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Oral surgery; otology

Hearing loss associated with maxillectomy

Hyde NC, Bailey BMW

Br J Oral Maxillofac Surg 2000; 38: 283-288

Impaired hearing is a frequent side-effect of such surgery, and radiotherapy may have an additional separate effect.

At a London hospital, 38 patients received maxillary surgery for neoplasia over a 10-yr period. Of these, 25 (median age 57yrs, range 16-80) were recalled 6-112 months later (mean 63) and tested for auditory function. In 2/3 patients, at least part of the soft palate had been removed, and in 11 of these, conductive hearing loss (impaired transduction of sound from the meatus to the oval window of the cochlea) was diagnosed. Nine of these 11 showed normal hearing on the untreated side.

In 18 patients, 17 of whom had part of the soft palate resected, tympanometry indicated auditory tube insufficiency on the operated side; and in 15 of these, the opposite ear responded normally. In 3 patients tested prior to surgery, hearing was subsequently impaired on the side of operation only. In 9 patients who had adjuvant radiotherapy, 7 subsequently showed sensorineural hearing loss (produced by sense organ or neural degeneration arising from various causes) on the treated side. Six other patients who had no radiotherapy showed bilateral sensorineural hearing loss from other causes.

The authors recommend that patients receiving such treatment should be warned of the possible complication of hearing loss and have hearing assessed before and after treatment, with consideration given to tympanostomy during surgery if the soft palate is affected.

Paediatric dentistry

Oral health in children undergoing liver transplantation

Sheehy EC, Roberts GJ et al.

Int J Paediatr Dent 2000; 10: 109-119

In a 3 month longitudinal study, the main difference from matched controls was development of gingival overgrowth in transplant patients who were taking the immunosuppressive cyclosporin, but not in those taking the alternative drug tacrolimus.

Oral conditions were assessed in 27 liver transplant patients prior to or soon after surgery, and 3-4 months later, and also in 27 healthy matched control subjects. In the transplant group, 16 children were caries-free, and in the control group, 14. DMFT, DMFS and dfs scores were similar for both groups.

At baseline, plaque and gingivitis affected about half the surfaces in both groups, and gingival overgrowth was very rarely found. There was a small significant difference in overgrowth in children aged 2-12 yrs at the 3 month follow-up. In subjects prescribed cyclosporin, half developed recognizable overgrowth at follow-up; in one of these who had switched to tacrolimus overgrowth was still present. However, in 6 others on tacrolimus, no overgrowth was present. There was a moderate correlation between the amount of

overgrowth and time since transplantation ($p = 0.48$; $p < 0.02$). No mucosal lesions were found in any patients.

The authors comment on the beneficial effect of tacrolimus and recommend the development of dental services to minimize the possibility of infection arising from the oral cavity in transplant patients.

Oncology

Combined treatment of adenoid cystic carcinoma of the salivary glands

Avery CME, Moody AB et al.

Int J Oral Maxillofac Surg 2000; 29: 277-279

A combined surgical and radical radiotherapy approach gave a high survival rate at 10 and 15 yrs.

This study covers all 15 patients with adenoid cystic carcinoma treated by a single surgeon over a 20 year period. Survival rates for this condition are typically reported as less than 50% at 10 yrs, on account of wide infiltration, perineural spread and frequent late metastases.

Adenoid cystic carcinoma was confirmed by multiple pathological examination of 6 specimens removed from major salivary glands and 9 from minor glands in patients of mean age 53 yrs. Another 2 patients who did not receive radiotherapy were excluded, as were 3 with less than 1 yr follow-up. Surgery included a margin of 1-2 mm and radiotherapy was up to a maximum dose of 65 Gy (mean 59). No patient had cervical lymphadenopathy and neck dissection was not performed. Patients received chest radiographs and liver function tests annually at review.

One patient developed lung metastases at 5 yrs, dying at 8 yrs, and 2 patients died of unrelated disease. Disease-specific survival was 100% at 5 yrs and 86% at 10 and 15 yrs. Actuarial survival rates were 100% at 5 yrs and 62% at 10 and 15 yrs. The approach is currently widely recommended.

Oral surgery

Effects of orthognathic surgery on temporomandibular joint dysfunction: a controlled prospective 4-year follow-up study

Panula K, Somppi M et al.

Int J Oral Maxillofac Surg 2000; 29: 183-187

Surgery reduced both TMJ dysfunction and the incidence of headache.

In a Finnish hospital, 60 patients treated with various sagittal split and LeFort I osteotomies for maxillary and mandibular hypoplasias and hyperplasias were compared with 20 controls who had similar conditions but declined elective surgery. All surgical patients had preoperative orthodontic treatment. Follow-up was for an average of 4 yrs in both groups.

In the control group, 75% had TMJ symptoms or signs initially, increasing to 85% at the last examination; 50% reported they suffered from headaches at both visits. In the experimental group, the respective percentages were 73% reducing to 60%, and 62% reducing to 20%. There was a low risk of creating TMJ dysfunction by surgery, and the authors conclude the effects of surgery are largely beneficial. They note, however, that their study did not support the idea of a link between TMJ dysfunction and dentofacial deformity.