ABSTRACTS

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

ORAL SURGERY; HAEMOSTASIS

Tranexamic acid mouthwash versus autologous fibrin glue in patients taking warfarin undergoing dental extractions: a randomized prospective clinical study

Carter GC, Goss A *et al.* *J Oral Maxillofac Surg* 2003; **61:** 1432-1435

Both methods were effective, but they might have different indications.

In 49 patients on warfarin anticoagulation, 152 extractions were performed. No adjustment was made to the regime and all patients had INR in the range 2.0–4.0. Although patients who had taken aspirin (which increases INR) were excluded, paracetamol (which also may increase INR) was given as an analgesic. Patients were randomized to tranexamic acid (TA: 71 extractions in 26 subjects) application and mouthwashes, or to application of prepared autologous fibrin glue (AFG: 81 in 23). All sockets were sutured.

In the TA group, 33 extractions were for periodontal disease and 38 for caries; respective figures for AFG were 27 and 54. In each of 2 AFG patients who had multiple extractions, one socket gave minor bleeding, after 3 dys in one case and 7 in the other. At presentation, their INRs were 5.9 and 7.6. The authors comment that tranexamic acid is preferable on grounds of low cost unless patient compliance is an issue.

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ENDODONTICS

Anatomy of the pulp chamber floor

Krasner P, Rankow HJ *J Endodon* 2004; **30:** 5-16

This paper proposes new rules to help identify number and location of root canals.

In this study, 400 teeth were sectioned horizontally at the level of the CEJ to view the pulp chamber, 50 were sectioned buccolingually, and 50 mesiodistally. The total number was approximately equally divided between maxillary and mandibular anteriors, premolars and molars, and each specimen was examined by 2 independent observers.

The observers noted that the pulp chamber was always central at CEJ level, with walls concentric to, and at a constant distance from, the external surface. The junction of pulp chamber floor and walls was marked by the former being a darker colour. Root canal orifices were always at this junction, at its angles, and at the terminus of developmental root fusion lines where these were present. Such fusion lines were darker than the pulp chamber floor. Repair dentine was lighter coloured than pulp chamber floor.

The authors propose a set of laws based on their findings, and suggest a systematic approach to guide the practitioner in identifying and preparing root canals for obturation, and avoiding the creation of perforations and other complications.

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ENDODONTICS

Relationship of radiologic and histologic signs of inflammation in human root-filled teeth

Barthel CR, Zimmer S *et al.* *J Endodon* 2004; **30:** 75-79

This study in cadavers showed that a radiolucency usually indicated inflammation, but inflammation did not always lead to radiolucency.

In this study, radiographs were used to identify 65 filled roots in 26 cadavers. Each tooth was then radiographed more accurately. Block sections were then made of roots with surrounding tissues. However, 12 specimens were unsuitable or unmatchable, and 53 were examined. Histological evaluation was by 1 operator, and radiographic assessment by 2. Apical radiolucency was present on 16 roots, widened periodontal ligament on 9 and normal appearance on 28. Respectively, histological inflammation was present on 13, 5 and 9 of these roots.

The odds ratio for histological inflammation when radiolucency was present was 9.2 ($P = 0.002$); for lack of inflammation with a radiographically good coronal seal, it showed a trend towards significance at 3.7 ($P = 0.053$). The authors comment that for more than 30% of inflammation-associated roots, no radiolucency was detected. There was no detectable relationship between unfilled lateral canals and inflammatory status.

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ORAL SURGERY; COMPLICATIONS

The relationship of 'shisha' (water pipe) smoking to postextraction dry socket

Al-Belasy FA *J Oral Maxillofac Surg* 2004; **62:** 10-14

Two different smoking habits were both associated with increased risk of dry socket.

In this study in Egypt, a comparison was made of dry socket incidence in the week following removal of a lower 3rd molar tooth in 3 groups of 100 patients each: nonsmokers (NS), cigarette smokers (CS) and 'shisha' smokers (SS: hookah users). No surgical flaps were raised, and no bone removed.

Dry socket was diagnosed at follow-up as a constant radiating pain not relieved by analgesics and with denuded socket or necrotic clot and foetor. Rates were 7% for NS, 16% for CS and 26% for SS. The differences between NS and the two smoking groups were statistically significant ($P = 0.046$ for CS, $P < 0.001$ for SS), but CS and SS did not differ significantly ($P = 0.083$).

However, when SS patients were grouped according to smoking 1-3 ($n = 30$), 4-6 (37), 7-9 (17) and 10-12 (16) pipes per day, there was a significant trend. Respective rates were 10%, 22%, 41% and 50% ($P < 0.001$). Smoking either cigarettes or pipes on the day of the extraction was also associated with an increased incidence of dry socket.

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