

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

CARIOLOGY; NUTRITION

Dietary patterns related to caries in a low-income adult population

Burt BA, Kolker JL *et al.* *Caries Res* 2006; **40**: 473-480

Soft drink consumption and gingival plaque were associated with caries.

Diet is still considered important in relation to dental caries aetiology. In deprived areas of Detroit, a sample of 1,021 subjects was recruited for interview and examination. Because of reported diet involving >16 or <4 items per day, greatly outside national norms, 200 subjects were omitted from analysis. Only 6% of the final sample was male, and nearly half of subjects were in the 25-34 yr age group.

Approximately 40% of the subjects were from families with annual income below £6,300 at the time of the study, 70% were overweight or obese, and a similar number had finished education by age 18. Over 60% were unemployed. There was an association between higher carbohydrate intake and DMFS scores ($P = 0.03$) and also between the proportion of energy from sugars and DMFS ($P = 0.001$). Plaque in gingival regions was also related to DMFS ($P = 0.02$). In the final regression model, frequency of soft drink consumption and gingival plaque related to caries. The authors note the importance of liquid intakes of sugar in causing caries in modern populations.

DOI: 10.1038/bdj.2007.230

ANALGESIA; ORAL SURGERY

Bupivacaine as pre-emptive analgesia in third molar surgery: randomised controlled trial

Nayyar MS, Yates C. *Br J Oral Maxillofac Surg* 2006; **44**: 501-503

This long-acting local anaesthetic reduced post-operative discomfort.

Studies report conflicting results on the ability of bupivacaine to reduce postoperative pain. In this study, 45 patients had bilaterally symmetrical impacted 3rd molars removed under GA. After induction and before surgery, bupivacaine 0.5% with epinephrine 1:200,000 was administered on one side chosen randomly. Patients recorded subsequent pain experience. There were no anaesthetic or surgical complications.

At 6, 12, and 72 hrs, there was significantly less pain on the test than the control side. Subsequent differences up to 7 days were not significant. The authors comment that bupivacaine can provide analgesia during the first 8-12 hrs after 3rd molar surgery (the period of maximum pain).

DOI: 10.1038/bdj.2007.232

ENDODONTICS; DENTAL MATERIALS

A prospective clinical study of mineral trioxide aggregate for partial pulpotomy in cariously exposed permanent teeth

Barrieshi-Nusair KM, Qudeimat MA. *J Endod* 2006; **32**: 731-735

After 2 yrs' follow-up, mineral trioxide aggregate (MTA) appeared suitable for this purpose.

Partial pulpotomy (PP: removal of 2-3 mm of inflamed coronal pulp) has been reported with high success rates. MTA is a very bland material which does not have the caustic and toxic effects of calcium hydroxide and induces pulp cell proliferation. In this study PP was performed using MTA for 31 molar teeth with deep carious exposures in 23 patients aged 7-13 yrs. There were 2 dropouts with 3 treated teeth.

Radiographic dentine bridges were present in 18 teeth at follow-up after 1-2 yrs. All 7 teeth with initially open apices had evidence of continued root maturation. In 22 teeth, vitality tests were positive. In the 6 teeth with no response, there were no pain problems. No periradicular bone resorption or root resorption or calcification was detected in any tooth followed up. The authors suggest PP with MTA is a reliable technique in young cariously exposed teeth.

DOI: 10.1038/bdj.2007.231

ORAL SURGERY; HEPATOLOGY

Long-term postoperative bleeding after dentoalveolar surgery in the pretransplant liver failure patient

Ward BB, Weideman EM. *J Oral Maxillofac Surg* 2006; **64**: 1469-1474

Some patients required hospital admission for control of postoperative haemorrhage.

The liver produces 11 of the 13 coagulation factors, and stores vitamin K. Dysfunction can affect these processes and also lead to reduction of platelets. In this study, 30 patients awaiting liver transplants had 35 minor oral surgical procedures and were given local haemostatic attention before discharge and follow-up. Patients were categorised by the surgeon prior to surgery as having a minimal, moderate or high risk of bleeding, and pre-operative platelet and INR tests helped determine management.

The minimal risk patients had 17 procedures, 8 received prior platelet transfusions (PT) and 1 received fresh frozen plasma. In the moderate risk group of 8 patients, 2 had PT and 1 was admitted for management. In the high risk group of 10 patients, 4 had PT, and 4 of 5 experiencing long term bleeding were admitted (average stay was 4 days). The authors comment that patients requiring 10 or more simple extractions have a high risk of bleeding problems.

DOI: 10.1038/bdj.2007.233