COMMENT

Letters to the editor

Send your letters to the Editor, *British Dental Journal*, 64 Wimpole Street, London, W1G 8YS. Email bdj@bda.org. Priority will be given to letters less than 500 words long. Authors must sign the letter, which may be edited for reasons of space.

Green dentistry

Daunting for developing countries

Sir, we read with interest the letter *The environmental impact of dentistry* where the author has rightly raised the awareness of the impact of packaging waste in dentistry.¹ There are umpteen ways in which green dentistry can be implemented and it is now no longer a fad.

This does sound exciting but the ground realities in rural areas in developing countries will, disappointingly, paint an entirely different scenario. Economics and lack of familiarity are the major professed impediments for green dentistry in developing countries that outplay the moral and ethical obligation to the environment by dentists.^{2,3}

Though implementation of green dentistry and its advantages are taught at graduate level, most of the graduates have no practical experience of effective implementation. The situation is further worsened in rural areas where green dentistry is negligible. Regrettably the cost:benefit ratio becomes the principal influencing factor in this decision for sustainability. Research on long-term economic assessment to establish the financially viable benefits of eco-friendly dental practices must be conducted.

Galvanising numerous professional behavioural modifications for eco-dentistry is daunting. Most importantly, how does a professional who is working in a rural setup in a developing country even *think* about green dentistry? The enormous amount of information can perplex practitioners on the sustainability vs going green model. Some of the recommendations such as implementing digital radiology, digital impression making, motion sensors and carbon-neutral practice can overwhelm general practitioners in the developing world.⁴ It will be much simpler if importance is placed on only a single point implementation of an inexpensive step (like

use of biodegradable cups) across all the clinics. As Lao Tzu aptly stated '*The journey of a thousand miles begins with one step*'. Continuing dental education programmes must emphasise that profits can be made even with a green practice.⁴

A. Nagpal, Gurugram, India, G. Sharma,
Faridabad, India

References

1. Bardolia P. The environmental impact of dentistry. *Br Dent J* 2019; **226**: 634.
2. Hiltz M. The environmental impact of dentistry. *J Can Dent Assoc* 2007; **73**: 59–62.
3. Chopra A, Raju K. Green dentistry: practices and perceived barriers among dental practitioners of Chandigarh, Panchkula, and Mohali (Tricity), India. *J Indian Assoc Public Health Dent* 2017; **15**: 53–56.
4. Holland C. Investigation: Greening up the bottom line. *Br Dent J* 2014; **217**: 10–11.

DOI: 10.1038/s41415-019-0612-0

Higher education

An apparent dissociation

Sir, as a second degree medical student (dentist first, qualified in 2013) entering my fourth year of study, I am saddened to see that Oral and Maxillofacial Surgery (OMFS) is still not a part of the undergraduate medical curriculum. This highlights an apparent dissociation between the dental and medical professions.

In an era where patients are treated more holistically than ever, there should be much more focus on oral health in hospitals. There is a plethora of evidence to prove that poor oral hygiene can contribute to ischaemic heart disease, stroke and pneumonia.^{1,2} Additionally, there is increasing focus on the benefits of a multidisciplinary team; however, the role of the dentist is rarely appreciated. We propose that ear, nose and throat undergraduate rotations incorporate OMFS teaching, with both specialities receiving recognition. We believe the lack of awareness of OMFS amongst medical students sets a

negative precedent for the rest of juniors' working careers and hope to see a change in this practice.

N. Axiotis, L. Benson, Manchester, UK

References

1. Joshy G, Arora M, Korda R J *et al*. Is poor oral health a risk marker for incident cardiovascular disease hospitalisation and all-cause mortality? Findings from 172 630 participants from the prospective 45 and Up Study. *BMJ Open* 2016; **6**: e012386.
2. Yoneyama T, Yoshida M, Matsui T, Sasaki H. Oral care and pneumonia. Oral Care Working Group. *Lancet* 1999; **354**: 515.

DOI: 10.1038/s41415-019-0629-4

Oral health

Organic is not better!

Sir, caries rates have dropped in recent decades, possibly due to the use of fluoridated toothpaste.¹ The fluoride content of UK brands is available in the *Delivering better oral health* toolkit from the Department of Health.² Fluoride-free toothpastes remain on the market, claiming to improve general health due to their organic ingredients.

A 20-year-old undergraduate dental student attended a screening clinic. Her presenting complaint was mild sharp pain and 'sensitivity to hot, cold and sweet food' for two years. She had last visited a dentist three years previously when she had also stopped using fluoridated toothpaste but brushed twice daily using an electric toothbrush. She uses Euthymol Original (Johnson & Johnson, USA) 'natural, organic' fluoride-free toothpaste, with the antiseptic ingredient Thymol. Her medical history was unremarkable, she experienced 'moderate' stress levels as a university student and had a high sugar intake prior to starting university two years ago, with regular sugary snacks.

On examination, she had an unrestored dentition with a fissure sealant on her upper right first molar. Generalised plaque with localised calculus between the lower anterior

teeth led to BPE scores of 111/121. There was plaque-induced gingivitis. Left and right bitewing radiographs confirmed diagnoses of caries into dentine in the 17, 18, 25 and 27 teeth. Alongside improved cleaning and dietary changes, the patient was encouraged to change her toothpaste from the fluoride-free brand, to one that contained at least 1,350 ppm fluoride.¹

This patient's irregular dental attendance could have contributed to the extent of

dental caries found. A competent clinician would have diagnosed active lesions earlier and instituted preventative strategies.³

Dental students should regularly check their own cleaning, diet and fluoride content of the toothpaste they use. This interesting case brought to light a potential lack of self-awareness amongst dental students.

H. Malik, A. Baysan,
London, UK

References

1. Walsh T, Worthington H V, Glenny A M *et al.* Fluoride toothpastes of different concentrations for preventing dental caries in children and adolescents. *Cochrane Database Syst Rev* 2019; **3**: CD007868.
2. Public Health England. *Delivering better oral health: an evidence-based toolkit*. pp 22-28. 22 March 2017. Available at: <https://www.gov.uk/government/publications/delivering-better-oral-health-an-evidence-based-toolkit-for-prevention> (accessed July 2019).
3. Ismail A I, Pitts N B, Tellez M *et al.* The International Caries Classification and Management System (ICCMS™) an example of a caries management pathway. *BMC Oral Health* 2015; **15** Suppl 1: S9. DOI: 10.1038/s41415-019-0628-5

CASE REPORT

Dental radiography Deceptive radiographs

Sir, a 29-year-old gentleman was referred to our oral surgery department complaining of food packing between the lower left second and third molar teeth (37, 38). The 38 was horizontally impacted and 37 had been restored with a metal-ceramic crown. A sectional panoramic radiograph (Fig. 1), taken to assess the relationship between 38 and the inferior alveolar canal, showed radiolucencies suggestive of caries occlusally in 38 and beneath the crown on 37.

Clinically, a defect was noted at the mesial margin of the metal-ceramic

crown on 37; however, the distal margin could not be accessed with a probe due to the position of 38. There was some doubt over the long-term prognosis of the second molar.

Following discussion of treatment options with the patient, he consented for surgical removal of 38 under local anaesthetic with intravenous sedation. A supplemental bitewing radiograph (Fig. 2) was taken to better appreciate the extent of any caries in 37, in case extraction was required. To our surprise this showed the distal surface of 37 to be intact and the tooth to be caries free. The mesial margin of the restoration was defective, however, and the patient and referring GDP were informed.

While it is well established in guidelines that bitewing radiographs are optimal for caries detection,¹ they do not show the root morphology or periradicular structures. In oral surgery, imaging of these structures is often desirable, and so panoramic radiographs are commonly used. Owing to their reduced sensitivity and specificity,² caution should be exercised when attempting to diagnose caries from these radiographs, particularly in relation to extra-coronal restorations. This case highlights the limitations of panoramic radiography, and the potential utility of supplemental bitewing radiographs for treatment planning, particularly in the oral surgery environment where such imaging may not be routinely used.

C. D. Simpson, Edinburgh, UK

Unusual supernumerary

Sir, a 23-year-old male patient presented to our clinic for removal of the left mandibular third molar after several episodes of acute pericoronitis. Intraorally the tooth appeared to be of normal morphology and was partially erupted. However, a panoramic radiograph showed what appeared to be a supernumerary tooth superimposed over the left mandibular third molar (Fig. 1). A surgical extraction was performed and the tooth was removed completely intact. Inspection of the specimen extra orally found that there

Fig. 1 A sectional panoramic radiograph showing radiolucencies suggestive of caries occlusally in 38 and beneath the crown on 37

Fig. 2 A supplemental bitewing showing the distal surface of 37 to be intact and the tooth to be caries free

Fig. 1 Cropped panoramic radiograph showing as if supernumerary tooth superimposed over the left mandibular third molar

References

1. Pitts N, Ricketts D. Radiographs in dental caries diagnosis. In Horner K, Eaton K (eds) *Selection criteria for dental radiography*. 3rd ed. Faculty of General Dental Practice (UK), 2018. Available at: <https://www.fgdp.org>.