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.

Water fluoridation

Dental fluoride policy in Japan

Sir, with regard to your recent content on toothpaste advertising,¹ there are two types of chemicals: controlled chemicals for our good health and reduced chemicals for our bad health. The Centers for Disease Control and Prevention (CDC) clearly stated that wide-spread use of fluoride has been a major factor in the decline in the prevalence and severity of dental caries in the United States and other economically developed countries.² The World Health Organisation (WHO) has also asserted that the use of fluoride is a major breakthrough in public health.³ However, in Japan, fluoride in drinking water is regulated to be less than 0.8 mg/l which is not able to decrease tooth decay. According to the latest information,⁴ we have 104,533 dentists in Japan which is greater than the number of convenience stores. The lay public in Japan does not understand the importance of using fluoride in drinking water. Although the WHO, CDC, and developed countries recognise the relationship between the use of fluoride and tooth decay, unfortunately the Japanese government has been neglecting it. I believe the Japanese government needs to care for their own people by using fluoride and should change their dental fluoride policy as soon as possible.

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References

1. Hellyer P. Toothpaste advertising. *Br Dent J* 2019; **226**: 666.
2. Centers for Disease Control and Prevention. Recommendations for using fluoride to prevent and control dental caries in the United States. Available at: <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5014a1.htm> (accessed June 2019).
3. Petersen P E, Ogawa H. Editorial. Prevention of dental caries through the use of fluoride – the WHO approach. 2016. Available at: http://www.who.int/oral_health/publications/2016_prevention_dental_caries_through_use_fluoride.pdf (accessed June 2019).
4. [Japanese publication.] Available at: https://www.mhlw.go.jp/toukei/saikin/hw/ishi/16/dl/kekka_2.pdf (accessed June 2019).

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Paediatric dentistry

Artefact or fiction?

Sir, an eight-year-old girl was recently seen on the paediatric dental department at Newcastle Dental Hospital following referral from her GDP. Clinical and radiographic examination revealed caries in her primary molars. These were planned for restoration using preformed metal crowns (PFMC) by means of the Hall technique. However, upon discussion with her parents regarding this treatment modality it emerged that the patient was currently receiving growth hormone, and as part of her treatment was having her pituitary gland monitored annually, by means of an MRI scan. Her parents were thus concerned about the potential interaction between PFMCs and MRI, as they believed this may have some bearing on the image quality, or that they may interact with the scanner itself.

PFMCs are an austenitic stainless steel alloy (18/8 or Type 304) which is generally accepted as being non-magnetic (although significant cold working can cause conversion to the magnetic ferritic form).

A search of the literature did not reveal any studies specifically relating to PFMCs and MRI. The effects on stainless steel orthodontic components have, however, been extensively studied. Stainless steel orthodontic bands could be considered similar to PFMCs and these are thought to be MRI-safe, as long as they are securely attached.^{1,2} However, metals of this nature can produce large amounts of artefact, thus having a negative effect on image quality.

In fact, stainless steel crowns, nickel chromium crowns and cobalt chromium crowns are at highest risk of causing artefacts on an MRI scan.³ It was also noted that the maximum area of signal loss is when the offending material is within 10 cm of the region of interest.³ In relation to this case, it is not unreasonable to assume that PFMCs would cause unwanted artefacts, owing to the fact that

both the mandible and maxilla lie within a 10 cm radius of the brain. One could also imagine that if multiple PFMCs were present in multiple quadrants, this could even render an MRI undiagnostic. Delman⁴ has thoroughly investigated imaging in paediatric pituitary abnormalities, and has documented the unwanted artefacts caused by fixed orthodontic appliances, clearly showing the negative impact these can have on MRI imaging in the head and neck area.

Given the difficulties of liaising with this patient's overseas doctors, the primary teeth were restored conventionally with composite restorations instead. As PFMC use becomes more widespread in the paediatric population, queries over their interaction with MRI may increase and further research/guidelines in this area would be useful.

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References

1. Wylezinska M, Pinkstone M, Hay N, Scott A D, Birch M J, Miguel M E. Impact of orthodontic appliances on the quality of craniofacial anatomical magnetic resonance imaging and real-time speech imaging. *Eur J Orthod* 2015; **37**: 610-617.
2. Beau A, Bossard D, Gebeile-Chauty S. Magnetic resonance imaging artefacts and fixed orthodontic attachments. *Eur J Orthod* 2015; **37**: 105-110.
3. Mathew C A, Maller S, Maheshwaran. Interactions between magnetic resonance imaging and dental material. *J Pharm Bioallied Sci* 2013; **5**(suppl 1): 113-116.
4. Delman B N. Imaging of pediatric pituitary abnormalities. *Endocrinol Metab Clin North Am* 2009; **38**: 673-698.

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Oral surgery

OS expansion

Sir, the British Association of Oral Surgeons (BAOS) welcomes the recent paper by Fullarton *et al.*,¹ which clearly illustrates the need to expand the number of oral surgery (OS) training posts, thereby increasing the number of OS specialists and ultimately consultants. These consultants can then not only deliver secondary care OS but would ideally be integral in the supervision and delivery of OS in the primary care setting as well as undergraduate

and postgraduate training across both sectors. These recommendations were made in the 2010 report by Medical Education England² but have yet to be actioned.

BAOS has been lobbying the Tri-collegiate Specialty Membership Examinations' Executive regarding portfolio access to the MOral Surg examination for some time now³ as well as holding discussions with the BDA⁴ and the GDC. Portfolio access to the MOral Surg would greatly benefit the huge number of experienced OS staff grade, associate specialist and specialty doctors, who form a vital part of the team in many maxillofacial units, and we welcome the support of the British Association of Oral and Maxillofacial Surgeons in this.⁵ These individuals have a wide scope of practice⁶ and access to this examination would also augment any subsequent portfolio application for mediated entry to the OS specialist list. This approach works well for the GMC with its Certificate of Eligibility for Specialist Registration model.

Once on the specialist list, these individuals would be able to apply for OS consultant roles. This step is necessary to try and remedy the current shortfall in training posts, which is extremely important in the interim as an increase in OS national training numbers cannot happen overnight. This method of application is onerous and is in no way a 'back door' route on to specialist lists.

BAOS is ultimately concerned with gold standard delivery of OS for patients. Safe, high quality care for all undergoing OS in every environment is only attainable with adequate workforce numbers comprising properly trained, quality assured OS specialists and consultants. The excellent paper by Fullarton *et al.*¹ clearly demonstrates the need for robust workforce planning and illustrates that the lamentably low numbers of OS training programmes (45 in total in the UK) are currently insufficient to provide this.

R. Hierons, P. Blacklock, P. Brotherton, BAOS, Edinburgh, UK

References

1. Fullarton M, Jadun S, Begley A, Magennis P. The oral surgery specialist list: what will happen as the 'grandfathers' disappear? *Faculty Dent J* 2019; **10**: 52–57.
2. Medical Education England. Review of Oral Surgery Services and Training. London: MEE, 2010.
3. British Association of Oral Surgeons. Letter to the Tri-collegiate Specialty Membership Examinations' Executive. Available at: <https://www.baos.org.uk/wp-content/uploads/2019/01/BAOS-Eligibility-for-MOral-Surg-121118.pdf> (accessed May 2019).
4. British Association of Oral Surgeons. Letter to the British Dental Association. Available at: <https://www.baos.org.uk/wp-content/uploads/2019/01/BAOS-CESR-letter-to-BDA-17.05.18.pdf> (accessed May 2019).

5. BDJ Upfront. Dental deans should give dentists fair access to Royal College exams. *Br Dent J* 2019; **246**: 546.
6. Brotherton P, Gerrard G, Bennett K, Coulthard P. The scope of practice of UK oral surgeons. *Oral Surg* 2015; **8**: 83–90.

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Oral health

IE advice

Sir, I was intrigued to read the article relating to infective endocarditis in the recent issue of your journal.¹ I agree with the authors that reliance on antibiotic prophylaxis is insufficient and prevention is key to reducing the risk. However, it should be emphasised that evidence has suggested bacteraemia can result from normal activities and is not limited to trauma to the soft tissue, as suggested to be the causative factor for the patient who possibly traumatised their gingiva using a toothpick. Mastication itself can increase the prevalence of bacteraemia by 17–51%, and dental flossing by 20–58%.²

A review by Roberts in 1999 suggested that it is far more likely these everyday procedures including tooth brushing and flossing are the cause of infective endocarditis rather than isolated random dental-induced bacteraemia that follows trauma. It is more likely that the cumulative exposure to bacteraemia from everyday activities increases a patient's risk of developing endocarditis as bacteraemia following dental procedures and isolated trauma to the mucosa is of low intensity and short duration.³

Therefore, by reiterating the advice offered by the NICE guidelines we focus on prevention and also the importance of case-selective advice.⁴ The preventive advice must include providing patients at risk with information about symptoms that may indicate infective endocarditis. Additionally, emphasising to them the importance of good oral health in reducing their risk and reminding them about the risks of bacteraemia from undergoing other invasive procedures such as body piercing or tattooing.

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References

1. Ahmed R, Elias S. Infective endocarditis and the heavily restored dentition: are clinicians becoming more complacent regarding prevention? *Br Dent J* 2019; **226**: 785–788.
2. Seymour R, Lowry R, Whitworth J, Martin M. Infective endocarditis, dentistry and antibiotic prophylaxis; time for a rethink? *Br Dent J* 2000; **189**: 610–616.
3. Roberts G J. Dentists are innocent! 'Everyday' bacteraemia is the real culprit: a review and assessment of the evidence that dental surgical procedures are a principal cause of bacterial endocarditis in children. *Pediatr Cardiol* 1999; **20**: 317–325.

4. National Institute for Health and Care Excellence. *Prophylaxis against infective endocarditis: antimicrobial prophylaxis against infective endocarditis in adults and children undergoing interventional dental procedures*. 2016. Available at <https://www.nice.org.uk/guidance/cg64> (accessed June 2019).

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Occupational health

Published research on stress

Sir, we read, with interest, the letters of R. Bernstein¹ and R. Swainston² regarding the need for research to explore the emotional drivers of dentists, and particularly young dentists' distress. We also read the letter from GDPs in Peru³ highlighting the apparent lack of a study evaluating primary interventions to deal with the dentists' stress.

We would like to point out that initial research into this area has already been conducted^{4–7} and published in this journal. It resulted in an evidence-based self-help programme⁸ which was both statistically and clinically effective in both the short- and longer-term. Participants in the research and programmes run to date have included a range of practitioners, from foundation dentists to established dentists in general practice. This programme has been made available to postgraduate medical education centres in the UK. It would also be possible to make it available elsewhere.

Our research and improvement of the stress/burnout coping skills package will continue, subject to research funding.

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References

1. Bernstein R. Emotional burnout. *Br Dent J* 2019; **226**: 635.
2. Swainston R. Young dentist burnout. *Br Dent J* 2019; **226**: 817.
3. Mattos A C Z, Tirodo L A A. Burn out solutions needed. *Br Dent J* 2019; **226**: 541.
4. Chapman H R, Chipchase S Y, Bretherton R. Understanding emotionally relevant situations in primary care dental practice: 1. Clinical situations and emotional responses. *Br Dent J* 2015; **219**: 401–409.
5. Chapman H R, Chipchase S Y, Bretherton R. Understanding emotionally relevant situations in primary dental practice. 2. Reported effects of emotionally charged situations. *Br Dent J* 2015; **219**: E8.
6. Chapman H R, Chipchase S Y, Bretherton R. Understanding emotionally relevant situations in primary dental practice. 3. Emerging narratives. *Br Dent J* 2015; **219**: 491–496.
7. Bretherton R, Chapman H R, Chipchase S. A study to explore specific stressors and coping strategies in primary dental care practice. *Br Dent J* 2016; **220**: 471–478.
8. Chapman H R, Chipchase S Y, Bretherton R. The evaluation of a continuing professional development package for primary care dentists designed to reduce stress, build resilience and improve clinical decision-making. *Br Dent J* 2017; **223**: 261–271.

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