

Abstract Selection

Efficacy of a small single dose of oral dexamethasone for outpatient croup: a double blind placebo controlled clinical trial. Geelhoed, G. C., Turner, J., Macdonald, W. B. Emergency Department, Princess Margaret Hospital for Children, Perth, Australia. *British Medical Journal* (1996) July 20, Vol. 313 (7050), pp. 140–2.

OBJECTIVE: To assess the efficacy of a single dose of oral dexamethasone 0.15 mg/kg in children with mild croup not admitted to hospital. **DESIGN:** Double blind, randomized, placebo controlled clinical trial. **SETTING:** The emergency department of a tertiary paediatric hospital. **SUBJECTS:** One hundred children aged 4–122 months presenting with mild croup. **INTERVENTION:** A single oral dose of dexamethasone 0.15 mg/kg or placebo. **MAIN OUTCOME MEASURE:** Return to medical care with ongoing croup. **RESULTS:** Baseline characteristics of the two treatment groups were similar. Eight children (all from the placebo group) returned to medical care with ongoing croup, one being admitted. There was no reported difference in duration of croup symptoms, duration of viral symptoms, or rate of return to medical care for other reasons. **CONCLUSION:** Oral dexamethasone in a dose of 0.15 mg/kg is effective in reducing return to medical care with ongoing croup in children with mild croup. Author.

Do positive resection margins after ablative surgery for head and neck cancer adversely affect prognosis? A study of 352 patients with recurrent carcinoma following radiotherapy treated by salvage surgery. Jones, A. S., Bin-Hanafi, Z., Nadapalan, V., Roland, N. J., Kinsella, A., Helliwell, T. R. Department of Otolaryngology, University of Liverpool, Royal Liverpool Hospital, UK. *British Journal of Cancer* (1996) July, Vol. 74 (1), pp. 128–32.

It is generally accepted by surgeons that failure to eradicate malignant disease at the primary site has an adverse effect on survival. The present study investigates 352 patients with squamous carcinoma of the head and neck treated by primary radical radiotherapy and who subsequently underwent surgical ablation for a recurrent carcinoma. A total of 303 (86 per cent) patients had a negative resection margin and 49 (14 per cent) had a positive resection margin. Oral carcinoma was 1.7 times more likely to be associated with a positive margin than other tumours ($p = 0.0292$). Actuarial calculations demonstrated that 47 per cent of patients with negative margins and 66 per cent of patients with positive margins developed a primary site recurrence ($p = 0.0286$). Neck node recurrence occurred in 10 per cent of those patients with negative margins and 12 per cent of patients with positive margins. Patients with positive margins had a significantly poorer survival than those with negative margins ($p = 0.022$). Multivariate analysis failed to confirm any independent adverse effect from a positive margin. The five year tumour-specific survival of patients with a positive margin was poorer by 12 per cent than for those patients with a negative margin. The pattern of failure differed between the two groups, with patients having positive margins tending to die of local recurrence. Author.

Photodynamic therapy on the normal rabbit larynx with phthalocyanine and 5-aminolaevulinic acid induced protoporphyrin IX photosensitisation. Kleemann, D., MacRobert, A. J., Mentzel, T., Speight, P. M., Bown, S. G. National Medical Laser Centre, University College London Medical School. *British Journal of Cancer* (1996) July, Vol. 74 (1), pp. 49–58.

Photodynamic therapy (PDT) is a promising technique for the treatment of small tumours in organs where it is essential to minimize damage to immediately adjacent normal tissue as PDT damage to many tissues heals by regeneration rather than scarring.

As preservation of function is one of the main aims of treating laryngeal tumours, this project studied the effects of PDT on the normal rabbit larynx with two photosensitizers, endogenous protoporphyrin IX (PPIX) induced by the administration of 5-aminolaevulinic acid (ALA) and disulphonated aluminium phthalocyanine (AIS2Pc). The main aims of the study were to examine the distribution of protoporphyrin IX and AIS2Pc by fluorescence microscopy in the different regions of the larynx and to assess the nature and subsequent healing of PDT damage. Peak levels of PPIX were found 0.5–4 h after administration of ALA (depending on dose) with highest levels in the epithelium of the mucosa. With 100 mg kg⁻¹, PDT necrosis was limited to the mucosa, whereas with 200 mg kg⁻¹ necrosis extended to the muscle. With 1 mg kg⁻¹ AIS2Pc, 1 h after administration, the drug was mainly in the submucosa and muscle, whereas after 24 h, it was predominantly in the mucosa. PDT at 1 h caused deep necrosis whereas at 24 h it was limited to the mucosa. All mucosal necrosis healed by regeneration whereas deeper effects left some fibrosis. No damage to cartilage was seen in any of the animals studied. The results of this study have shown that both photosensitizers are suitable for treating mucosal lesions of the larynx, but that for both it is important to optimize the drug dose and time interval between drug and light to avoid unacceptable changes in normal areas. Author.

The reduction of radiation mucositis by selective decontamination antibiotic pastilles: a placebo-controlled double-blind trial. Symonds, R. P., McIlroy, P., Khorrami, J., Paul, J., Pyper, E., Alcock, S. R., McCallum, I., Speekenbrink, A. B., McMurray, A., Lindemann, E., Thomas, M. Beatson Oncology Centre, Western Infirmary, Glasgow, UK. *British Journal of Cancer* (1996) July, Vol. 74 (2), pp. 312–7.

The aim of this study was to see if antibiotic pastilles could reduce radiation mucositis pain, dysphagia and weight loss in patients undergoing radical radiotherapy for head and neck cancer. A total of 275 patients with T1–T4 tumours entered the study; 136 were allocated to suck four times daily a pastille containing amphotericin, polymyxin and tobramycin. The remaining 139 patients received an identical placebo. In all, 54 patients were unevaluable (24 active, 30 placebo). Bacteriological monitoring was carried out before and twice weekly during treatment. Both arms of the study were well balanced for T and N stage, age, sex and radiation dose (60 Gy). There was a slight imbalance in the site of disease which had no substantive effect on the results. The primary study end point was the percentage of patients who developed intermediate or thick pseudomembranes. No statistically significant difference was found in this end point, with 36 per cent of patients in the active arm developing this type of membrane compared with 48 per cent in the placebo arm ($p = 0.118$). The estimated odds ratio (placebo/active) of developing an intermediate or thick pseudomembrane was 1.59 (95 per cent CI 0.89–2.82). However, a more sensitive test comparing the worst recorded mucositis grade between the two arms was statistically significant ($p = 0.009$). This indicated that the active pastilles had a beneficial effect, but the magnitude was probably smaller than the trial was designed to detect. There was a reduction in mucositis distribution ($p = 0.002$), mucositis area ($p = 0.028$), dysphagia ($p = 0.006$) and weight loss ($p = 0.009$) in the active arm. There was a clear tendency for patients with positive cultures for aerobic Gram-negative bacteria (AGNB) ($p = 0.003$) and yeasts ($p = 0.026$) during treatment to have more severe mucositis. The active pastilles reduced the percentage of patients with yeast cultures ($p = 0.003$) but had less effect on AGNB. The benefit derived from the pastilles should materially increase patient tolerance to radical radiotherapy for head and neck surgery. Author.

Recurrent aspergilloma of the frontoethmoid sinus in a non-immunocompromised patient. Tierney, P., Thomas, M., Samuel, D., Patel, K. S., Stafford, N. Department of Otolaryngology – Head and Neck Surgery, St Mary's Hospital, London, England. *Journal of the Royal Society for Medicine* (1996) March, Vol. 89 (3), pp. 165–6.

Management of invasive aspergillosis of the paranasal sinuses requires sufficient experience to initiate appropriate investigations and then utilize the correct treatment protocol. Computed tomography (CT) or magnetic resonance imaging (MRI) is essential to show the extent of the disease and diagnosis is confirmed by histological analysis. *Aspergillus flavus* is a ubiquitous soil saprophyte in the Sudan and is responsible for many cases originating from this area. The literature is reviewed and treatment options discussed. Author.

Microendoscopy of the internal auditory canal in vestibular schwannoma surgery. Tatagiba, M., Matthies, C., Samii, M. Neurosurgery Department, Nordstadt Hospital, Hannover, Germany. *Neurosurgery* (1996) April, Vol. 38 (4), pp. 737–40.

Intraoperative microendoscopy was performed for eight patients to access the fundus of the internal auditory canal after retrosigmoid transmeatal surgery of vestibular schwannomas. The transmeatal procedure is usually limited laterally by the labyrinth block. The restricted opening of the internal auditory canal bears a potential risk of incomplete tumour resection. For eight patients with vestibular schwannomas, intraoperative microendoscopy was performed after tumour resection to expose the 'blind' area of the internal auditory canal fundus. An excellent view of the fundus contents was obtained, including Cranial Nerves VII and VIII and the crista transversa. Tumour remnants were not observed in this series. Microendoscopy was shown to be an ideal adjunct to hearing-preserving transmeatal surgery of vestibular schwannomas, enabling the removal of intracanalicular tumours with direct control of the lateral intracanalicular nerve portions. Author.

Are two hearing aids better than one? Andersson, G. Department of Clinical Psychology, Uppsala University, Sweden. Gerhard. Andersson@itp.uu.se. *Perceptions of Motor Skills* (1995), December, Vol. 81 (3 Pt 2), pp. 1130.

The use of hearing aids in 114 persons fitted with one or two hearing aids was compared. Those with two hearing aids registered significantly more daily use of their hearing aids. Author.

Spin lock and magnetization transfer imaging of head and neck tumors. Markkola, A. T., Aronen, H. J., Paavonen, T., Hopsu, E., Sipila, L. M., Tantt, J., I., Sepponen, R. E. Department of Radiology, Helsinki University Central Hospital, University of Helsinki, Finland. *Radiology* (1996) August, Vol. 200 (2), pp. 369–75.

PURPOSE: To evaluate and compare the spin lock and magnetization transfer techniques in the differentiation of benign and malignant head and neck tumours at magnetic resonance (MR) imaging. **MATERIALS AND METHODS:** Forty consecutive patients with histologically verified head and neck tumours (20 malignant and 20 benign tumours, including five infections) were studied with a 0.1-TMR unit. The spin lock and magnetization transfer effects were defined as 1-(signal intensity with stronger preparation pulse/signal intensity with weaker preparation pulse). **RESULTS:** A strong correlation between the spin lock and magnetization transfer effects was found ($r = 85$, $p < 0.001$). With a spin lock effect of 0.48 and a magnetization transfer effect of 0.32 as the thresholds, sensitivity for detecting a malignant tumour was 95 per cent and 94 per cent, respectively, and specificity was 60 per cent and 65 per cent. **CONCLUSION:** Low spin lock and magnetization transfer effects are characteristic of benign tumours. High spin lock and magnetization transfer effects were associated with malignancy, but there were overlapping values for salivary gland infections, some benign tumours, and malignancies. The spin lock technique seems to be an effective method for generating magnetization transfer-based contrast in the head and neck tumours. Author.