

Abstract Selection

Sentinel node excision for the diagnosis of metastatic neuroendocrine carcinoma of the skin: a case report. Javaheri, S., Cruse, C. W., Stadelmann, W. K., Reintgen, D. S. Department of Surgery, College of Medicine, University of South Florida 33606, USA. *Annals of Plastic Surgery* (1997) September, Vol. 39 (3), pp. 299–302.

The technology of sentinel node lymphoscintigraphy has made it possible to map and identify the lymph nodes draining the site of a primary cutaneous malignancy. This technique is now being used in the treatment of melanoma, and breast and vulvar carcinoma. With melanoma and breast carcinoma, the histology of the sentinel lymph node (SLN) has been found to be reflective of the histology of the remainder of the nodal basin. The concept of sampling the SLN is to provide an accurate staging for the entire nodal basin, obviating the need for a complete lymphadenectomy if the SLN is negative. It is believed that cutaneous malignancies with a propensity for regional metastasis, such as neuroendocrine carcinoma of the skin, may spread via a similar lymphatic pathway involving an SLN. Using this technique we identified and excised the SLNs in a patient with a neuroendocrine carcinoma of the skin that contained the only focus of metastatic disease. Although this technique is still investigational we believe it holds great promise in being able to detect occult metastatic nodal disease in clinically node-negative patients. Author.

Audiometric patterns of genetic non-syndromal sensorineural hearing loss. Martini, A., Milani, M., Rosignoli, M., Mazzoli, M., Prosser, S. ENT Department Ferrara University, Italy. *Audiology* (1997) July-August, Vol. 36 (4), pp. 228–36.

Sixty-five families with non-syndromal sensorineural hearing loss (NS-SNHL) of genetic aetiology were subtyped according to Gorlin *et al.* Individual audiogram shapes were also classified in order to detect inter- and intra-familial variations. In 48 families with an Autosomal Dominant (AD) inherited form, 26 exhibited the features of (high-frequency) progressive NS-SNHL, 12 those of mid-frequency NS-SNHL, five were affected by congenital low-frequency NS-SNHL; one kindred showed a progressive low-frequency pattern and another one a unilateral NS-SNHL; only three kindreds were affected by severe congenital NS-SNHL. Autosomal Recessive (AR) inherited forms were composed of nine kindreds with severe congenital NS-SNHL, and seven with moderate congenital NS-SNHL. One X-linked form was identified. AD- and AR-inherited NS-SNHL differed significantly both in severity of hearing impairment and in audiogram shapes. With few exceptions, in each family classified according to Gorlin, most of the affected subjects shared the same audiogram profile. Intrinsic progression of the disease versus ageing was studied in the larger subtype of individuals with the high-frequency loss. Gorlin's classification still remains the best system to classify NS-SNHL, and can provide a broad base to separate a very heterogeneous group of disorders. Results obtained in gene mapping in single large human families or in homologous gene search could be tested in our families. For some of them, namely those with high frequency progressive and low-frequency NS-SNHL, testing should already be feasible. Author.

Acoustic neuroma and the eye. Rogers, N. K., Brand, C. S. Department of Ophthalmology, Royal Hallamshire Hospital, Sheffield, UK. *British Journal of Neurosurgery* (1997) August, Vol. 11 (4), pp. 292–7.

A retrospective survey is presented of the case records of 138 patients who had undergone operative treatment for acoustic neuroma. The nature and incidence of ophthalmic features prior to and following surgery is documented. The study covers 12 years in two regional neurosurgical centres, under the care of six

different neurosurgeons, one otolaryngologist and nine ophthalmologists. Of the 138 records examined 61 patients (44 per cent) required lid surgery of one variety or another. Eighteen (13 per cent) developed minor superficial exposure keratopathy, 13 (nine per cent) developed corneal opacification or clouding, two had recurrent infective abscesses and four developed optic atrophy. The development of corneal complications strongly correlates with the presence of documented preoperative fifth nerve involvement. Postoperative oculomotor cranial nerve palsies were seen in 10 patients (seven per cent). Ophthalmologists should be involved in the perioperative management of these patients and certainly before irreversible corneal damage has occurred. Author.

Cancer of the pyriform sinus: trends towards conservative treatment. Allal, A. S. Division de radio-oncologie, Hôpital universitaire de Genève, Suisse. *Bulletin on Cancer* (1997) July, Vol. 84 (7), pp. 757–62.

Despite progress in diagnostic methods, radiotherapeutic and surgical techniques, and the development of new chemotherapeutic agents, the prognosis of pyriform sinus carcinomas has not improved in a significant way over the last two decades. Whatever the treatment approach, for all stages combined, the overall survival at five years remains modest and rarely exceeds 30 per cent. Deaths from distant metastases, second cancers and intercurrent diseases represent 30 to 40 per cent of cases. For this, any improvement in loco-regional control does not necessarily translate into a gain in survival. Thus, for these patients it is judicious to consider not only the loco-regional control but also the quality of life since larynx preservation is concerned. In this review article, the results of different treatment approaches are illustrated by the most representative series in the recent literature. Early stages (T1-2) are managed conservatively either by radical radiotherapy or conservative surgery, although the former is the most frequently utilized as it requires less stringent patient selection. For more advanced stages (T3-4), recent tendencies appear to lean toward the use of primary radical radiotherapy with or without chemotherapy, with surgery reserved for persistent or recurrent tumour. However, this strategy is still under study and the initial results should be confirmed. Author.

Malignant mucosal melanoma of the head and neck: review of the literature and report of 14 patients. Manolidis, S., Donald, P. J. Department of Otolaryngology – Head and Neck Surgery and Pharmacology, Tufts University School of Medicine, Boston, Massachusetts 02111, USA. *Cancer* (1997) October 15, Vol. 80 (8), pp. 1373–86.

BACKGROUND: Fortunately, primary malignant mucosal melanoma of the head and neck is a rare entity. A paucity of data elucidating the predictive factors as well as the unpredictable and aggressive biologic behaviour of mucosal melanoma compound the vexing clinical situation. This review summarizes what the literature reveals about the epidemiology, patient survival, patterns of local recurrence, and local and distant metastasis of the disease. Over 1,000 patients with this disease have been reported. Survivals at five and 10 years is 17 per cent and five per cent, respectively. Approximately 19 per cent of patients present with lymph node metastasis and another 16 per cent develop lymph node metastases after treatment, whereas 10 per cent present with distant metastasis. Local metastasis does not affect survival; this is in sharp contrast with skin melanoma. Over 50 per cent of patients experience local treatment failure, and salvage treatment is effective in only 25 per cent of these cases. Local failure is the harbinger of distant metastases. Patients with nasal mucosal melanoma have a 31 per cent five-year survival rate, whereas sinus melanoma patients fare poorly, with a zero per cent

rate of five-year survival. **METHODS:** The authors conducted a retrospective review of 14 patients with characteristics similar to those in the literature in terms of outcome. **RESULTS:** The five-year survival rate for these patients was 14 per cent. Whole-body positron emission tomography was performed on three patients to detect metastatic disease. The patterns of local recurrence, distant metastasis, and survival for these patients were compared with the same data for patients described in the literature. **CONCLUSIONS:** Surgery appears to have the greatest efficacy in the management of mucosal melanoma, although radiation therapy may play an increasingly important role in the future. Author.

Non-Hodgkin's lymphoma of the paranasal sinuses: clinical and pathological features, and response to combined-modality therapy. Hausdorff, J., Davis, E., Long, G., Hoppe, R., van der Pas, M., Lassman, C., Kamel, O., Jacobs, C. Department of Medicine, Stanford University, California, USA. *Cancer Journal for Science in America* (1997) September-October, Vol. 3 (5), pp. 303-11.

PURPOSE: Lymphomas of the paranasal sinuses may have poorer prognoses compared with other extranodal lymphomas of the head and neck, and are not well defined as a particular clinicopathologic entity. The outcome of combined-modality therapy and central nervous system (CNS) prophylaxis has not been fully determined. **PATIENTS AND METHODS:** We retrospectively reviewed our experience with 16 consecutive, carefully defined patients, all treated with both chemotherapy and radiotherapy. **RESULTS:** There were 11 men and five women, mean age 52. All presented with local symptoms; 13 had stage I or II disease. Thirteen had diffuse large cell lymphoma, two diffuse mixed, and one small noncleaved. Phenotyping revealed 10 B-cell, four T-cell, and two T or natural killer (NK). Most received CHOP (cyclophosphamide, doxorubicin, vincristine, prednisone) chemotherapy; the order of chemotherapy and radiotherapy varied. Twelve received CNS prophylaxis. Of 12 complete responses, six relapsed, all at distant sites, and two died during initial therapy. Five-year survival was 29 per cent, and median survival 18 months. Four of 10 B-lineage patients were relapse-free at four years; all six T- or T/NK-lineage patients relapsed or were dead within six months. Tumours of T or NK lineage often expressed CD56 and showed evidence of Epstein-Barr viral infection; otherwise, pathological features were not predictive of lineage or outcome. Neither age nor lactate dehydrogenase predicted prognosis. No complete responder recurred in the CNS as site of first relapse. **CONCLUSION:** Despite localized stage at presentation, sinus lymphoma is an aggressive disease, characterized by distant relapse and early mortality. Combined-modality therapy with CNS prophylaxis improves outcome compared with radiotherapy alone; however, prognosis remains poor. Patients with T-lineage disease appear to have a particularly bad outcome. Autologous bone marrow transplantation should be evaluated as first-line therapy for those at high risk of relapse. Author.

Dynamics of MLAEP changes in midazolam-induced sedation. Morlet, D., Bertrand, O., Salord, F., Bouliou, R., Pernier, J., Fischer, C. Mental Process and Brain Activation, INSERM U280, Lyon, France. morlet@lyon151.inserm.fr. *Electroencephalographic Clinical Neurophysiology* (1997) September, Vol. 104 (5), pp. 437-46.

This study aimed at assessing the effects of midazolam (MDZ) sedation on auditory brainstem (BAEP) and middle latency (MLAEP) evoked potentials in intensive care conditions. Ten ventilated comatose patients were receiving an intravenous MDZ bolus dose (0.2 mg/kg) followed by a two h continuous infusion (0.1 mg/kg/h). MLAEPs and BAEPs elicited by clicks (90 dB HL + masking) were simultaneously and continuously monitored during the first six h and for 30 min the next morning. We found no effect of MDZ sedation on BAEPs. Only MLAEP components were modified. However, none of the patients presented any total abolition of the MLAEPs. Bolus injection led to very early alteration of cortical responses, beginning after five min and lasting almost one h (maximum Pa latency increase, 3.1 ms; maximum Pa-Nb amplitude decrease, 46 per cent). During continuous infusion, MLAEPs remained slightly, although significantly, altered (Pa latency, +1.3 ms; Pa-Nb amplitude, 27 per cent). The Nb wave seemed to be modified earlier and to return to normality later than the Pa wave. These findings incite a careful interpretation of MLAEP tracings acquired during the first hour following MDZ bolus injection. If possible, MDZ should be

administered as continuous infusion for reliable interpretation of evoked potential changes in intensive care unit, or during surgery. Author.

Impaired deglutitive airway protection: a videofluoroscopic analysis of severity and mechanism. Kahrilas, P. J., Lin, S., Rademaker, A. W., Logemann, J. A. Department of Medicine, Northwestern University Medical School, Chicago, Illinois 60611-3053, USA. *Gastroenterology* (1997) November, Vol. 113 (5), pp. 1457-64.

BACKGROUND AND AIMS: Laryngeal vestibule penetration is a prerequisite for deglutitive aspiration. This study aimed to analyse the mechanism and model the risk of laryngeal penetration before or during the pharyngeal swallow. **METHODS:** Videofluoroscopic swallowing studies of 29 patients with neurogenic dysphagia with penetration before or during the pharyngeal swallow were compared with 12 controls. A stepwise regression analysis was used to define the coordinative defects leading to bolus penetration into the laryngeal vestibule. The mechanism was biomechanically analysed. **RESULTS:** The stepwise regression modelled a laryngeal penetration index from the coordination between laryngeal vestibule closure and bolus release at the glossopalatal junction and the timing of upper esophageal sphincter opening relative to glossopalatal junction opening. The model accounted for 86 per cent of the observed variance in severity of laryngeal penetration among the dysphagics. The observed incoordination resulted from both delayed initiation and slowed enactment of deglutitive laryngeal elevation. **CONCLUSIONS:** A dysphagic individual's risk of incurring laryngeal penetration before or during one-, three-, or five-ml swallows is proportional to two temporal measures of coordination made from one-ml swallows. The severity of the relevant defects (delayed and slowed laryngeal elevation) is proportional to the severity of swallow dysfunction. Author.

Diesel exhaust particulates enhance eosinophil adhesion to nasal epithelial cells and cause degranulation. Terada, N., Maesako, K., Hiruma, K., Hamano, N., Houki, G., Konno, A., Ikeda, T., Sai, M. Department of Otorhinolaryngology, Chiba University, School of Medicine, Chiba City, Japan. *International Archives Allergy Immunology* (1997) October, Vol. 114 (2), pp. 167-74.

Diesel exhaust particulates (DEP) are a common air pollutant from diesel-engine-powered car exhaust and are thought to cause chronic airway diseases. On the other hand, eosinophils are major components of allergic inflammatory disorders such as asthma, nasal allergy and atopic dermatitis. We examined the effects of DEP and DEP extract (extract of polyaromatic hydrocarbons) on eosinophil adhesion, survival rate and degranulation. Eosinophils, human mucosal microvascular endothelial cells (HMMECs) and human nasal epithelial cells (HNECs) were preincubated in the presence or absence of DEP and DEP extract. ³⁵S-labelled eosinophils were allowed to adhere to monolayers of HMMECs and HNECs. After washing, ³⁵S radioactivity was determined and numbers of adherent eosinophils were calculated using each standard curve. The effects of DEP and DEP extract on eosinophil survival rate and degranulation were also determined. Although neither DEP nor DEP extract affected the adhesiveness of HMMECs and HNECs to eosinophils, five ng/ml of DEP extract and 50 ng/ml of DEP extract each significantly increased eosinophil adhesiveness to HNECs (134 ± 9 and 143 ± eight per cent, respectively; *p* < 0.01 vs. control), but neither effected eosinophil adhesiveness to HMMECs. DEP extract also induced eosinophil degranulation without changing the eosinophil survival rate. Given that eosinophil-derived lipid mediators and toxic proteins play important roles in the development of nasal allergy, the above findings strongly suggest that DEP plays an important role in promoting the nasal hypersensitivity induced by enhanced eosinophil infiltration of epithelium and eosinophil degranulation. Author.

Repair of traumatic orbital wall defects with nasal septal cartilage: report of five cases. Li, K. K. Department of Otolaryngology - Head and Neck Surgery, University of California, Irvine, USA. *Journal of Oral Maxillofacial Surgery* (1997) October, Vol. 55 (10), pp. 1098-102.

PURPOSE: This article reports the use of nasal septal cartilage for the repair of traumatic orbital wall defects. **PATIENTS AND METHODS:** Five patients with disruption of the orbital wall

after facial trauma were included in this retrospective review. All of the patients underwent open reduction with internal fixation of the fractures as well as repair of the orbital wall defect with autogenous septal cartilage. **RESULTS:** Nasal septal cartilage was used in four cases of orbital floor defect and one case of orbital roof defect. All of the cases were successfully treated by restoration of the orbital wall continuity. **CONCLUSION:** Nasal septal cartilage is a readily accessible autogenous material that can be easily harvested with minimal donor site morbidity, and it should be considered when an autogenous orbital implant is needed for the repair of a traumatic orbital wall defect. Author.

The effect of hyaluronic acid on experimental temporomandibular joint osteoarthritis in the sheep. Neo, H., Ishimaru, J. I., Kurita, K., Goss, A. N. Oral and Maxillofacial Surgery Unit, The University of Adelaide, South Australia. *Journal Oral Maxillofacial Surgery* (1997) October, Vol. 55 (10), pp. 1114–9.

PURPOSE: The purpose of this study was to test the effect of repeated injections of hyaluronic acid (HA) on the sheep model of osteoarthrotic temporomandibular joint (TMJ) disease.

MATERIALS AND METHODS: Bilateral osteoarthritis (OA) was induced in the TMJs of six sheep. HA was injected into one joint on seven, 10, 14, 17 and 21 days postoperatively. Normal saline was injected into the contralateral joint. Three sheep were killed at one month and three at three months. The joints were removed and examined macroscopically and histologically. A special scoring system was applied following the modified Mankin's score to evaluate the histologic changes. **RESULTS:** The control group showed severe osteoarthrotic changes in the condyle, deviation in form from normal morphology, and marked marrow fibrosis. The HA-treated group showed less deviation from normal condylar morphology. The histologic scores at one month were HA 12.6, control 24.2 ($p < 0.001$), and at three months were HA 6.9, control 18.9 ($p < 0.001$). There was a significant difference in osteoarthrotic changes between HA-treated and control TMJs, with the HA-treated TMJs having less severe changes. **CONCLUSION:** Repeated intraarticular injections of HA into a sheep TMJ with experimentally induced OA minimizes the extent of osteoarthrotic change when compared with the control joint. Thus, HA may have a role in preventing the progression of TMJ OA. Author.