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.

'HARMFUL AND HELPFUL'

Use of dentifrices to prevent erosive tooth wear: harmful or helpful?

Magalhães AC, Wiegand A *et al. Braz Oral Res* 2014; **28(Spec Iss 1):** 1–6

Tin-containing fluoride toothpastes, that form metal-rich surface precipitates, would appear to be most efficacious at preventing erosion.

Dentifrices with the aim of preventing or controlling erosion, counter-intuitively may increase tooth wear. What the manufacturers advertise, and what the literature reports, maybe inconsistent. Calcium sodium phosphosilicate (NovaMin®) containing toothpaste (Sensodyne Repair & Protect), 'had no preventive or repairing effect on erosion'. Distinct from this product sold in the UK and in some other markets, it is understood stannous fluoride has been substituted in NovaMin® in the US. It would also appear, that regardless as to whether a toothpaste contains no fluoride, 1,100 ppm fluoride, or 5,000 ppm fluoride, there were no differences in their reparative properties. And then a toothpaste with a relatively low REA (relative enamel abrasion value) may have a high RDA (relative dentine abrasion) and *vice versa*. The authors advise that as whitening toothpastes are more abrasive, they should not be used on a frequent basis. Taken in the round, however, the 'benefits of dentifrices exceed adverse side effects'. There is a plea for more clinical studies.

DOI: 10.1038/sj.bdj.2014.1118

DETECTING OCCLUSAL CARIES

A comparative study of different radiographic methods for detecting occlusal caries lesions

Tarim Ertas E, Küçükyılmaz E *et al. Caries Res* 2014; **48:** 566–574

The use of intra-oral radiographs are 'sufficient' for detecting occlusal caries.

As background, when it is elected to use the D3 threshold for caries detection, then a lesion is scored only when it has involved dentine (and a lesion confined to enamel will not be included), whereas at the D1 threshold, both an enamel lesion, and a dentine lesion is scored. Using the time-honoured methods of calculating receiver operating characteristic (ROC), sensitivity, and specificity, there were no differences in detecting occlusal caries at the D1 threshold when comparing 1) conventional planar radiography (F-speed) with, 2) direct digital imaging system, 3) indirect digital imaging system, and 4) CBCT. At the D3 threshold, however, CBCT was shown to be superior to the other diagnostic methods. This *in vitro* study used 125 extracted molar teeth, none of which were cavitated. The gold standard was that obtained from histological examination. Others are cited that state 'CBCT is not considered suitable for routine caries diagnosis' because metallic restorations can cause artefacts that simulate recurrent caries, and any patient movement will compromise the quality of the image.

DOI: 10.1038/sj.bdj.2014.1119

EBOLA VIRUS DISEASE

Editorial – Rationality and coordination for Ebola outbreak in west Africa

Lancet Infect Dis 2014; **14:** 1163

and

Commentary – Ebola: no time to waste

Fisman D, Tuite AR. *Lancet Infect Dis* 2014; **14:** 1164–1165

See http://ebola.thelancet.com/ for The Lancet Ebola Resource Centre.

This balanced Editorial, puts into perspective the impact of Ebola with that of other health burdens in west Africa. As of 31st October, 13,540 people have been diagnosed with Ebola, a third of whom have died. When comparing this with malaria, in 2012 alone, there were over twenty thousand deaths in Sierra Leone, Liberia and Guinea. The initial signs and symptoms of Ebola are the same as those for malaria. As a consequence, Médecins Sans Frontières have begun to distribute artesunate/amodiaquine (to treat uncomplicated malaria) in order to reduce the numbers of those with malarial-related fever, seeking care for possible Ebola, in Ebola treatment centres.

This Editorial also urges US states to adopt an evidential approach when implementing procedures to prevent transmission. These states should not be panicked into specious actions driven by the media. For example, healthcare workers returning from west Africa are not thought to be infective as long as they are symptom-free. It is only 3-4 days after the fever onset, and as shown by a positive reverse polymerase chain reaction, can they infect others. In addition, such is the severity of Ebola, once these symptoms develop, those afflicted would be too sick to function normally and thereby transmit the disease to those carrying out their everyday business. It is reiterated that 'Transmission occurs only through contact with the body fluids...'

These commentators cite others that have shown the present spread in EBOLA follows well-established mathematical epidemiological modelling that seems 'torn from the pages of a textbook'. This is based on R_0 (basic reproductive number); 'the number of cases one case generates...over the course of its infectious period...' Simply, an $R_0 < 1$ and the infection will disappear, but with an $R_0 > 1$, it will spread into populations. The present R_0 for this outbreak is 2.5. This would result in an increase in 150% in each successive generation. There is an imperative to reduce the total number of cases now. It has been calculated, that if 1) construction of treatment centres, 2) accelerated case assessment, and 3) distribution of protective kits for home care, could have started 2 weeks earlier (15th October instead of 31st October), 137,432 new cases could have been prevented compared with 97,940 cases. The present Ebola epidemic 'is proceeding at virus time, with a response on bureaucrat time'.

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