Other journals in brief

A selection of abstracts of clinically relevant papers from other journals.

The abstracts on this page have been chosen and edited by John R. Radford.

CHALLENGING PARADIGMS

What is an appropriate caries diagnosis?

Baelum V. *Acta Odontol Scand* 2010; **68**: 65–79

'...a healthy person is just someone who has not been sufficiently tested'.

At the heart of this discourse is the assertion that the tools for caries diagnosis (caries detection), lack veracity. A systematic review is cited that concludes 'the sensitivity and specificity values for bite-wing radiography in the detection of approximal cavities were 0.66 and 0.95, respectively'. Increasing the number of diagnostic tests, particularly when 'each of which has a low, but certainly discernible, error probability', merely results in more decisional errors. And when considering routine dental recall programmes, potentials for further harm are increased. Parallels are drawn with breast screening although these conditions have dramatically different impacts. A link is also made between screening programmes and an increase in entrepreneurial healthcare. Such 'commercial proclivities, penchants, and practices', as seen in medicine, may 'pose a threat to the survival of the core professional privileges'.

DOI: 10.1038/sj.bdj.2010.462

SONIC SCALING

Effects of sonic scaling on the surface roughness of restorative materials

Mourouzis P, Koulaouzidou EA *et al. J Oral Sci* 2009; **51**: 607–614

Re-polishing of aesthetic dental materials restored the surface roughness to the values before sonic instrumentation.

This *in vitro* study examined the effects of sonic scaling on the surface characteristics of three different types of resin composite and a glass ionomer cement. The surface roughness of twenty polished cylindrical specimens of each material were measured before scaling, after scaling and after re-polishing. Before sonic instrumentation, all materials demonstrated surface roughness within the same order of magnitude. Except for Filtec Supreme XT (3M/ESPE), the surface morphology of each of the other materials became significantly more rough after scaling. After re-polishing, the surface roughness of all materials were returned to their original values. Apart from re-polishing, the authors recommend that sonic scaling should be performed at minimum power in order to preserve the surface morphology of the restorative material, but sufficient to disrupt the biofilm.

DOI: 10.1038/sj.bdj.2010.463

THIRD MOLAR SURGERY

Risk factors associated with injury to the inferior alveolar and lingual nerves following third molar surgery—revisited

Jerjes W, Upile T *et al. Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2010; **109**: 335–345

Approximately one percent of patients experienced sensory dysfunction two years after extraction of lower third molar teeth.

The main aim of this study was to corroborate 'a preliminary study within our unit...that the surgeon's experience is one of the most influential factors in determining the likelihood of both permanent inferior alveolar nerve (IAN) and lingual nerve (LN) paresthesia, following third molar surgery'. This prospective study involved 3,236 patients. The investigators assert that the 'cases were distributed among specialists and residents randomly regardless... (of) complexity of surgery'. Chi-squared analysis confirmed numerous factors associated with IAN and LN damage. The authors emphasised that 'treatment by trainee surgeons' is associated with such sensory dysfunction. However, they concede that without 'performing multiple regression analysis...it is not possible to eliminate the presence of potential confounding factors influencing the results'.

DOI: 10.1038/sj.bdj.2010.464

ALL-CERAMIC CROWNS

Survival rates of porcelain molar crowns – an update

Kassem AS, Atta O *et al. Int J Prosthodont* 2010; **23**: 60–62

One in every ten all-ceramic crowns fail after five years.

The critical appraisal method adopted for this paper, summarised the results of seven *in vivo* studies. Five examined the longevity of crowns constructed using a two phase in-lab technique (Procera AllCeram), one study that reported on In-Ceram Alumina and In-Ceram Spinell crowns and one study that examined monolithic crowns (CEREC). Ten other papers were excluded, '4 because of language and 6 because of short duration'. Some of these restorations were provided by dentists and others by undergraduates. The restorations were luted with different materials. The analysis was restricted to crowns provided for molar teeth. After 5 years or more, there was an overall failure rate of 10.2% for Procera AllCeram crowns and similar failure rates for the other types of ceramic crowns. Most of these failures were 'fractures of the coping and veneering porcelain'.

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