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Making Education Easy

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In this issue:

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Welcome.

From homeopathy to hospitalisation, clasps to composites, hopefully there is something of interest for everyone in this issue.

Best Wishes,

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Outcomes in patients hospitalized for periapical abscess in the United States: an analysis involving the use of a nationwide inpatient sample

Authors: Allareddy V et al

Summary: Periapical disease is usually limited in extent and relatively easily managed. It may, however, lead to cellulitis and life threatening conditions where hospital admission is indicated. The authors used a sample which provided data from 1,044 hospitals in 40 US states. In 2007 there were 7,886 hospitalisations (23,001 days in hospital), 91% on an emergency or urgent basis, at a cost of $US105.8 million.

Comment: Perhaps not surprisingly, there were significantly more admissions of uninsured patients than those with private health cover, and the length of stay was longer for those with other medical problems. This data set did not reveal severity of condition, the extent of spread of infection or the number of teeth involved.

Reference: Journal of the American Dental Association 2010;141:1107-1116.

http://jada.ada.org/cgi/content/abstract/141/9/1107

Use of a mucoadhesive disk for relief of dry mouth: a randomized, double-masked, controlled crossover study

Authors: Kerr AR et al

Summary: This paper reports a study of 27 patients who wore 1 cm diameter disks on their palates, the active disks containing a lubricant and other agents. With 2 weeks of daily use all subjects experienced a significant improvement in their experience of dryness and moistness and measurements of salivary flow increased, suggesting a sustained effect.

Comment: The prevalence of dry mouth is estimated to range from 6 to 46% of the population, with over-the-counter products for treatment including rinses, gels or sprays. Patients seemed to benefit from this delivery system, with no significant difference between active disk and placebo.

Reference: Journal of the American Dental Association 2010;141:1250-1256.

http://jada.ada.org/cgi/content/abstract/141/10/1250

The influence of visible dental caries on social judgments and overall facial attractiveness amongst undergraduates

Authors: Karunakaran T et al

Summary: This study compared combinations of attractiveness with two levels of decay on judgments of several personal characteristics. Biomedical science undergraduates (263) examined A4 size photographs of young males reliably rated for attractiveness. A dentist modified some images so that the maxillary central incisors were carious. The assessments of attractiveness were more important to social judgements than the dental condition.

Comment: Attractiveness is judged according to common standards; smiling may be a more important factor than attractiveness, a point worthy of further research according to the authors. Little work has been done investigating attractiveness and caries, while tooth colour has been studied previously.

Reference: Journal of Dentistry 2011;39:212-217.

http://www.jodjournal.com/article/S0300-5712%2810%2900292-7/abstract

Natal teeth: a sign of fortuity or grave misfortune

Authors: Sothinathan R et al

Summary: Natal teeth are present at birth and neonatal teeth erupt in the first month. They are commoner in females, often in the anterior mandible and their incidence varies from one in 800 to 6,000 live births. Some cultures regard them as very positive, while in others they are considered evil and indicators of grave misfortune. They may present problems such as difficulty suckling, ulceration (child and mother) and an aspiration risk.

Comment: Natal teeth are classified into four categories and their management is conservative. Anecdotal reports of fathers removing these teeth at home raises concern about child protection issues.

Reference: British Dental Journal 2011;210:265-266.

http://www.nature.com/bdj/journal/v210/n6/full/sj.bdj.2011.200.html

UNIVERSITY of OTAGO
Te Whare Wānanga o Otāgo

Independent commentary by Associate Professor Nick Chandler of the Department of Oral Rehabilitation, University of Otago

Research Review publications are intended for New Zealand health professionals

Comparison of clasp retention on enamel and composite resin-recontoured abutments following repeated removal in vitro

Authors: Zarrati S et al

Summary: What happens to abutment surfaces during repeated insertions of a partial denture? This experiment involved 4,500 cycles of a cobalt chrome T-clasp against a 0.25 mm composite undercut and one of enamel of the same size. It examined retention loss, which was 3 times greater on the composite surfaces compared to initial values.

Comment: The experiment aimed to represent 4 years in use, but did not discuss if retention was compromised to such an extent that a denture would fail to resist dislodging forces. None of the composite 'undercuts' were lost. The retention loss in the experiment would be the combined effect of wear of the clasp and undercut materials, which was not explored. Further experiments might consider thermocycling and the influence of saliva.

Reference: Journal of Prosthetic Dentistry 2010;103:240-244.

http://www.thejpd.org/article/S0022-3913%2810%2960037-6/abstract

12-year survival of composite vs. amalgam restorations

Authors: Opdam NJM et al

Summary: Failure of amalgam and composite restorations involves the size of the restorations, how they were placed and possibly the risk of developing caries. This retrospective study was practice-based and compared Class II restorations relative to caries risk. Large amalgams (1,202) and composites (747) were considered over 12 years. Overall, 15% of composites and 24% of the amalgams failed. In high caries risk patients the amalgams had the best 12-year survival rates; with low caries risk, composites fared better.

Comment: Organising a clinical trial lasting longer than 5 years is extremely difficult, making this data of special interest as the differences between the materials did not become apparent until 5 years had passed. The results support some form of caries-risk assessment before restoring teeth, and suggested the adhesive restorations gave lower fracture rates.

Reference: Journal of Dental Research 2010;89:1063-1067.

http://jdr.sagepub.com/content/89/10/1063.abstract

Dietary and oral hygiene intervention in secondary school pupils

Authors: Anttonen V et al

Summary: All school children in Finland receive a hot meal free of charge. To improve their eating habits and promote oral health, this study assigned the children to groups and surveyed their eating habits. Laser fluorescence (LF, Diagnodent) values were recorded from the occlusal surfaces of premolars and molars during the experiment. In the intervention schools, the numbers eating the hot meal and drinking water increased, and the LF values decreased with dietary advice.

Comment: Not all students consumed all or part of the meals provided, and cold options were available. The study suggests changes in enamel can be detected in a short time using LF.

Reference: International Journal of Paediatric Dentistry 2011;21:81-88.

http://tinyurl.com/3fgsl2l

Articaine: a review of the literature

Authors: Yapp KE et al

Summary: This paper from Melbourne reviews the use of articaine in dentistry with particular emphasis on efficacy and safety. Many consider it provides anaesthetic success when other agents fail, but the authors conclude that there is no convincing evidence of its superiority over other local anaesthetics.

Comment: Articaine entered clinical practice in Germany in 1976, coming to the USA in 2000 and Australia in 2005. An interesting point raised is why it is only offered as a 4% solution, as no data suggests this is more effective than a 2% concentration.

Reference: British Dental Journal 2011;210:323-329.

http://tinyurl.com/3wj27bw

UK national clinical guidelines in paediatric dentistry: treatment of traumatically intruded permanent incisor teeth in children

Authors: Albadri S et al

Summary: Intruded permanent teeth are an uncommon injury (0.3–1.9%) and there is a lack of general agreement on how to treat the problem. Options are to passively or surgically reposition teeth or reposition them orthodontically. When root development is incomplete passive repositioning is recommended. If intrusion is moderate to severe (3–6 mm) a surgical approach is suggested if the root is complete and root canal treatment is often indicated. There is a high risk of replacement root resorption in these injuries.

Comment: A very concise guide – just over a page of A4, and with a table which summarises the results of outcome studies. The complications are severe and this article will help inform patients and parents on what may happen next.

Reference: International Journal of Paediatric Dentistry 2010;20 (Suppl. 1); 1-2.
http://www.bspd.co.uk/LinkClick.aspx?fileticket=cknRdocHBqc%3D&tabid=62

Unethical aspects of homeopathic dentistry

Author: Shaw D

Summary: In 2009 a UK House of Commons committee concluded there was no evidence base for homeopathy and that it should not be funded by the National Health Service. There are apparently many homeopathic dentists practicing in the UK; this paper suggests they are not entirely ethical and may be working in breach of some professional guidelines.

Comment: Dentists in the UK interested in extending their pharmaceutical knowledge in this area may undertake a five-year modular postgraduate course. Written by an ethics lecturer and not a practicing dentist, and very topical in media around the world right now, this item has been followed by an opinion piece and two letters in the 8 April issue of this journal. Tensions are clearly running high.

Reference: British Dental Journal 2010;209:493-496.

http://www.nature.com/bdj/journal/v209/n10/full/sj.bdj.2010.1032.html