The Journal of Laryngology and Otology
September 1996, Vol. **110,** pp. 904–906

Abstract selection

Diagonal earlobe creases and prognosis in patients with suspected coronary artery disease Elliott, W. J., Powell, L. H. Department of Preventive Medicine, Rush Presbyterian-St., Luke's Medical Center, Chicago, Illinois 60612, USA. *American Journal of Medicine* (1996) February, Vol. 100 (2), pp. 205–11.
PURPOSE: To determine whether high-risk patients with unilateral, bilateral, or no earlobe creases (ELC) have different prognoses for common sequelae of coronary heart disease. PATIENTS AND METHODS: Two hundred sixty-four consecutive patients from a university-based coronary care unit or catheterization laboratory were blindly followed up for 10 years, using questionnaires, medical records, and death certificates. The primary outcome measure was time to cardiac event; namely, coronary artery bypass graft (CABG), myocardial infarction (MI), or cardiac death. Analyses included log-rank tests and Cox proportional hazards regression modelling. RESULTS: The number of creased ears was significantly associated, in a graded fashion, with 10-year cardiac event free survival: 43.5 per cent ± 5.7 per cent, 33 per cent ± 6.7 per cent or 17.5 per cent ± 4.6 per cent (mean ± standard error for 0, 1 or 2 ELC, respectively; $P = 0.003$). After adjustment for 10 known cardiac risk factors, including age and left ventricular ejection fraction, the relative risk for a cardiac event for a unilateral ELC, relative to 0 ELC, was 1.33 (95 per cent confidence interval (CI) 1.10 to 1.61, $P = 0.02$), and for bilateral ELC, it was 1.77 (95 per cent CI 1.21 to 2.59, $P = 0.003$). CONCLUSIONS: Ear lobe creases are associated, in a graded fashion, with higher rates of cardiac events in patients admitted to hospital with suspected coronary disease. In such patients, ELC may help to identify those at higher risk for sequelae for coronary disease. Author.

Long-term subjective functional outcome of surgery plus post-operative radiotherapy for advanced stage oral cavity and oropharyngeal carcinoma. Zelefsky, M. J., Gaynor, J., Kraus, D., Strong, E. W., Shah, J. P., Harrison, L. B. Department of Radiation, Oncology, Memorial Sloan Kettering Cancer Center, New York, USA. *American Journal of Surgery* (1996) February, Vol. 171 (2), pp. 258–61; discussion 262.
BACKGROUND: Although long-term cures have been achieved for locally advanced squamous cell carcinomas of the head and neck, there is a paucity of information available regarding patients' perspectives of their functional outcome. PATIENTS AND METHODS: Thirty-five long-term survivors free of disease following surgery and post-operative radiotherapy for advanced cancers of the oral cavity and oropharynx were sent questionnaires to evaluate their long term functional outcome after therapy. The questionnaires included a subjective performance status scale that assessed the patient perceived (1) ability to eat in public, (2) understandability of speech, and (3) normalcy of diet. Twenty-nine of 35 patients participated in this function assessment and are the subjects of this report. RESULTS: The mean function scores for all patients were as follows: 72 for eating in public, 69 for understandability of speech, and 58 for normalcy of diet. Functional results were further analyzed by T stage and anatomic subsite. Inferior results were noted with increasing T stage. A two-way analysis of variance showed that this difference was significant even after adjusting for the effect of anatomic subsite ($P = 0.0002$, $P = 0.018$, and $P = 0.0018$ for the three outcome variables). In addition, patients with base of tongue lesions had a worse functional outcome for both early T state (T1/T2) and advanced T stage (T3/T4) when compared to other subsites. This difference averaged across T stage was statistically significant for understandability of speech ($P = 0.0019$) and normalcy of diet ($P = 0.013$), but was not significant for eating in public ($P = 0.16$). CONCLUSIONS: This performance status scale was found to be a useful tool for functional assessment following definitive therapy for advanced stage head and neck carcinomas. These subjective functional scores deteriorated with increasing T stage. In addition, functional scores for oral tongue, floor of mouth, and tonsillar primaries were superior to those for base of tongue lesions. These functional outcome scores are consistent with the extent of surgery required for the base of tongue subsite and are in direct relation to the patients' T stage in this study population. Author.

Environmental tobacco smoke: a risk factor for pediatric laryngospasm. Lakshmipathy, N., Bokesch, P. M., Cowen, D. E., Lisman, S. R., Schmid, C. H. Department of Anesthesiology, Tufts University School of Medicine, New England Medical Centre, Boston, Massachusetts, USA. *Anesthesia Analgesics* (1996) April, Vol. 82 (4), pp. 724–7.
Adult patients who smoke are known to have airway complications during general anesthesia. The objective of this study was to explore the relationship between environmental tobacco smoke (ETS) exposure in the home and laryngospasm during general anesthesia in pediatric patients. A retrospective, cohort study was performed on pediatric ambulatory patients in the day surgery centre and main operating room of a university hospital. We studied 310 consecutive pediatric patients (all ASA physical status I) who underwent an outpatient elective ear, nose, and throat or urologic surgical procedure in the spring and summer of 1994, and received inhalation induction by mask with halothane. Laryngospasm was identified from quality management and anesthetic records, and included only those patients whose records indicated that succinylcholine was given because of oxygen desaturation and inability to ventilate. Patients' families were questioned within one week after surgery as to the number of smokers in each child's household. Of 96 children with ETS exposure, nine (9.4 per cent) developed laryngospasm. Of the 214 patients without domestic ETS exposure, two (0.9 per cent) developed laryngospasm. The relative risk for developing laryngospasm was 10 times higher in the ETS exposed patients compared with the non-ETS-exposed group (95 per cent confidence interval = 2.2–45.6; $P<0.001$). We conclude that ETS exposure is a strong risk factor for laryngospasm in infants and children during general anesthesia. Author.

Liposarcoma of the base of tongue and tonsillar fossa: A possibly underdiagnosed neoplasm. Saddik, M., Oldring, D. J., Mourad, W. A. Department of Pathology, University of Alberta Hospitals, Edmonton, Canada. *Archives of Pathology and Laboratory Medicine* (1996) March, Vol. 120 (3), pp. 292–5.
Liposarcomas of the head and neck are exceedingly rare, and fewer than 90 cases have been reported in the literature. Liposarcoma of the oral cavity is an even less common entity, and to our knowledge only nine cases have been reported to date. We report the clinical and pathologic findings of a case of well-differentiated liposarcoma of the base of tongue and tonsillar fossa. The patient is a 76-year-old white man with a long-standing history of a mass in the oral cavity and hypopharynx. The mass had been resected several times over the span of 23 years, and diagnoses of lipoma, neurofibroma, mesenchymoma, and angiofibrolipoma have been rendered on different occasions. At the last admission, a polypoid mass of the left tonsillar fossa and base of tongue was resected. The tumour was multinodular and measured 2.5 cm in greatest diameter. Histologically the tumour was ill-defined with infiltrating borders and was composed predominantly of mature adipose tissue with occasional lipoblasts. A small proportion of the tumour consisted of clusters of spindle cells and pleomorphic lipoblasts. Mitotic activity was not seen. The pleomorphic cells were positive for S100 protein and negative for muscle-specific markers. Ultrastructural analysis confirmed the nature of the lipoblasts. Our case depicts the typical natural history and histologic features of liposarcoma of the oral cavity. This tumour is usually well differentiated and have a high recurrence rate and almost no tendency for metastasis. Based on our case and

review of the literature, it appears that well-differentiated liposarcoma of the oral cavity can occasionally be underdiagnosed because of the low mitotic activity and long latent period between the original diagnosis and first recurrence. Author.

Incidence of vocal fold paralysis in infants undergoing ligation of patent ductus arteriosus. Zbar, R. I., Chen, A. H., Behrendt, D. M., Bell, E. F., Smith, R. J. Department of Otolaryngology–Head and Neck Surgery, University of Iowa Hospitals and Clinics, Iowa City 52242, USA. *Annals of Thoracic Surgery* (1996) March, Vol. 61 (3), pp. 814–6.
BACKGROUND: Left-sided, iatrogenic vocal fold paralysis (IVFP) secondary to recurrent laryngeal nerve injury is a potential complication of ligation of patent ductus arteriosus (PDA). This study investigates specific risk factors associated with IVFP. METHODS: A retrospective chart review was performed for all infants cases studied comprised all head and neck melanomas registered with the Scottish Melanoma Group between 1979 and 1992, apart from the three per cent of cases that were unclassifiable or are histogenetic types. The histogenetic types of melanoma were 498 (52 per cent) lentigo maligna melanoma (LMM), 237 (25 per cent) superficial spreading melanoma (SSM) and 218 (23 per cent) nodular melanoma (NM). All types increased in incidence throughout the study period. Patients with LMM (mean age 73 years) and NM (mean 68 years) were significantly older than those with SSM (mean 57 years). There were significant anatomical subsite differences related to sex of patients and histogenetic type of melanoma; melanomas on the face were more frequent in females and 90 per cent of LMM occurred at this site, whereas melanomas on the scalp, neck and ears were more frequent in men. Kaplan-Meier estimates of the probability of survival were produced for the 595 of these 953 patients with five year follow-up details. In this group of patients the prognostic significance of tumour thickness, Clark levels of invasion, ulceration, histogenetic type of melanoma and number of mitoses were studied using stepwise variable selection of procedures. Each of these possible prognostic factors attained individual significance but the tumour thickness was the dominant risk factor in the proportional hazards analysis. When patients were divided into four sex/ulceration subgroups (male/ulcerated, female/ulcerated, male/non-ulcerated, female/non-ulcerated) and analysed by proportional hazards analysis, no variable other than the tumour thickness had any further prognostic effect. Histogenetic type did not remain an independent prognostic variable at this stage. Despite sex and subsite differences, the prognosis for invasive lentigo maligna melanoma does not differ from that for other histogenetic types after controlling for tumour thickness. Author.

Nasopharyngeal carcinoma: an EBV-associated tumour not significantly influenced by HIV-induced immunosuppression. The AIDS/Cancer Working Group. Melbye, M., Cole, T. R., West, D., Kessler, L., Biggar, R. J. Danish Epidemiology Science Centre, Statens Serum Institut, Copenhagen, Denmark. *British Journal of Cancer* (1996) April, Vol. 73 (8), pp. 995–7.
We used a link between cancer (859,398 reports) and AIDS (50,050 reports) registries in the United States to study whether nasopharyngeal carcinoma (NPC) was increased in the population with AIDS. There was no indication of a significantly increased risk up to or after the AIDS diagnosis, which argues against progressively failing immunity being important in the development of this malignancy. Author.

Flow cytometric DNA analysis and lysosomal cathepsins B and L in locally advanced laryngeal cancer. Relationship with clinicopathologic parameters and prognostic significance. Russo, A., Bazan, V., Gebbia, N., Pizzolanti, G., Tumminello, F. M., Dardanoni, G., Ingria, F., Restivo, S., Tomasino, R. M., Leto, G. Institute of Otorhinolaryngology B, School of Medicine, University of Palermo, Italy. *Cancer* (1995), November 15, Vol. 76 (10), pp. 1757–64.
BACKGROUND: The traditional factors of locally advanced laryngeal squamous cell carcinoma (LSCC) have limited predictive value for the identification of high risk patients. Therefore, it is extremely important to define prognostic factors that identify the more aggressive types. Reliable and reproducible prognostic indicators are being investigated to help clinicians identify high risk groups and address more rational treatment. METHODS. Flow cytometric DNA ploidy and S-phase fraction (SPF) measurements were performed on frozen tumour tissues from a consecutive series of 71 patients with Stage III and IV LSCC. Lysosomal cathepsin B and L activity levels were determined biochemically in matched paired sets of tumour tissue and normal mucosa samples. RESULTS. By univariate analysis, lymph node positivity, poor histologic differentiation, DNA aneuploidy, high SPF, and high tumour/mucosa ratio of cathepsin B activity were significantly related to risk of relapse, whereas only DNA ancuploidy and high SPF proved to be significantly related to risk of death. Multivariate analysis showed that high histologic grade and high SPF values (>15.1 per cent) were independently prognostic factors related to risk of relapse (relative risk (RR) − 3.54; 95 per cent confidence limits (CL) = 1.05–12.0; and RR = 4.22; CL − 1.54–11.6, respectively), whereas only high SPF was related to risk of death (RR = 3.63; CL = 1.17-11.3). CONCLUSIONS. S-phase fraction is an independent predictor of relapse free and overall survival in patients with locally advanced LSCC. On the basis of these findings, SPF should be used in addition to other established prognostic factors to refine the prognostic assessment of these patients further. More studies are needed for a better evaluation of the prognostic significance of DNA ploidy and that of lysosomal cysteine proteinases in these tumours. Author.

Basaloid-squamous carcinoma of the nasopharynx. An Epstein-Barr virus-associated neoplasm compared with morphologically identical tumours occurring in other sites. Wan, S. K., Chan, J. K., Lau, W. H., Yip, T. T. Department of Pathology and Radiotherapy, Queen Elizabeth Hospital, Hong Kong. *Cancer* (1995), November 15, Vol. 76 (10), pp. 1689–93.
BACKGROUND. Basaloid-squamous carcinoma is a newly characterized, highly aggressive neoplasm occurring mostly in the base of tongue, hypopharynx, larynx, and esophagus. Its occurrence in the nasopharynx is rare. METHODS. The clinicopathologic features of three cases of basaloid-squamous carcinoma of the nasopharynx are described and were studied for the presence of Epstein-Barr virus (EBV) by in situ hybridization for EBV-encoded small nuclear RNA (EBER). For comparison, basaloid-squamous carcinomas occurring in other sites also were studied for the presence of EBV. RESULTS. EBER was detected in all three cases of basaloid-squamous carcinoma occurring in the nasopharynx, but in none of the 13 cases from other sites including the esophagus, larynx, pharynx, hypopharynx, and nasal cavity. The nasopharyngeal basaloid-squamous carcinomas occurred in two male and one female patients with an age range of 48–70 years. The serum immunoglobulin A against the EBV-viral capsid antigen was elevated in all three cases. Two patients developed cervical lymph node involvement during the course of the disease. All three patients were treated by radiotherapy and survived for longer than 34 months compared with the average reported median survival of approximately two years for basaloid-squamous carcinomas occurring in the usual sites. CONCLUSION. Based on this limited study, basaloid-squamous carcinoma occuring in the nasopharynx appears to be an EBV-associated tumour site subgroup, laryngeal squamous cell carcinoma (n = 32), (P= 0.04). The most prevalent breakpoint was in chromosome band 11q13, occurring in 11 tumours, 10 of which belonged to the k4-subgroup. The two-year survival rate was lower for patients with 11q13 rearrangements (20 per cent) than for those without (60 per cent), both in the series as a whole (P = 0.001), and in th k4-subgroup (P= 0.02). CONCLUSIONS. The results suggest that in SCCIIN the presence of a complex karyotype is associated with poor prognosis, particularly when 11q13 rearrangements are present. Author.

Head and neck liposarcoma. Golledge, J., Fisher, C., Rhys-Evans, P. H. Royal Marsden Hospital, London, England. *Cancer* (1995) September 15, Vol. 76 (6), pp. 1051–8.
BACKGROUND. Liposarcoma of the head and neck region represents approximately one per cent of head and neck sarcomas. Therefore, there are few data on the natural history, presentation, treatment, and prognosis of this neoplasm. METHODS. This study is a report of data from 76 patients with head and neck liposarcoma of whom four were treated at The Royal Marsden Hospital during the past 50 years. RESULTS. The median age of patient presentation was the seventh decade (range, six months-86 years), and 65 per cent of the patients were male. The commonest

site of presentation was the neck (28 per cent), followed by the larynx (20 per cent) and pharynx (18 per cent). Sixty-two per cent of tumours were low grade (well differentiated and myxoid), and 38 per cent were high grade (pleomorphic and round cell). The principal determinant of outcome was histologic grade. Five-year survival by life-table analysis was 67 per cent overall and varied with tumour type as follows: well differentiated 100 per cent, myxoid 73 per cent, pleomorphic 42 per cent, and round cell 0 per cent. Site appears to have had some influence on prognosis. Oral liposarcoma had a poor prognosis with a five-year survival of 50 per cent, despite the low grade of all tumours; however, the five-year survival for laryngeal (89 per cent) and head (83 per cent) liposarcoma was considerably better. Tumour size did not affect prognosis. The mainstay of treatment was surgical excision, used alone in 70 per cent of the cases. Radiotherapy was used with other treated with surgery only (five-year survival, 83 per cent), compared with those receiving surgery plus radiotherapy (five-year survival, 63 per cent), chemotherapy (five-year survival, 33 per cent), and radiotherapy alone (five-year survival, 0 per cent). CONCLUSIONS. Liposarcoma rarely involves the head and neck region. The prognosis for patients with this disease appears to be better than for those with liposarcoma arising elsewhere, particularly in the retroperitoneum. Prognosis is principally dependent on histologic grade. Complete surgical excision provides the most effective treatment. Author.

Evidence of neuronal plasticity within the inferior colliculus after noise exposure: a study of evoked potentials in the rat. Szczepaniak, W. S., Moller, A. R. Department of Neurological Surgery, University of Pittsburgh School of Medicine, PA 15213, USA. *Electroencephalography and Clinical Neurophysiology* (1996) March, Vol. 100 (2), pp. 158–64.

Recent investigations have implicated that the central nervous system has a role in the changes that occur in auditory function following acoustic trauma caused by noise exposure. These investigations indicate that the inferior colliculus may be the primary anatomical location in the ascending auditory pathway where noise-induced neuronal plasticity occurs, thereby resulting in changes in the neuronal processing of auditory information. In the present investigation, we show that the amplitudes of all peaks in the click-evoked response from the external nucleus of the inferior colliculus decrease during a 30 min exposure to a tone (104 dB sound pressure level (SPL) at 4 khz and 0 kHz). After tone exposure, the amplitudes of two of the peaks of the response from the external nucleus of the inferior colliculus that reflect the input from more caudal structures slowly returned to baseline levels, whereas the amplitudes of the two peaks reflecting neuronal activity in the inferior colliculus increased above baseline levels and remained at the increased levels for at least 90 min following exposure to the tone. We also show that exposure to a 4 kHz tone at 104 dB SPL causes changes in the neuronal processing of tone bursts in the form of changes in the temporal integration function for one of the peaks of the response from the external nucleus of the inferior colliculus that originates in the inferior colliculus. Before tone exposure the amplitude of this peak decreased with increasing stimulus duration, but after tone exposure the amplitude of this peak was independent of the duration of the toneburst stimulus. We interpret these changes as evidence that noise exposure (tone exposure) causes changes in the excitability of the inferior colliculus that are not seen in more caudal structures, and these changes are probably a result of a change in the balance between inhibition and excitation in the inferior colliculus. Author.

Cancer of the larynx in Hong Kong: a clinico-pathological study. Lam, K. Y., Yuen, A. P. Department of Pathology, Queen Mary's Hospital, Hong Kong. *European Journal of Surgery and Oncology* (1996) April, Vol. 22 (2), pp. 166–70.

Laryngeal cancer is a relatively common cancer in Hong Kong when compared with other cities over the world. The purpose of this study is to characterize and identify the clinico pathological features of patients with laryngeal cancer being resected or autopsied in our hospital for the years 1973 to 1992. The peak age at presentation of 451 patients (408 males, 43 females) with primary laryngeal cancer resected was 62 years old and 1.6 per cent of patients were under 40. The incidence increased with age in both sexes. The patients were noted to be ageing steadily in the 20-year study period. Most patients (30 per cent) had tumours involving both the supra-glottis and glottis. Histological examination revealed that the cancers comprised squamous cell carcinomas (98.3 per cent), spindle cell carcinoma (0.7 per cent), adenoid cystic carcinoma (0.2 per cent), mucoepidermoid carcinoma (0.2 per cent), atypical carcinoid (0.2 per cent) and chondrosarcoma (0.4 per cent). Most cases of squamous cell carcinomas were moderately differentiated (67.3 per cent). Poorly differentiated squamous cell carcinomas were more often noted in females. Forty-six laryngeal cancers were noted in the study period giving an autopsy incidence of laryngeal cancers of 0.46 per cent. Distant metastases were found in 50 per cent of these autopsied cases. The metastatic lesions were found in the lung (43 per cent), liver (18 per cent), diaphragm/pleura (18 per cent), kidney (nine per cent), bone (seven per cent), heart (five per cent), spleen (two per cent), nostril (two per cent) and small intestine (two per cent). The results indicate that there are different histological subtypes of laryngeal cancer in Hong Kong Chinese and they share similar epidemiological characteristics with those reported in other studies. Author.