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ENDODONTICS; MICROBIOLOGY

Microbiological evaluation of one- and two-visit endodontic treatment of teeth with apical periodontitis: a randomized clinical trial

Kvist T, Molander A *et al.* *J Endodon* 2004; **30**: 572-576

One visit with the specified protocol was as effective as two.

One-visit endodontic treatment has the potential advantage that the root canal is filled immediately after biomechanical cleansing and is opened only once. This trial randomly assigned 96 asymptomatic teeth with necrotic pulps and apical periodontitis in 85 patients to one-visit (group 1; $n = 52$) or two-visit (group 2; $n = 44$) procedures.

After instrumentation in group 1, the disinfectant was 5% iodine-potassium-iodide for 10 min, and in group 2, calcium hydroxide was the dressing between visits. Bacteria were demonstrated in 98% of all canals before instrumentation, in 62% and 64% of groups 1 and 2 respectively after this, and in 29% and 36% respectively prior to obturation (all differences NS). The authors stress that meticulous instrumentation was fundamental to their study.

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TEMPOROMANDIBULAR DISORDERS

Prediction of demand for treatment of temporomandibular disorders based on a 20-year follow-up study

Carlsson G, Magnusson T *et al.* *J Oral Rehabil* 2004; **31**: 511-517

Absence of tooth grinding at night indicates that temporomandibular disorders (TMD) are less likely to develop.

There is still much controversy among clinicians regarding the need and demand for treatment of TMD. This study aimed to find predictors of adult TMD treatment demand from signs and symptoms in childhood. The researchers identified a cohort of 135 subjects at age 15 yrs; at age 25, 103 completed a questionnaire and 84 were clinically examined with respect to TMD; at age 35, respective figures were 114 and 100. Bivariate analysis was used to identify possible prediction variables, and these were entered into multivariate logistic regression analysis.

At the 20 yr follow-up, 21 subjects were found to have received TMD treatment. At 20 yrs, baseline differences between treated and untreated subjects were found for TMJ clicking, jaw fatigue, difficult mouth opening, reported TMD symptoms, nocturnal bruxism, nocturnal clenching of teeth, and bruxism and/or nail-biting. Logistic regression identified reported nocturnal bruxism as the only significant predictor at all 3 examinations. The authors comment that absence of this sign was associated with a low risk of future demand for TMD treatment.

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ONCOLOGY

Survival and prognosis for cancer of the submandibular gland

Bhattacharyya N *J Oral Maxillofac Surg* 2004; **62**: 427-430

Survival depended mostly on tumour type, subject age, tumour grade and radiation therapy.

Data on 412 patients with surgically treated submandibular salivary gland cancer were extracted from the US Surveillance, Epidemiology and End Results (SEER) oncology database. After exclusion of patients who already had distant metastasis, or who had rare histopathological findings, 370 cases were analysed.

Adenocarcinoma accounted for 15% of cases and 5 year survival was 49%; respective figures for adenoid cystic carcinoma were 42% and 76%, for mucoepidermoid carcinoma, 22% and 55%, and for squamous cell carcinoma, 17% and 60%.

Regression analysis identified significant factors for overall survival as age, tumour grade and the provision of radiotherapy, whereas gender, positive nodes and extraglandular extension were of very little significance. Size of the tumour showed a trend towards significance at the 10% level. The authors note that the available data omit the state of surgical margins, which studies have shown to be a significant prognostic factor.

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ENDODONTICS; HAEMOSTASIS

Cardiovascular effects and efficacy of a hemostatic agent in periradicular surgery

Vy CH, Baumgartner JC *et al.* *J Endodon* 2004; **30**: 379-383

Collagen sponges saturated with 2.25% racemic epinephrine gave good haemostasis without cardiac effects.

Haemostasis is important in endodontic surgery to improve vision, minimise operating time and allow dry placing of retrograde filling materials. This study was a double-blind comparison of the use of collagen sponges saturated with 2.25% epinephrine (42 subjects) or saline placebo (6 subjects) in patients treated with apicectomy.

Operators (postgraduate students) decided on the need for haemostasis and placed up to 2 sponges. If this did not achieve haemostasis, epinephrine-saturated cotton pellets were placed. In 5 of the 6 controls, haemostasis was not achieved at a level compatible with good vision; in the active group, full haemostasis was achieved in 39 cases.

Mean systolic and diastolic blood pressure (BP) did not differ between groups before or after LA, or after the surgery. Mean pulse increased after LA in all subjects, and diastolic BP after surgery. The authors also consider collagen sponges preferable to cotton pellets, as retained fibres from the latter might delay healing.

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