

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.

PAIN

The myth of unexplained pain

de C Williams A C. *Fac Dent J* 2011; 2: 148-151

'...pain might be considered a disease in its own right.'

The cover sheet for this 'OPINION' statement in an issue that focuses largely on pain, is enigmatic yet insightful. It is a diagram of a maze. Surely this illustrates the sometimes almost insurmountable difficulty that a physician may encounter in caring for a patient with unexplained pain. An inference that the pain is not real is unacceptable. The author, a psychologist, asserts that 'mysterious psychological phenomena' such as 'somatisation', 'medical unexplained' or 'functional' leads patients nowhere. Pain from an evolutionary perspective protects against injury and promotes healing. Such an approach is more useful than any psychological speculation. Nevertheless, with chronic as opposed to acute pain, there are 'shifts (in patients) towards more emotional and motivational involvement'. Importantly, when patients seek advice from their primary care physician, the patient focuses on the physical symptoms suppressing the emotional components of their pain.

DOI: 10.1038/sj.bdj.2012.22

IMAGING

Application of ultrasonography in dentistry

Hayashi T. *Jpn Dent Sci Rev* 2011; doi: 10.1016/j.jdsr.2011.05.001

Is ultrasonography still the Cinderella of dental imaging?

To date, the use of ultrasonography (US) in dentistry has been restricted largely to the diagnosis of major salivary gland disease and cervical lymph node metastases. However, with the adoption of high-resolution equipment and the newly developed US-elastography, the role of US is being extended. Ultrasonography-elastography quantifies the amount of deformation of a tissue in response to an external force. It has been used to diagnose breast cancer and can be used to identify early lymph node metastases. For the latter, it may be appropriate to carry out monthly monitoring with US. It is also asserted that US should be used routinely in tongue carcinoma to evaluate the depth of invasion. Ultrasonography can also provide information about the size of a periradicular radiolucency, but only if there is loss of the cortical bone; is this application one too far?

DOI: 10.1038/sj.bdj.2012.24

UTILITY OF AN EXAMINATION

Assessing small cohorts: can we be relied upon?

Chadwick S, Holsgrove G. *Fac Dent J* 2011; 2: 184-190

There is more to asserting the 'impeccable quality' of an examination than reporting the percentage of candidates that passed 'looked about right'.

The reliability of an examination is demonstrated by the Cronbach's alpha coefficient. If the value attains the recently raised benchmark value of 0.90, then 90% of what is measured is true difference between the candidates, with only 10% comprising errors associated with the assessment process. However, Cronbach's alpha cannot be used when there are less than one hundred candidates. In addition, if the examination assesses high performers such as a postgraduates, the range of marks (subject variance) is narrowed. For small cohorts therefore, apart from reliability and validity, other factors are recruited that, taken in the round, are referred to as utility. Such include the impact of the training experience, benefits accruing by those being treated by learners who have met standard, and opportunity costs.

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OCULAR DAMAGE CAUSED BY CURING LIGHTS

Evaluation of ocular hazards from 4 types of curing lights

Labrie D, Moe J *et al.* *J Can Dent Assoc* 2011; 77: b116

Particular vigilance when curing palatal restorations.

This study measured spectral irradiance emitted by four different light curing units (LCUs). In this *in vitro* study, when the light source was positioned in the maxillary palate, the ocular hazard was larger compared with when it was positioned buccally. This is because a proportion of the light was absorbed by the teeth when curing from a buccal direction. In the other limb of the study, it was shown that the maximum recommended daily exposure to blue light was exceeded after only two 5-second curing cycles with high-power plasma arc Sapphire® Supreme (Den-Mat) and after two 20-second cycles with the high-power LED unit, Elipar S10 (Kerr Corporation). Those who have received cataract surgery or are taking photosensitising medications such as antimalarials and St. John's wort would be even more susceptible to retinal damage. Dental carers must wear protective eyewear when using LCUs.

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