

Letters to the editor

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Oral health

An evidence-based approach

Sir, after reading with interest your recent supplement entitled 'A guide to the efficacy of essential oil-containing mouthrinses', I felt that I should modify my own oral hygiene regime to a more evidence-based approach before recommending such a change to my patients. I therefore purchased a bottle of Listerine Zero. While idly swishing I perused the back of the bottle, initially looking at fluoride content, but my eye caught the directions section which states 'Especially effective when used morning and evening **after brushing**'. Being an evidence-based practitioner, I am a little worried by this statement especially seeing as how the evidence-based bible of prevention, *Delivering better oral health*,¹ explicitly states 'Use a fluoride mouthrinse daily at a **different time to brushing**'. This is to maximise the topical effect of fluoride which is related to frequency of availability.

I think that if the manufacturers of oral hygiene products want to use the best available evidence to advertise their products to patients and professionals, then it is essential that they also ensure the guidance they provide on the use of their products also follows the evidence available.

M. James, London

1 Department of Health and British Association for the Study of Community Dentistry. *Delivering better oral health: an evidence based tool-kit to prevention*. 2nd ed. 2009.

Dr Gill Nelson, Medical Director UK & Northern Europe, Johnson and Johnson Ltd and Dr Roberto Labella, Scientific Engagement Leader, Oral Care, Johnson and Johnson Consumer Services EMEA Ltd respond: We were pleased to learn that the supplement 'A guide to the efficacy of essential oil-containing mouthrinses' proved an interesting

read. We would agree with Mr James that the labelling on oral hygiene products should reflect the best available scientific evidence. We try to be mindful of this principle in all our communications with healthcare professionals and the general public.

There is a robust body of research demonstrating that essential oil-based mouthwashes can help control plaque when used daily.¹ These plaque reduction studies all followed a protocol prescribing post-brushing rinsing, and we use this as the basis for our advice that Listerine is especially effective when applied after brushing. We appreciate that this may seem contrary to the Delivering better oral health toolkit advice to use fluoride mouthwashes at a different time to brushing.² However, this recommendation relates specifically to fluoride mouthwashes being prescribed to patients presenting with current active caries. These patients may need to follow their dental professional's advice to use mouthwash at specific points in the day.

For the wider population who simply want to control plaque and maintain good oral health, the evidence suggests that rinsing with mouthwash after brushing is effective. This has the additional practical benefit of fitting mouthwash use into most people's daily routine.³⁻⁵ Indeed, as caries is a multifactorial disease, plaque control is one way to help reduce caries risk.⁶ In addition, as demonstrated in the scientific literature,⁶ using fluoride-containing mouthwash, rather than rinsing with water after brushing, can help maintain or boost the levels of fluoride exposure, at least during morning and evening oral hygiene routines. The Listerine range of fluoridated essential oil-based mouthwashes contain varying levels of fluoride from 100 ppm–450 ppm, so dental professionals have a range of options to recommend, depending on patients' needs.

We appreciate feedback from healthcare professionals and are grateful for this opportunity to clarify an important point. We hope this response will reassure readers that our labelling is carefully considered and based on the highest level of available evidence.

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Managing drug addicts

Sir, I read with great interest S. Joshi *et al.*¹ on cannabis and dental health. The prevalence of drug addiction is increasing in Europe being more common in males than females and involving various types of drugs. These can have local and systemic harmful effects and patients who are addicted to drugs suffer from poor oral hygiene, xerostomia, increased prevalence of periodontal and other oral diseases.

Marijuana abuse can lead to acidic erosion of enamel due to cannabinoid hyperemesis, in which frequent episodes of vomiting occurs. In addition, these patients develop dental caries, inflammation and hyperplasia of gingival, uvulitis, leukoplakia, oral papillomas and tongue carcinoma.² The chronic abuse of methamphetamine is characterised

by large carious lesions in buccal smooth surface areas and fractured teeth due to increased motor activity. It is important to note that a significant level of osteoporosis has also been reported in a high percentage of methamphetamine abusers.³

Cocaine can result in movement disorder and manifest itself as transient chorea⁴ while heroin can increase the number of decayed, missing and filled teeth.⁵

These patients develop dental caries, inflammation and hyperplasia of gingival, uvulitis, leukoplakia, oral papillomas and tongue carcinoma, and their nutrition is also compromised. Dentists should be aware of the effects of these drugs in dental management.

A. Curto, Spain

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Depression and dental outcomes

Sir, despite the increasingly high prevalence of depression and depressive disorders, there has been a lack of well-conducted observational studies that have examined the associations between depression and adverse dental outcomes. Some of the published studies to date have found associations while others have not. Two studies that observed positive associations are described below. The first, a multivariable analysis of adult patients in India, detected an association between depression and periodontitis, and the authors concluded that depression can be considered an important risk factor for the development of periodontal diseases.¹ The second, a study using self-reported data among patients from a randomised trial at two cancer centres in the US, concluded that depression was associated with non-adherence to therapeutic oral medications in patients with oral cancer.²

While the aforementioned studies have various limitations including cross-sectional designs that limit our ability to make statements of causality between depression

and adverse dental outcomes, they provide initial insights into the associations and the need for further study of them. There are various plausible biological and behavioural pathways by which depression can lead to a worsening of dental outcomes including an increased prevalence of periodontal disease and dental caries.

Our purpose is to draw attention to an understudied area of research. In two recent analyses of the Nationwide Emergency Department Sample we identified associations between the presence of depression and an increased likelihood of hospital admission among older male patients with prostate cancer (in press) and among patients with head and neck cancer (under review). We hypothesised in both analyses that depression would be associated with worsening overall health, as indicated by the need for hospital admission vs. discharge after controlling for possible confounding variables including demographic, hospital and clinical characteristics. Our analyses add to other studies that show associations between depression and worsening health, including oral health. There is a clear need for well-designed prospective studies that examine if depression can lead to an increased incidence of adverse dental outcomes including dental caries and periodontal disease.

B. Laurence, D. Woods, USA

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Antimicrobial resistance COMs and OMFSs

Sir, I read with great interest the short communication by Pankhurst *et al.*¹ regarding the role of consultants in oral microbiology (COMs) and the adverse issues faced by the dental profession in light of their dwindling numbers, particularly in relation to inappropriate prescription of antimicrobial agents.

Having worked in oral and maxillofacial surgery (OMFS) units for several years in an on-call capacity, managing patients with acute odontogenic cervicofacial infections is a clinical scenario frequently encountered – no doubt my colleagues in similar

settings will corroborate this anecdotally. The incidence of deep neck space infections from dental causes which require admission to hospital appears to be rising.² While the central tenet of ‘incision and drainage’ firmly holds true, patients with odontogenic infections are invariably prescribed antimicrobials as an adjunct to surgical management. These tend to be of the broad spectrum ilk, prescribed with the arguably misguided intention of ‘covering all bases’.³

As the mainstay of OMFS is in secondary care, there is access to hospital-based medical microbiology teams but I would welcome a greater degree of interprofessional working with OMFS teams and COMs, to update on emerging trends in the microbiology of odontogenic abscesses and on the most suitable empirical antimicrobials. There appears to be a lack of awareness of oral microbiology as a specialty,⁴ and this raises some questions regarding the practicalities of working with OMFS units. With most COMs situated in dental schools how would we ensure that COM advice is available to OMFS units based in district general hospitals, particularly in an out-of-hours situation? This perhaps necessitates development of a network by formally linking with a named COM in a dental school in the first instance.

At a dental undergraduate level and beyond there needs to be greater awareness of the clinical training and scope of practice for COMs. For example, in an established odontogenic infection where a patient subsequently becomes septic would it be appropriate to consult an oral microbiologist for antimicrobial advice, or would we then revert to contacting the hospital’s medical microbiologist? Or indeed is there benefit to be derived from involving all above parties to achieve a favourable outcome for the patient? I would be most interested to hear thoughts from any colleagues.

N. Singh,
Medical Student, Leicester

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