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Abstract Selection

Risk factors of tracheostomal recurrence after laryngectomy for laryngeal carcinoma. Yuen, A. P., Wei, W. I., Ho, W. K., Hui, Y. Department of Surgery, University of Hong Kong, Queen Mary Hospital, Hong Kong. *American Journal of Surgery* (1996) September, Vol. 172 (3), pp. 263–6.
BACKGROUND: Tracheostomal recurrence after total laryngectomy for laryngeal carcinoma has a poor prognosis. The independent risk factors of tracheostomal recurrence are, however, not well documented. METHODS: This is a multivariate analysis of the risk factors of tracheostomal recurrence after total laryngectomy for 322 laryngeal squamous cell carcinomas. The factors included in the analysis were sex, age, tumour stage, sites of tumour involvement, preoperative airway obstruction, preoperative tracheostomy, extent of surgical resection, radiotherapy, and pathological resection margin. RESULTS: Seventeen (five per cent) patients developed tracheostomal recurrence. Univariate analysis showed that preoperative airway obstruction, subglottic involvement, and postcricoid extension were significant factors associated with tracheostomal recurrence. Multivariate analysis using logistic regression method showed that both subglottic and postcricoid involvement were independent predisposing factors for tracheostomal recurrence. The tracheostomal recurrence rates were two per cent in patients without the risk factor and 10 per cent in patients with the presence of one or both risk factors. CONCLUSIONS: Subglottic and postcricoid involvement were independent risk factors for tracheostomal recurrence. Author.

Lipomas of the internal auditory canal. Singh, S. P., Cottingham, S. L., Slone, W., Boesel, C. P., Welling, D. B., Yates, A. J. Department of Pathology, Ohio State University Medical Center, Columbus, OH 43210–1228, USA. *Archives of Pathological Laboratory Medicine* (1996) July, Vol. 120 (7), pp. 681–3.
Lipoma of the internal auditory canal is a rare tumour that may be confused clinically with the much more common vestibular schwannoma. We present two cases of lipoma of the internal auditory canal. The clinical presentation is indistinguishable from that of vestibular schwannomas. The high signal intensity on T1-weighted magnetic resonance imaging, both with and without contrast, is consistent with other reports of lipoma. Review of the literature shows that lipomas of the internal auditory canal are histopathologically similar to lipomas of the cerebellopontine angle. The symptoms, erosive effect on the auditory canal, and gross appearance of this uncommon tumour are sometimes difficult to differentiate from those of a vestibular schwannoma. The diagnosis can be established by intraoperative examination of frozen sections. Author.

Results of definitive radiotherapy in T1 and T2 glottic carcinoma: Institute of Rotary Cancer Hospital experience. Mohanti, B. K., Tandon, D. A., Bahadur, S., Rath, G. K., Tanwar, R. K., Lal, P., Biswal, B. M. Department of Radiation Oncology, Institute Rotary Cancer Hospital, New Delhi, India. *Australasia Radiology* (1996) August, Vol. 40 (3), pp. 287–90.
Early glottic carcinomas (T1 and T2) constitute only two per cent of all laryngeal cancers in our data. Seventy patients were seen between 1985 and 1992. All patients were treated by cobalt-60 small field radiotherapy using a beam directed shell. The total dose delivered was 60–65 Gy in 31 patients and 66–70 Gy in 39 patients. The follow-up period ranged from five to 126 months, with a mean follow-up of 37 months overall and 55 months in the surgical salvage group. Radiation therapy controlled disease in 71 per cent (50 of 70) of patients overall; 75 per cent with T1 and 67 per cent with T2 lesions. Total laryngectomy as salvage surgery was performed in 70 per cent (14 of 20) of patients whose disease recurred. Ultimate control including surgical salvage occurred in 64 (91 per cent) of 70 patients in the present study. The actuarial five year survival was 83 and 80 per cent in T1 and T2 tumours, respectively (statistically insignificant). This report supports the policy of definitive irradiation, reserving surgical salvage for radiation failures in early laryngeal cancers. Author.

Up-regulation of urokinase-type plasminogen activator in squamous cell carcinoma of human larynx. Parolini, S., Flagiello, D., Cinquetti, A., Gozzi, R., Cristini, S., Cappiello, J., Nicolai, P., Rusnati, M., Presta, M., Tosatti, M. M. Department of Biomedical Sciences and Biotechnology, University of Brescia, Italy. *British Journal of Cancer* (1996) October, Vol. 74 (8), pp. 1168–74.
The expression of urokinase-type plasminogen activator (uPA) was investigated in squamous cell carcinoma of the human larynx. For this purpose, tissue extracts from 25 matched samples of normal mucosa and neoplastic larynx were compared for the levels of uPA activity as evaluated by a chromogenic PA assay and sodium dodecyl sulphate-polyacrylamide gel electrophoresis (SDS-PAGE) zymography. Also, uPA antigen was quantified by enzyme-linked immunosorbent assay (ELISA) in 19 cases. The results demonstrate a significant increase in the levels of uPA activity and protein in tumour tissue extracts, more pronounced in tumours with lymph node metastases. Immunohistochemistry performed on 70 biopsies showed that uPA positivity is present both in neoplastic cells and in fibroblast-like cells and macrophages. However, depending on the histological grading and invasive capacity of the tumour, a pronounced intra- and intertumoral heterogeneity in uPA staining was observed. In situ hybridization confirmed the presence of uPA mRNA in both tumour and stromal cells. The present study provides experimental evidence for a role of uPA in the invasive growth of human laryngeal carcinoma. Author.

Prognostic significance of epidermal growth factor receptor in laryngeal squamous cell carcinoma. Maurizi, M., Almadori, G., Ferrandina, G., Distefano, M., Romanini, M. E., Cadoni, G., Benedetti-Panici, P., Paludetti, G., Scambia, G., Mancuso, S. Department of Otolaryngology, Catholic University, Rome, Italy. *British Journal of Cancer* (1996) October, Vol. 74 (8), pp. 1253–7.
Epidermal growth factor receptor (EGFR) content was determined by a radioligand receptor assay in 140 primary laryngeal squamous cell carcinomas (median value of 8.4 fmol mg^{-1} protein, range 0–169.9 fmol mg^{-1} protein). Cox univariate regression analysis using EGFR as a continuous variable showed that EGFR levels are directly associated with the risk of death (chi^2 = 14.56, *P*-value = 0.0001) and relapse (chi^2 = 7.77, *P*-value = 0.0053). A significant relationship between EGFR status and survival was observed at the different arbitrary cut-off values chosen (8, 16 and 20 fmol mg^{-1} protein). The cut-off value of 20 fmol mg^{-1} protein was the best prognostic discriminator. In fact, the five year survival was 81 per cent for patients with EGFR- tumours compared with 25 per cent for patients with EGFR+ tumours ($P<0.0001$). The five year relapse-free survival was 77 per cent for patients with EGFR- tumours compared with 24 per cent for patients with EGFR+ tumours ($P<0.010$). When clinicopathological parameters and EGFR status were examined in the multivariate analysis, T classification and EGFR status retained an independent prognostic value. In this study we demonstrated that high EGFR levels single out patients with poor prognosis in laryngeal cancer. Author.

Familial risks of squamous cell carcinoma of the head and neck: retrospective case-control study. Foulkes, W. D., Brunet, J. S., Sieh, W., Black, M. J., Shenouda, G., Narod, S. A. Department of Medicine, Montreal General Hospital, McGill University, Canada. *British Medical Journal* (1996) September 21, Vol. 313 (7059), pp. 716–21.
OBJECTIVE: To determine the contribution of inheritance to the incidence of squamous cell carcinoma of the head and neck.

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DESIGN: Historical cohort study. First degree relatives of cases with squamous cell carcinoma of the head and neck made up the exposed cohort and first degree relatives of spouses of cases made up the comparison unexposed cohort. SETTING: Ear, nose, and throat clinic in a large metropolitan teaching hospital. SUBJECTS: 1,429 first degree relatives of 242 index cases of squamous cell carcinoma of the head and neck; as controls, 934 first degree relatives of the spouses of 156 index cases. MAIN OUTCOME MEASURES: Relative risk of developing squamous cell carcinoma in first degree relatives of cases compared with risk in first degree relatives of spouses. RESULTS: The adjusted relative risk for developing head and neck cancer if the index case had squamous cell carcinoma of the head and neck was 3.79 (95 per cent confidence interval 1.11 to 13.0). There were no significantly increased risks associated with a family history of cancer at other sites. The adjusted relative risk for squamous cell carcinoma of the head and neck was 7.89 (1.50 to 41.6) in first degree relatives of patients with multiple primary head and neck tumours. CONCLUSIONS: These data suggest that genetic factors are important in the aetiology of head and neck cancer, in particular for patients with multiple primary cancers. Given the prolonged exposure of these subjects to carcinogens, these genetic factors may have a role in modifying carcinogen activity or in host resistance to carcinogens. Inherited factors may be important in persons with environmentally induced cancers. Author.

Self-report of cochlear implant use and satisfaction by prelingually deafened adults. Zwolan, T. A., Kileny, P. R., Telian, S. A. Department of Otolaryngology, University of Michigan, Ann Arbor, USA. *Ear and Hearing* (1996) June, Vol. 17 (3), pp. 198–210.
OBJECTIVE: Prelingually deafened adults tend to demonstrate smaller improvements in speech recognition after cochlear implantation than do postlingually deafened adults, which has led some professionals to believe that prelingually deafened adults receive only minimal benefit from a cochlear implant. The primary objective of this study was to evaluate cochlear implant use and satisfaction by prelingually deafened adults. DESIGN: A questionnaire was administered to 12 prelingually deafened adult cochlear implant patients to evaluate cochlear implant efficacy and satisfaction. Questionnaire results were contrasted with performance on speech recognition tasks. RESULTS: Although these patients demonstrated little or no improvements in speech recognition 12 months postoperatively, most patients reported that they used their device regularly, that they were satisfied with their device, and that using the cochlear implant improved both their expressive and receptive communication skills. CONCLUSIONS: Procedures other than traditional speech recognition measures should be used to evaluate cochlear implant benefit, particularly with prelingually defeaned adults. Author.

Nasal fossa dimensions in normal and nasally obstructed neonates and infants: preliminary study. Corsten, M. J., Bernard, P. A., Udjus, K., Walker, R. Department of Otolaryngology, Children's Hospital of Eastern Ontario, Ottawa, Canada. *International Journal of Pediatric Otorhinolaryngology* (1996) June, Vol. 36 (1), pp. 23–30.
Computed tomography (CT) is a valuable imaging tool in the examination of neonates and infants with nasal obstruction. At present, however, it is difficult to quantitatively evaluate the nasal fossa with CT as normative data and the relative significance of individual nasal fossa dimensions have not been established. A standardized CT image was proposed, and performed on a prospective cohort of 56 infants up to one year of age. A parental questionnaire was used to identify infants with nasal obstruction. Normative data for four nasal fossa dimensions are presented and analysed. The statistical validity of these dimensions in the diagnosis of nasal obstruction was examined; only the maximal posterior bony diameter showed a significant difference between normal and nasally obstructed infants (t-test, $P = 0.05$). Examples of CT findings in the above-mentioned cases as well as past cases of 'choanal stenosis' are demonstrated. Author.

Nasal foreign bodies in children. Tong, M. C., Ying, S. Y., van Hasselt, C. A. Division of Otorhinolaryngology, Department of Surgery, Chinese University of Hong Kong, Prince of Wales Hospital, Hong Kong. *International Journal of Pediatric Otorhinolaryngology* (1996) May, Vol. 35 (3), pp. 207–11.
This study investigates the pattern of pediatric nasal foreign body impaction and its management in a metropolitan area. Data was obtained from 147 children presenting to the Accident and Emergency Department over a four-year period. The majority of foreign bodies were toys and household products. Complications which occurred, such as ingestion of the foreign body or epistaxis were usually related to attempts at removal. Fourteen cases of local complications resulted from button battery impaction. Most of these patients can successfully be managed without complication if correct procedures are adopted. Author.

Otitis media with effusion and S-carboxymethylcysteine and/or its lysine salt: a critical overview. Pignataro, O., Pignataro, L. D., Gallus, G., Calori, G., Cordaro, C. I. Institute of Clinical Otorhinolaryngology, University of Milan, Italy. *International Journal of Pediatric Otorhinolaryngology* (1996) May, Vol. 35 (3), pp. 231–41.
An overview of the placebo-comparative articles retrieved by a literature search on Medline-Embase-Biosis data banks from 1972 to 1993 was performed to evaluate the therapeutic relevance of the medical treatment with S-carboxymethylcysteine (SCMC) and its monohydrate lysine salt (SCMC-LYS) in patients with otitis media with effusion (OME). Ten original published studies were reviewed by an independent physician who assessed their quality by standard nine-items methodology. A meta-analytical approach was used to compare outcomes across all qualifying studies. Because of the heterogeneity of clinical endpoints, a new outcome measure was defined, i.e. overall clinical improvement, which consisted of the number of patients with complete resolution of clinical signs and symptoms and no need for surgical intervention. The objective evaluation criteria of normalization of tympanogram was an additional end-point. Potential confounding variables such as eligibility criteria, treatment protocol and study design of the six methodologically complying studies were statistically homogeneous. No association was found between treatment effect-size and publication date or patients' age. Outpatients with disease duration of <six months, not previously treated, with bilateral ear involvement were included in the studies; half of them presented hyperplasia or hypertrophy of the pharyngeal or the adenoid tissue. Out of 483 patients, 430 (89 per cent) terminated studies and were evaluable. Results from this meta-analysis indicate that patients with OME receiving oral SCMC/-lys benefit from the medical treatment to the extent of avoiding surgical intervention approximately 2.31 times more often than similar patients receiving placebo (ratio of active drug to placebo-effect on overall clinical improvement: 2.31; CI 1.28–4.20, $P<0.01$) and attain reversion to normal of the tympanogram at an extent close to statistical significance (odds ratio: 2.25, CI 0.97–5.22, $P = 0.058$). In conclusion, the use of this new methodology for the evaluation of the mucoactive drug effect in OME has shed light into methodological pitfalls of clinical trials to date and underlines the need for agreed outcome measures, which may modify medical policy, which addresses more and more often to symptomatic treatment. Author.

Expression of antigens associated with the individual stages of the inflammatory response in child and adult as a possible distinctive method for recurrent and chronic tonsillitis. Bussi, M., Carlevato, M. T., Panizzut, B., Majore, L., Giaretta, F., Omede, P. II ENT Department, University of Turin, Italy. *International Journal of Pediatric Otorhinolaryngology* (1996) May, Vol. 35 (3), pp. 243–50.
Monoclonal antibodies (MoAbs) specific for the antigens associated with each stage of an inflammatory response were assayed with tonsillar mononuclear cells (TMNG). MoAbs BMA 27 E 10 and BMA 4 D 10 were used as markers for the early stages, BMA RM 3/1 for the intermediate stage, BMA 25 F 9 for the late stage, and BMA G 16/1 for the chronic stage. TMNC were obtained from patients operated for (1) recurrent tonsillitis with hypertrophy caused by common flora (children); (2) an indication for surgery for chronic tonsillitis in adults; (3) patients who were 'warm' tonsillectomized for a second peri-tonsillar phlegmon. Our results are presented and discussed in the light of their possible clinical significance. Our findings indicate that clinical chronic tonsillitis in the adult really is such. In the adults studied there was a high expression of antigens which is associated with the chronic stages, while the low expression of antigens is associated with the intermediate stage and an even lower antigen expression indicates

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the acute stage. In children what is considered to be chronic tonsillitis may perhaps be more correctly regarded as an expression of recurrent inflammation. Author.

The perceptual structure of pathologic voice quality. Kreiman, J., Gerratt, B. R. Division of Head and Neck Surgery, UCLA School of Medicine 90095-1794, USA. *Journal of the Acoustical Society of America* (1996) September, Vol. 100 (3), pp. 1787–95.
Although perceptual assessment is included in most protocols for evaluating pathologic voices, a standard set of valid scales for measuring voice quality has never been established. Standardization is important for theory and for clinical acceptance, and also because validation of objective measures of voice depends on valid peceptual measures. The present study used large sets (n = 80) of male and female voices, representing a broad range of diagnoses and vocal severities. Eight experts judged the dissimilarity of each pair of voices, and responses were analyzed using nonmetric individual differences multidimensional scaling. Results indicate that differences between listeners in perceptual strategy are so great that the fundamental assumption of a common perceptual space must be questioned. Because standardization depends on the assumption that listeners are similar, it is concluded that efforts to standardize perceptual labels for voice quality are unlikely to succeed. However, analysis by synthesis may provide an alternative means of modelling quality as a function of both voices and listeners, thus avoiding this problem. Author.

Anemia is associated with lower local-regional control and survival after radiation therapy for head and neck cancer: a prospective study. Dubray, B., Mosseri, V., Brunin, F., Jaulerry, C., Poncet, P., Rodriguez, J., Brugere, J., Point, D., Giraud, P., Cosset, J. M. Department of Radiation Oncology, Institut Curie, Paris, France. *Radiology* (1996) November, Vol. 201(2), pp. 553–8.
PURPOSE: To evaluate the prognostic value of anemia in squamous cell carcinomas in the head and neck treated with curative radiation therapy alone. MATERIALS AND METHODS: In a prospective study, the hemoglobin level was measured prior to radiation therapy in 217 patients (188 (87 per cent) men and 29 (13 per cent) women) with cancer of the oral cavity (n = 61 (28 per cent)), oropharynx (n = 53 (24 per cent)), hypopharynx (n = 21 (10 per cent)), and larynx (n = 82 (38 per cent)). Anemia, defined as hemoglobin level below 13.5 g/dl in men and below 12.0 g/dl in women, was diagnosed in 58 (31 per cent) of the men and five (17 per cent) of the women. Median follow-up was 29 months (range, 2-63 months). RESULTS: The two-year actuarial probability of local-regional control was 69 per cent (95 per cent confidence interval, 63 per cent, 76 per cent). Multivariate analysis showed the relative risk of failure of local-regional control to increase for stage T3 and T4 tumours (1.8 (95 per cent confidence interval, 1.1, 3.1)), stage N3 nodes (3.6 (95 per cent confidence interval, 1.8, 7.1)), weight loss (2.2 (95 per cent confidence interval, 1.3, 4.0)), and anemia (1.6 (95 per cent confidence interval, 1.0–2.7)). The relative risk of death increased for stage T3 and T4 tumours (2.5 (95 per cent confidence interval, 1.4, 4.3)), N3 nodes (4.0 (95 per cent confidence interval, 1.0, 7.9)), oral cavity tumours (2.0 (95 per cent confidence interval, 1.2, 3.2)), male sex (4.1 (95 per cent confidence interval, 1.3, 13.1)), weight loss (2.2 (95 per cent confidence interval, 1.3, 3.7)), and anemia (1.7 (95 per cent confidence interval, 1.03, 2.7)). CONCLUSION: Moderate anemia appeared to be an independent prognostic factor in squamous cell carcinoma of the head and neck treated with radiation therapy alone. Author.

Early recurrent otitis media, language and central auditory processing in children. Campbell, N., Hugo, R., Uys, I., Hanekom, J., Millard, S. Department of Communication Pathology, University of Pretoria. *South African Journal of Communication Disorders* (1995), Vol. 42, pp. 73–84.
The study examines the relationships that exist between early recurrent otitis media, language and central auditory processing in children. A restrospective case-control experimental design was employed and ten subjects were allocated to each of the two research groups, namely children with a history of early recurrent otitis media (research group 1) and children without a history of early recurrent otitis media (research group 2). The children in both research groups were in grade one and turning seven years old. The language and central auditory processing of the subjects were assessed using the Clinical Evaluation of Language Function (Wiig and Semel, 1980) and the Willeford Battery of Central Auditory Function (Willeford, 1974). The results showed that the language and central auditory processing of the children with a history of early recurrent otitis media were significantly poorer than that of their disease-free peers. The results stress the importance of vigorous identification and management programmes for children with a history of early recurrent otitis media. Author.

Hearing rehabilitation in a psychosocial framework. Stephens, D. Welsh Hearing Institute, University Hospital of Wales, Cardiff. *Scandinavian Audiology Supplement* (1996), Vol. 43, pp. 57–66.
This paper is primarily concerned with handicap, which emphasizes the psychosocial consequence of hearing loss, its development and a framework for its alleviation. The development of handicap is considered, taking as a starting point the World Health Organization Definitions of disablements and their application to audiology by Stephens and Hetu (1991). This is extended in the light of recent work on the role of significant others and of positive experiences arising from the hearing loss. This approach is then incorporated into an update of the Goldstein/Stephens (1981) management model of audiological rehabilitation which provides a framework applicable in any sociomedical situation. Author.

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