

Dental Review™

Making Education Easy

Issue 33 – 2012

In this issue:

- > *Partial denture stomatitis*
- > *Herpetic stomatitis*
- > *Topical TMJ treatment*
- > *Aphthous ulcers – vitamins*
- > *Aphthous ulcers – lavender oil*
- > *Class V restoration success*
- > *Burning mouth*
- > *Uncomfortable radiographs*
- > *iPad caries*
- > *Three-headed toothbrush*

Welcome. There seems to be a lot of pain in this episode of Dental Review – discomfort from radiography, burning mouths and three items which could involve ulcers. And the topical creams which might help some cases of temporomandibular joint pain don't seem to work. Let's hope for better luck in the next issue!

Best wishes,

Nick Chandler

Associate Professor

Department of Oral Rehabilitation, University of Otago

nickchandler@researchreview.co.nz

The association of denture stomatitis and partial removable dental prostheses: a systematic review

Authors: Emami E et al

Summary: This review analysed the occurrence of denture stomatitis and risk factors in patients wearing partial removable prostheses. Eight studies met the inclusion criteria. The prevalence of stomatitis ranged from about 1 to 37%. Information on risk factors was not consistent, with only limited evidence to relate dentures to the problem.

Comment: We have all seen stomatitis in patients with complete dentures and many will have noticed the problem under partial dentures. Nevertheless, this work could not confirm a cause-and-effect relationship.

Reference: *International Journal of Prosthodontics* 2012;25:113-119.

<http://tinyurl.com/7dgt05g>

Coming soon...

> **Patient Psychology Research Review**

[CLICK HERE](#) TO SUBSCRIBE



The way out of the cements maze Cementation Navigation System

CEMENTATION NAVIGATION SYSTEM

The Cementation Navigation System (CNS) is a multimedia application from Ivoclar Vivadent which offers dentists practical orientation and guidance in the selection of the best luting material for each case.

Visit www.cementation-navigation.com,
or download as an app for iPhone or iPad at <http://itunes.apple.com>

**ivoclar
vivadent**
passion vision innovation

Hospital-based emergency department visits with herpetic gingivostomatitis in the United States

Authors: Elangovan S et al

Summary: This study used a database from 27 states to estimate the number of visits to hospital emergency departments in the USA in 2007 by patients with herpetic gingivostomatitis. There were over 23,000 patients, mostly young females with lower socioeconomic status. All had comorbid conditions, with over 200 of these recorded. They included fevers of unknown origin, fluid disorders, respiratory and ear infections, anaemia and substance abuse. The average age of the patients was 16, with most under 19.

Comment: Over 15% of the patients seen were admitted to the same hospital, and it was likely they were dehydrated. The study did not allow the medications administered to be studied. The paper emphasises the need for hospital doctors to have skills in the diagnosis of common dental emergencies.

Reference: *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology* 2012;113:505-511.

<http://www.oooojournal.net/article/S2212-4403%2811%2900719-X/abstract>

Topical nonsteroidal anti-inflammatory medications for treatment of temporomandibular joint degenerative pain: a systematic review

Authors: Senye M et al

Summary: The authors searched for clinical trials comparing topical non-steroidal anti-inflammatory creams to treat degenerative TMJ disease. Only one study using a double-blind randomised placebo-controlled trial could be found. It involved 20 patients over 12 weeks. It suggested a decrease in pain intensity from the application of creams but no significance between the treatment groups.

Comment: We seem to be bombarded with TV adverts advising us to rub various creams onto traumatised or arthritic joints. They seem to be effective, especially for knees, so the TMJ seems to be a reasonable target to investigate. The only study meeting the author's inclusion criteria was limited in duration and sample size.

Reference: *Journal of Orofacial Pain* 2012;26:26-32.

<http://lib.bioinfo.pl/paper:22292137>



New Zealand Dental Therapists' Association
(Incorporated)

Dental Review is also made available to Dental Therapists through the kind support of the New Zealand Dental Therapists' Association

Multivitamin therapy for recurrent aphthous stomatitis

Authors: Lalla RV et al

Summary: The researchers involved 160 patients who had a history of at least three episodes of idiopathic minor recurrent aphthous stomatitis (RAS) in the previous year. Their double-masked placebo-controlled trial involved 77 patients taking the placebo while the other 83 took a multivitamin which contained the US reference daily intake of essential vitamins. The groups had similar red cell folate and vitamin B12 levels at the start. There was no significant difference in their new episodes of RAS over the year of the trial.

Comment: High doses of vitamins may be helpful for patients with documented deficiencies. How vitamins influence oral ulceration is not well understood, and tests for deficiencies are expensive and usually only requested by a specialist. This work suggests that vitamins as a prophylaxis for RAS cannot be recommended.

Reference: *Journal of the American Dental Association* 2012;143:370-376.

<http://jada.ada.org/content/143/4/370.abstract>

Subscribing to Research Review

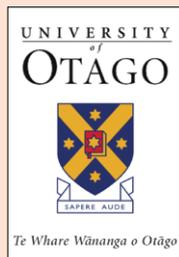
To subscribe or download previous editions of Research Review publications go to

www.researchreview.co.nz

You're welcome to pick our brains.

Ask us about financial solutions today.

0800 273 916 > bnz.co.nz/medical



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

For full bio [CLICK HERE](#)

Research Review publications are intended for New Zealand health professionals.

Topical lavender oil for the treatment of recurrent aphthous ulceration

Author: Altaei DT

Summary: This experiment had four stages. In the first, induced ulcers in (New Zealand) albino rabbits were treated with lavender oil or placebo. Next, the lethal dose and dermal irritation were evaluated in albino mice. Then, a diffusion method was used to determine the antibacterial effect of the oil on bacteria from swabs of human ulcers. Finally, 115 human subjects were topically treated with oil or placebo. When the data were examined the animals showed ulcer size reduction and there was no skin irritation. The oil had broad antibacterial activity, and the patients improved compared with those taking the placebo.

Comment: This may be a promising and safe treatment to help the healing of certain oral ulcers. The 2% lavender oil in glycerol used in the study has been authorised in Europe for oral use and the placebo was glycerol alone. The wide antibacterial effect could be the key factor in healing, while the antioxidant, anti-inflammatory and immune effects require further study.

Reference: *American Journal of Dentistry* 2012;25:39-43.

<http://tinyurl.com/6rs5ap9>

The survival of Class V restorations in general dental practice: part 3, five-year survival

Authors: Stewardson D et al

Summary: With more people keeping their teeth for longer we may see more teeth requiring challenging Class V restorations. In this study over 60% lasted longer than 5 years. Analyses showed that the practitioner, age of the patient, cavity size, use of burs, moisture contamination and material influenced survival. The best results were with resin-modified glass ionomer cements (RMGI).

Comment: Often the smallest restoration, nevertheless this type causes perhaps the most problems. This study was performed under the real conditions of general practice by 10 dentists, but only two chose to use RMGIs. If this is the best material, why don't we all use it? The challenge is to change what we do, rather than to keep doing the things which seem to work in our hands.

Reference: *British Dental Journal* 2102;212;1-9.

<http://www.nature.com/bdj/journal/v212/n9/full/sj.bdj.2012.367.html>

Pain and pain behavior in burning mouth syndrome: a pain diary study

Authors: Forssell H et al

Summary: This syndrome features burning pain on the tongue or mucosa but without visible oral lesions. Fifty-two female sufferers completed a two-week diary noting pain intensity, distress, mood and amplifying and relieving factors three times each day. Almost all had pain in the tongue. Most of the patients reported that their pain was intermittent and its intensity increased through the day. Amplifying factors were pungent or hot food and drinks, stress and tiredness. Pain could be reduced by eating, cold drinks, sucking pastilles and relaxation. Pain medication was used by 58%. The results suggest that treatment should be individualised.

Comment: The study involved only female patients as women are more frequently affected and seek professional help. This was a good group, with very high compliance (97%) in maintaining their diary records every day.

Reference: *Journal of Orofacial Pain* 2012;26:117-125.

<http://tinyurl.com/84nmuov>

Patient discomfort in bitewing examination with film and four digital receptors

Authors: Jørgensen PM, Wenzel A

Summary: Patients may complain of discomfort from the placement of intra-oral sensors used for digital radiography, with several studies finding more errors when a wired sensor was used compared to a storage phosphor plate or conventional film. Sensors may have square corners and stiff wires. Sixty patients were involved in a trial of five receptors, using a visual analogue scale to record their discomfort during positioning and placement for 10 seconds. A conventional film and an ergonomically shaped wired sensor with rounded corners were rated similarly.

Comment: For ethical reasons X-ray exposures were not made, so it was not possible to determine if image quality would have been satisfactory using the devices. Smaller and better-shaped sensors can be almost as comfortable as conventional films, while maintaining a similar field of view.

Reference: *Dentomaxillofacial Radiology* 2012;41:323-327.

<http://dmfr.birjournals.org/content/41/4/323.abstract>

Coming soon...

> Asian Health Review

[CLICK HERE](#) TO SUBSCRIBE

Privacy Policy: Research Review will record your email details on a secure database and will not release them to anyone without your prior approval. Research Review and you have the right to inspect, update or delete your details at any time.

Disclaimer: This publication is not intended as a replacement for regular medical education but to assist in the process. The reviews are a summarised interpretation of the published study and reflect the opinion of the writer rather than those of the research group or scientific journal. It is suggested readers review the full trial data before forming a final conclusion on its merits.

Find healthcare jobs
in your area

trade me
JOBS 

www.trademe.co.nz/jobs

Evaluation of interproximal caries using the iPad 2 and a liquid crystal display monitor

Authors: Shintaku WH et al

Summary: In dental digital radiography the viewing display may play as important a role as the image sensor. LCDs have replaced cathode ray tube monitors and today new display tools such as iPads may have potential. This study involved four dentists examining 27 digital bitewings (164 tooth surfaces, 48 carious) as TIFF files on the tablet and a 24-inch LCD monitor. The devices were calibrated before use. The iPad performed extremely well, despite its smaller size and its ability to only adjust brightness, rather than both brightness and contrast.

Comment: The relentless march of progress! This paper about the iPad2 has been published last month, while the iPad3 was introduced in March and has twice the pixels of most high-definition TV screens. It should be even better.

Reference: Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology 2012;113:e40-e44.

http://www.sciencedirect.com/science/article/pii/S2212440312000235

CLICK HERE

to read previous issues of Dental Review

Brushing skills and plaque reduction using single- and triple-headed brushes

Authors: Levin L et al

Summary: Two hundred young adults were randomly assigned to use a manual single-headed or manual triple-headed toothbrush. Initially they were given no guidance on brushing technique and their plaque index was measured on all first molars and two incisors after use of disclosing solution. They were then given instructions and their skills evaluated. Performance and plaque index were reassessed during another appointment one week later. The three-headed brush was found to promote easier brushing and better removal of plaque both before and after the session of instruction.

Comment: Many patients neglect the lingual surfaces of their teeth, and the triple-headed brush is designed to clean this surface and the buccal and occlusal surfaces simultaneously. In experiments results with these brushes are either better than or the same as those of conventional brushes. This study showed easier brushing and better plaque removal with or without professional help in these healthy subjects, but the brush may not be the best for patients with recession from periodontal disease. The design of the experiment also meant that the scoring of brushing performance could not be blinded.

Reference: Quintessence International 2012;43:525-531.

http://www.ncbi.nlm.nih.gov/pubmed/22532960

ALSO AVAILABLE...

Oral Health Research Review

Another useful summary from Research Review takes a closer look at general oral health. This quarterly publication is ideal for those working as hygienists or dental therapists or for anyone with a keen interest in evidence based oral health management. Expert commentary supplied by Dr Jonathan Leichter, DMD, Cert Perio (Harvard), University of Otago.



Click here to subscribe