

Abstracts on this page have been chosen and edited by Dr Trevor Watts

Endodontics

Pain reduction in untreated irreversible pulpitis using an intraosseous injection of Depo-Medrol

Gallatin E, Reader A et al.
J Endodon 2000; 26: 633-638

Long-acting methylprednisolone may relieve the severe pain associated with pulpitis before definitive endodontic treatment is possible.

Following a diagnosis of an irreversible pulpitis, 40 patients were randomized in a double-blind trial to intraosseous injections of either methylprednisolone (40 mg; 19 subjects) or sterile saline (21).

Injections were given by perforating the buccal cortical plate at a point 2 mm apical to the line joining the gingival margins of the 2 adjacent teeth, vertically in line with the proximal papilla, preferably distally, but mesially if the immediately distal tooth was too close to the tooth with pulpitis. Patients were given a supply of ibuprofen and paracetamol with codeine, with instructions, and asked to keep a pain diary for 1 week, after which endodontic treatment was started.

At baseline, 10 active group subjects had moderate pain, and 9 had severe pain; respective control figures were 7 and 14. By day 2 no active subjects had more than mild pain, but this persisted in 4 subjects to day 7. In the control group, moderate or severe pain persisted in 10 subjects until day 7. These differences were significant, as were other postoperative differences favouring the active group, in medication use and patient-elicited percussion sensitivity.

Oral surgery

Factors affecting neurosensory disturbance after mandibular bilateral sagittal split osteotomy

Ylikontiola L, Kinnunen J et al.
J Oral Maxillofac Surg 2000; 58: 1234-1239

Long-term sensory loss appears very rare, but one third of this series of patients reported a slightly altered mental nerve sensation after 1 year.

Thirty patients who had received sagittal split osteotomy (according to Obwegeser-Dal Pont modification) for correction of mandibular prognathism (8 subjects) or retrognathism (22) were followed for 1 year. Before surgery, lower lip and chin sensation was normal in all subjects. During surgery, the degree of inferior alveolar nerve manipulation was noted. Fixation was with bicortical bone screws. In relation to the 60 sides, 8 complications were recorded.

Percentages of sides with abnormal sensation at 4 dys, 3 wks, 3, 6 and 12 months were respectively 61%, 43%, 22%, 10% and 0%. During the follow-up, there was significantly greater early sensory loss in patients aged > 30 yrs, those with mandibular movement > 7 mm, and those where the nerve had to be manipulated. There was a non-significant trend towards greater early sensory loss where the operation was for prognathism.

At 1 year, the authors noted that 31% of patients had 'almost normal' sensation, but patients did not consider this to be a significant neurosensory deficit. A subsequent discussion of the paper by

another surgeon agrees with the findings and commends aspects of the authors' approach.

Oral pathology

Osteoradionecrosis of the jaws: clinical characteristics and relation to the field of irradiation

Thorn JJ, Hansen HS et al.
J Oral Maxillofac Surg 2000; 58: 1088-1093

More than half of 80 cases of osteoradionecrosis were apparently caused by tooth extraction.

Over a 7 year period, 80 patients with osteoradionecrosis (ORN) of the jaws were seen in a Danish University hospital, following radiotherapy up to 20 years earlier. Median age was 57 yrs (range 39-79) and 74 patients had been treated for squamous cell carcinoma, 1 for adenoid cystic carcinoma, and 4 for lymph node metastasis with an unknown primary tumour. All but 3 patients received a cumulative dose of > 60 Gy.

ORN was diagnosed on the basis of radiographs and 55 patients also had ⁹⁹technetium scintigraphy which gave similar results for 2/3 of cases. Prior to radiotherapy, 71 patients smoked, and when referred for ORN, 63 still did so. More than half the patients took alcohol regularly.

In all but 1 patient, ORN was shown to be fully within the radiation field. In 44 patients, initiation was related to tooth extraction (8 prior to irradiation), in 11 cases associated surgery was implicated, and in 2, prosthesis-related injury. There was no identifiable cause in 23 cases. A following discussion by another surgeon notes that other forms of osteonecrosis may occur after other types of tumour therapy.

Oral pathology

Salivary alterations in type 2 (non-insulin-dependent) diabetes mellitus and hypertension

Dodds MWJ, Yeh C-K et al.
Community Dent Oral Epidemiol 2000; 28: 373-381

Salivary defence may be impaired in Type 2 diabetes.

Out of 1,155 subjects participating in a longitudinal American study of aging and oral health, 233 Type 2 diabetics (mean age 63 yrs: fasting blood glucose \geq 126 mg/dL or on medication), 227 hypertensives (64: diastolic \geq 95 mm Hg or on medication) and 240 healthy controls (56) were identified. In the diabetic group, 88 subjects also had hypertension, and 100 had HbA_{1C} above 8% (metabolic control less satisfactory).

When compared with controls, stimulated and unstimulated salivary flow rates were significantly reduced in diabetic subjects, with hypertensives intermediate. In denture wearers, oral yeast counts did not differ between the 3 groups, but in non-denture wearers, high yeast counts were commoner in diabetics (21%) and hypertensives (14%) than in controls (6%). Diabetics also had higher concentrations of lactoferrin, myeloperoxidase, salivary peroxidase, albumin and secretory IgA from specified salivary glands. However, the authors commented that these increases did not prevent the higher yeast carriage, and considered that Type 2 diabetic oral defences were impaired.