after ablative tumour surgery in the head and neck area. In 10 patients, a total or subtotal glossectomy had been performed and the flap was used to replace the resected tongue volume. In five of these cases, extensive perforating defects had resulted after additional resection of large portions of the chin and the cheek. Mandibular continuity was restored by a metal plate and the flap was divided into an intraoral and extraoral portion in these patients. In one patient, the flap had been used for closure of a full thickness defect of the calvarium. Nine of the 11 flaps healed uneventfully. In one case, a partial flap loss was encountered after thrombosis of the venous pedicle due to compression as a result of an unfavourable defect anatomy and flap positioning. Primary closure of the abdominal wall was achieved in all cases. A subcutaneous hematoma occurred at the donor site in one patient. According to our present experience, the rectus abdominis free flap may serve as an alternative to the frequently employed latissimus dorsi flap in maxillofacial reconstructions while it offers the possibility for flap elevation simultaneously to the surgical procedures in the head and neck area. Author.

Expression of Epstein-Barr virus-encoded RNAs as a marker for metastatic undifferentiated nasopharyngeal carcinoma. Chao, T. Y., Chow, K. C., Chang, J. Y., Wang, C. C., Tsao, T. Y., Harn, H. J., Chi, K. H. Division of Hematology/Oncology, Department of Medicine, Tri-Service General Hospital National Defense Medical Center, Taipei, Taiwan, Republic of China. *Cancer* (1996), July 1, Vol. 78 (1), pp. 24–29.

BACKGROUND: Epstein-Barr virus (EBV) is associated with undifferentiated nasopharyngeal carcinoma (NPC). EBV-encoded nonpolyadenylated RNAs (EBERs) are often used as a marker to detect EBV-infected NPC cells. This study was conducted to document the expression and determine the significance of EBERs in NPC cells at various metastatic sites. **METHODS:** An *in situ* hybridization (ISH) technique was used to identify the presence of EBERs in paraffin embedded tissues of primary and metastatic sites obtained from 21 patients with NPC. Nineteen of these patients had undifferentiated lesions, and two had squamous cell carcinoma. One hundred and fifty specimens of normal tissues and tissues from patients with a variety of benign and malignant diseases other than NPC served as controls. In the NPC specimens, the expression of latent membrane protein (LMP) and a lytic protein, BZLF-1, were also examined by immunohistochemistry. **RESULTS:** Tissues from all patients with undifferentiated NPC and one patient with squamous cell carcinoma contained EBERs in the malignant cells; the other case of squamous cell carcinoma was negative. In metastatic NPCs, LMP was expressed in 18 per

cent (four of 22) of tissues whereas BZLF-1 was not expressed in any tissues. EBERs were not detected in the 43 patients with normal tissues and benign lesions. In malignant diseases other than NPC, EBERs were detected in only two of 12 cases of non-Hodgkin's lymphoma, one of two cases of Hodgkin's lymphoma, and one of six cases of gastric cancer. **CONCLUSIONS:** By virtue of the direct correlation between latent EBV infection and NPC, the authors conclude that EBERs can be used as a sensitive marker to identify NPC cells at various metastatic sites by techniques of *in situ* hybridization, and that demonstration of EBERs in lesions of undifferentiated histology may be useful as a diagnostic adjunct for NPC presenting as metastatic cancer of unknown origin. Author.

Unusual endocrine presentations of nasopharyngeal carcinoma. Tan, K. C., Nicholls, J., Kung, A. W., Leong, L., Lam, K. S. Department of Medicine, University of Hong Kong, Queen Mary Hospital, Hong Kong. *Cancer* (1996), May 15, Vol. 77 (10), pp. 1967–1972.

BACKGROUND: Nasopharyngeal carcinoma is endemic in Southern China and the majority of patients present with local symptoms due to the tumour. **METHODS:** This report describes two unusual cases of occult nasopharyngeal carcinoma in which the patients initially presented with endocrine manifestations. **RESULTS:** The first patient presented with Cushing's syndrome secondary to ectopic adrenocorticotropic hormone (ACTH) production. Nasolaryngoscopy showed a growth in the left nasal fossa and biopsy revealed a poorly differentiated nasopharyngeal carcinoma that exhibited positive immunostaining for ACTH. The second patient presented with a 10-month history of bone pain over both lower limbs. She was normocalcemic but her serum alkaline phosphatase was markedly elevated. A bone biopsy showed both osteoclastic and osteoblastic activity with widespread fibrosis suggestive of Paget's disease. Three months later, she developed third cranial nerve palsy. Computed tomography investigation revealed a soft tissue mass filling the sphenoid and ethmoid sinuses. Biopsy showed a poorly differentiated nasopharyngeal carcinoma. The bone biopsy was reviewed and immunohistochemistry demonstrated the presence of cells positive for the epithelial marker AE1/3 within the fibrous stroma. Radio-labelled *in situ* hybridization showed that Epstein-Barr virus early RNA was present in these tumour cells and the bone lesions were in fact metastases. **CONCLUSIONS:** Nasopharyngeal carcinoma can present with rather atypical symptoms that may lead to a delay in diagnosis. Therefore, in high risk populations, it is important to consider nasopharyngeal carcinoma as a possible primary tumour in patients with occult carcinomas. Author.

Mandibular excursions and maximum bite forces in patients with temporomandibular joint disorders. Sinn, D. P., de Assis, E. A., Throckmorton, G. S. Division of Oral and Maxillofacial Surgery, University of Texas Southwestern Medical Center, Dallas 75235-9109, USA. *Journal of Oral Maxillofacial Surgery* (1996), June, Vol. 54 (6), pp. 671–679.

PURPOSE: This study evaluated mandibular motion and bite force in patients with temporomandibular joint disorders after joint surgery. **PATIENTS AND METHODS:** Maximum voluntary mandibular motion, maximum excursion during mastication, and maximum bite force were examined in 25 female patients before temporomandibular joint surgery. Their pretreatment performance was compared with that at six weeks, six months, and one year after surgery, and with performance of 26 normal female volunteers. **RESULTS:** Before surgery, all of the patients' movements and bite forces were smaller than those of controls. One year after surgery, maximum interincisal opening increased significantly, but lateral excursion and protrusion remained unchanged. Maximum bite forces increased significantly and nearly reached control levels. **CONCLUSIONS:** Patients with severe restriction in temporomandibular joint function exhibit general improvements in some mandibular movements and in maximum bite force after surgical treatment. Author.

Mediastinal tracheostomy. Maipang, T., Singha, S., Panjapiyakul, C., Totemchokchyakarn, P. Department of Surgery, Faculty of Medicine, Prince of Songkla University Hat-Yai, Thailand. *American Journal of Surgery* (1996), June, Vol. 171 (6), pp. 581–586.

BACKGROUND: Advanced carcinoma of the lower neck with direct extension to the superior mediastinum is a major

therapeutic challenge. Complete removal of the tumours requires a radical operation in order to remove the larynx, portions of trachea and esophagus, and to construct a tracheostomy stoma with intrathoracic trachea. **METHODS:** We present our experience and technique for removal of difficult tumours in this region and construction of mediastinal tracheostomy. A technique for reconstruction of a very short segment of distal trachea is also proposed. Twelve mediastinal tracheostomies were performed; all except three patients underwent total laryngopharyngectomy and resection of tumour with gastric pull-up. **RESULTS:** There were two operative deaths, one from tracheoinnominate artery fistula and the other from cerebral infarction. Complications included pharyngeal fistula (two patients), respiratory failure (1), and osteomyelitis of sternum (1). Post-operative survival was disease-dependent. All patients who survived the operation achieved good airway patency and relief of dysphagia. **CONCLUSIONS:** The method of airway reconstruction by mediastinal tracheostomy is an advance in surgical treatment of malignancies in the cervicothoracic region. By careful selection of patients, successful operation resulted in good palliation and sometimes cure with acceptable quality of life. Author.

A nurse-led preadmission clinic for elective ENT surgery: the first eight months. Koay, C. B., Marks, N. J. Department of Otolaryngology, Royal Berkshire Hospital, Reading. *Annals of the Royal College of Surgery in England* (1996), January, Vol. 78 (1), pp. 15–19.

A nurse-led preadmission clinic was set up in the Department of Otolaryngology of The Royal Berkshire Hospital, Reading, for patients undergoing elective ENT surgery. The progress of the clinic has been monitored during its first eight months of service. A two-part study was undertaken: (a) A prospective study of the process from the time an admission appointment was sent until completion of surgery and, (b) a retrospective review of the case notes to study the quality of clerking and note keeping and the pattern of requests for investigations made by the nurses. In all, 514 patients were invited to attend the preadmission clinic before operation. Of these patients, 454 attended the clinic for preadmission clerking, 440 (96.9 per cent) of whom underwent their operation without complication. All clerking notes were well kept, but a number of unnecessary investigations were requested. It is concluded that a nurse-led preadmission clinic is effective in the management of elective ENT operating lists. It assists in improving the quality of an SHO's training by reducing time spent on service commitments, thereby increasing the potential training time. More guidance to nurses on the use of preoperative investigations is needed. Author.

A clinician friendly computerized head and neck oncology audit: the first year results. Rogers, S. N., Beirne, J. C., Patel, M., Vaughan, E. D., Brown, J. S. Department of Maxillofacial Surgery, Walton Hospital, Liverpool. *Annals of the Royal College of Surgery in England* (1996) January, Vol. 78 (1 Suppl), pp. 14–18. Surgical audit is only as good as the information recorded and data entry is often onerous and the domain of the enthusiastic clinician or research fellow. A head and neck oncology audit which incorporates a specific software program has been established in our department. The software interface increases the user friendliness of two conventional database systems, ACCESS and SUPERBASE and structures data input for the clinical situation. The program has been designed for ease of use by every clinician irrespective of their computer competence. The departmental prospective audit has been active since January 1993 and the essential details on new patient presentation, assessment, surgery and outcome for the first year are included in this article. Author.

Long tracheobronchial and esophageal rupture after blunt chest trauma: injury by airway bursting. Martin de Nicolas, J. L., Gamez, A. P., Cruz, F., Diaz-Hellin, W., Marron, M., Martinez, J. I., Galvez, R., Toledo, J. Department of Thoracic Surgery, Doce de Octubre Hospital, Madrid, Spain. *Annals of Thoracic Surgery* (1996), Vol. 62 (1), pp. 269–272.

Tracheobronchial rupture can be associated with blunt thoracic trauma. An important factor in the pathophysiology of these lesions is reflex closure of the glottis, which can be related to closed chest trauma. We report a case of nonpenetrating thoracic trauma that caused a long membranous tracheal rupture from the subcricoid area to the main carina, extending to both main

bronchi. In addition, a complex esophageal rupture occurred due to the great energy liberated by the airway rupture acting as a real tracheal burst. Both lesions were diagnosed by flexible bronchoscopy. The postoperative period was without serious complications. Author.

Aetiology of bilateral sensorineural hearing impairment in children: a 10 year study. Das, V. K. University Department of Otolaryngology and Audiological Medicine, Manchester Royal Infirmary. *Archives of Diseases in Children* (1996), January, Vol. 74 (1), pp. 8–12.

The study was carried out on children born over a 10 year period from 1981 to 1990 in a defined area known as Greater Manchester and referred to the Centre for Audiology or the Manchester Royal Infirmary for specialist audiological assessment. The children were investigated for possible congenital or intrauterine infection. Perinatal assessment was carried out in conjunction with paediatricians for adverse aetiological factors. Full medical histories were obtained with detailed family history relevant to hearing impairment and any associated condition or syndrome. Parents and siblings were examined and hearing assessed. A total of 339 cases was studied. Children with positive family history of deafness in parents or siblings, or both, constituted 23.3 per cent of the cases (genetic group). Other aetiological groups showed the following distribution: cause unknown 33.9 per cent; perinatal group 12.8 per cent; congenital infections 8.2 per cent; bacterial meningitis 6.5 per cent; chromosomal anomalies 5.3 per cent; syndromal group 5.3 per cent; and miscellaneous group 4.7 per cent. The high incidence of genetic causes indicates that steps should be taken to facilitate genetic counselling and conceivably to reduce the numbers affected. Author.

Enteroviral pharyngitis diagnosed by reverse transcriptase-polymerase chain reaction. Sharland, M., Hodgson, J., Davies, E. G., Booth, J., Jeffery S. Paediatric Infectious Diseases Unit, St George's Hospital, London. *Archives of Diseases of Children* (1996), May, Vol. 74 (5), pp. 462–463.

The role of enteroviruses in childhood pharyngitis was investigated using enteroviral specific reverse transcriptase-polymerase chain reaction (RT-PCR). Viral/bacterial throat swabs were taken from 50 children with acute pharyngitis and 26 controls. A positive culture was identified in only 26 per cent of children with pharyngitis (adenovirus 10 per cent, group A streptococci two per cent), and none of the controls. Enteroviral RT-PCR was positive in eight per cent of the pharyngitis group and none of the controls. Enteroviruses are an important cause of pharyngitis in childhood. Author.

The use of duplex ultrasonography in penetrating neck trauma. Ginzburg, E., Montalvo, B., LeBlang, S., Nunez, D., Martin, L. Department of Surgery, University of Miami School of Medicine, Fla, USA. *Archives of Surgery* (1996), July, Vol. 131 (7), pp. 691–693.

OBJECTIVE: To compare intraoperative findings and/or angiography with colour-flow duplex scan. **DESIGN:** This prospective double-blind study was performed on all stable patients with zone 1, 2 or 3 penetrating neck trauma. Results of angiographic or intraoperative findings were compared with the results of duplex ultrasonographic scans. **MAIN OUTCOME MEASURES:** Fifty-five patients were studied over a two-year period in which the distribution of injuries included 23 stab wounds (42 per cent), 30 gunshot wounds (54 per cent), and two motor vehicular lacerations (four per cent). There were 42 patients (76 per cent) with normal ultrasonographic results and 13 patients (24 per cent) with abnormal ultrasonographic results. The true-negative rate was 100 per cent; however, there were two false positives resulting in 100 per cent sensitivity and 85 per cent specificity. **CONCLUSIONS:** Duplex ultrasonography provides an excellent diagnostic modality with cost-saving, patient-friendly characteristics and a low rate of morbidity. It should be instituted as the primary diagnostic procedure of choice for penetrating neck trauma. Author.

Longitudinal assessment of physiological and psychophysical measures in cochlear implant users. Brown, C. J., Abbas, P. J., Bertschy, M., Tyler, R. S., Lowder, M., Takahashi, G., Purdy, S., Gantz, B. J. University of Iowa, Department of Otolaryngology-Head and Neck Surgery, Iowa City, USA. *Ear and Hearing* (1995), October, Vol. 16 (5), pp. 439–449.

OBJECTIVE: The purpose of this study was to evaluate the effects of long-term electrical stimulation on human cochlear implant users. **DESIGN:** Repeated measures of electrically evoked auditory brain stem response (EABR) threshold, slope of the EABR growth function, and behavioural measures of threshold and dynamic range were made for a group of 22 Ineraid cochlear implant users and 19 Nucleus cochlear implant users over a three- to five-year period. **RESULTS:** Data from both Ineraid and Nucleus cochlear implant users suggest that EABR threshold, slope of the EABR growth function, and behavioural measures of threshold and dynamic range remain reasonably stable for periods up to five year postimplant. **CONCLUSIONS:** The results of this study show little evidence that prolonged electrical stimulation through daily use of a cochlear implant has deleterious effects on the auditory system. Author.

Preliminary results of a randomized trial comparing neoadjuvant chemotherapy (cisplatin, epirubicin, bleomycin) plus radiotherapy vs. radiotherapy alone in stage IV (> or = N2, M0) undifferentiated nasopharyngeal carcinoma: a positive effect on progression-free survival. International Nasopharynx Cancer Study Group. VUMCA I trial. Institute Gustave Roussy, Rue Camille Desmoulins, Villejuif, France. *International Journal of Radiation, Oncology, Biology and Physiology* (1996), June 1, Vol. 35 (3), pp. 463-469.

PURPOSE: Our Phase II trial using bleomycin, epirubicin, and cisplatin (BEC) protocol in the treatment of loco-regionally advanced undifferentiated nasopharyngeal carcinoma (UCNT) patients has shown encouraging results with high objective response, disease-free survival, and overall survival rates. To establish the value of this BEC regimen as neoadjuvant chemotherapy, we initiated in 1989 a large international Phase III trial. It compares three cycles of BEC followed by radiotherapy to radiotherapy alone. **METHODS AND MATERIALS:** From November 1989 to October 1993, 339 patients with negative metastases workup, stratified by accrual centre have been randomized, 168 to radiotherapy alone and 171 to chemotherapy plus radiotherapy. All patients' characteristics were well balanced in both arms. There was a quality control/data verification by specialist panel (radiology, histology, radiotherapy, chemotherapy) and external policy board expert every 60-80 patients having completed treatment. **RESULTS:** With a median follow-up of 49 months (range: 23-70), despite an excess of treatment-related deaths in the neoadjuvant chemotherapy arm (eight vs. one per cent), there is a significant difference in disease free survival favouring the chemotherapy arm ($p < 0.01$). The proportion of local and/or regional metastases was comparable in both arms. No difference in overall survival is seen but the numbers of events needed for analysis has not yet been reached. **CONCLUSIONS:** BEC type neoadjuvant chemotherapy has a significant impact in the natural history of UCNT. Further follow-up is needed to establish an eventual overall survival difference. Author.

Vocal tract area functions from magnetic resonance imaging. Story, B. H., Titze, I. R., Hoffman, E. A. Department of Speech Pathology and Audiology, University of Iowa, Iowa City 52242, USA. *Journal of Acoustic Society of America* (1996), July, Vol. 100 (1), pp. 537-554.

There have been considerable research efforts in the area of vocal tract modelling but there is still a small body of information regarding direct 3-D measurements of the vocal tract shape. The purpose of this study was to acquire, using magnetic resonance imaging (MRI), an inventory of speaker-specific, three-dimensional, vocal tract air space shapes that correspond to a particular set of vowels and consonants. A set of 18 shapes was obtained for one male subject who vocalized while being scanned for 12 vowels, three nasals, and three plosives. The 3-D shapes were analysed to find the cross-sectional areas evaluated within planes always chosen to be perpendicular to the centreline extending from the glottis to the mouth to produce an 'area function'. This paper provides a speaker-specific catalogue of area functions for 18 vocal tract shapes. Comparisons of formant locations extracted from the natural (recorded) speech of the imaged subject and from simulations using the newly acquired area functions show reasonable similarity but suggest that the imaged vocal tract shapes may be somewhat centralized. Additionally, comparisons of the area functions reported in this study are compared with those from four previous studies and demonstrate general similarities in shape but

also obvious differences that can be attributed to differences in imaging techniques, image processing methods, and anatomical differences of the imaged subjects. Author.

Sleeping position and upper airways bacterial flora: relevance to cot death. Bell, S., Crawley, B. A., Oppenheim, B. A., Drucker, D. B., Morris, J. A. Department of Microbiology, Withington Hospital, Manchester. *Journal of Clinical Pathology* (1996), February, Vol. 49 (2), pp. 170-172.

The hypothesis that the prone sleeping position is associated with accumulation of upper airways secretions and increased bacterial growth was investigated in adults. Ten subjects with upper respiratory tract infection lay prone for one hour and then supine for one hour. Nasal swabs after the prone period yielded higher bacterial counts than swabs obtained after the supine period. This result could be relevant to sudden infant death syndrome (SIDS), as infants who sleep in the prone position are at increased risk of SIDS and one theory is that death is caused by toxins produced by bacterial overgrowth in the upper respiratory tract following a viral infection. Author.

Surgical cricothyroidotomy in trauma patients: analysis of its use by paramedics in the field. Jacobson, L. E., Gomez, G. A., Sobieray, R. J., Rodman, G. H., Solotkin, K. C., Misinski, M. E. Indiana University School of Medicine, Indianapolis, USA. *Journal of Trauma* (1996), July, Vol. 41 (1), pp. 15-20.

OBJECTIVE: To analyse the indications for and the success rate, complications, and neurologic outcomes of surgical cricothyroidotomy when performed in the field by ambulance paramedics. **METHODS:** The ambulance and hospital records of all trauma patients on whom a surgical cricothyroidotomy was attempted in the field by ambulance paramedics over a five-year period were reviewed. A telephone survey of survivors was used to assess long-term complications and neurologic outcome. **RESULTS:** Surgical cricothyroidotomy was attempted on 50 patients, or 9.8 per cent of those requiring definitive airway control. The most common indications were clenched teeth, blood or vomit obscuring visualization of the upper airway, severe maxillofacial injuries, and inaccessibility because the patient was trapped. Airway establishment was successful in 47 patients (94 per cent). Major complications occurred in two patients (four per cent), where inadvertent dislodgement of the tube developed, requiring replacement. No patient developed significant subglottic stenosis. Nineteen patients (38 per cent) survived and no patient died because of an inadequate airway. Evaluation of neurologic outcome revealed 12 patients (63 per cent) with no significant deficits, three (16 per cent) with moderate disability, two (10 per cent) with severe disability, and only two in a persistent vegetative state. **CONCLUSIONS:** Surgical cricothyroidotomy can be performed on the critically injured patient in the field by ambulance paramedics with a high success rate and a low complication rate. The use of surgical cricothyroidotomy should be included in airway protocols for well-trained, ambulance Advanced Life Support paramedics. Author.

The prevention of hearing loss worldwide. Alberti, P. W. Department of Otolaryngology, University of Toronto, Canada. *Scandinavian Audiology Supplement* (1996), Vol. 42, pp. 15-19.

The prevalence of disabling hearing loss (>40 dB, average 0.5-4 KHz) is at least 120 million worldwide. It is estimated that half of this loss is preventable by primary means. These include genetic counselling, stricter supervision of ototoxic drug use, vaccination against common viral diseases, measles, mumps and in selected populations, rubella; vaccination against meningitis, better management of acute respiratory infections, noise control and the appropriate use of hearing protection. Education of individuals, communities and governments is an essential prerequisite to implementation. Author.

The WHO programme for the prevention of deafness and hearing impairment. Thylefors, B. I. Programme for the Prevention of Deafness and Hearing Impairment, World Health Organization, Geneva, Switzerland. *Scandinavian Audiology Supplement* (1996), Vol. 42, pp. 21-22.

The WHO Programme for the Prevention of Deafness and Hearing Impairment (PHD) was established in 1987 to deal with causes of avoidable hearing loss, particularly in developing countries. The Programme is developing its strategies on the basis

of essential ear care as part of primary health care, and the collection of epidemiologically sound data on ear disease and hearing impairment. A uniform Ear Examination Form is being finalized, for use in field surveys. The PDH Programme suffers from not having adequate resources available, and few countries have so far taken on the prevention of deafness as a health care

issue. In the Eastern Mediterranean, South-East Asia and Western Pacific Regions, a number of national programmes will hopefully develop in the near future. Particular issues for the next two years include ototoxicity and the management of otitis media. Overall, the priority is to obtain programme staff and a more adequate working budget. Author.