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Priority will be given to letters less than 500 words long. Authors must sign the letter, which may be edited for reasons of space.



Validity of association

Sir, I found the paper *Periodontal disease as a risk factor...* (BDJ 2007; 203: E5) of interest and the authors' attempt to assess the risk is appreciated. As stated, it is a case-control study, but I wish to express my concern about the validity of association between AMI and periodontitis in this paper. The study is similar in view to that expressed by Danesh¹ in his review, where he noted that studies based on clinical measures of periodontal disease did not have direct measures of the infection, such as the bacterial count or the systemic level of antibodies to oral pathogens.

The second aspect to be considered is the selection of CHD patients as a control group. This introduces a bias that can exert an effect on clinical measurements like bleeding on probing and OHI-S, as there is a difference in ambulatory condition between the two groups which could affect oral hygiene maintenance. The criteria mentioned do not specify the cut-off point for probing depth and the results also show significant difference in the serum lipid levels. The non-matching of this factor can be a confounder.

The third aspect is the role of smoking, which is a confounder risk factor for periodontal disease and heart disease, and therefore must also be considered as a confounder.² Even though the study is adjusted for smoking by means of multivariate analyses, this approach is open to bias due to residual confounding. As for other morbidities it has been suggested that statistical adjustment is insufficient to control for smoking and that stratification is needed. Furthermore the age range is wide, between 29 and 85 years, which have not been stratified.

K. Sreevidya
Bangalore

1. Danesh J. Coronary heart disease, *Helicobacter pylori*, dental disease, *Chlamydia pneumoniae*, and cytomegalovirus. *Am Heart J* 1999; **138**: S434-S437.
2. Hujoel P, Drangsholt M, Spiekerman C, DeRouen T. Periodontitis: systemic disease associations in the presence of smoking: causal or coincidental? *Periodontol* 2000 2002; **30**: 51-60.

The lead author, Dr Sumeet Kaisare, responds: I am extremely happy that this paper has been critically read and evaluated by many. I agree with the first point stated that the studies based on clinical measures of periodontal disease did not have direct measures of the infection, such as bacterial count or the systemic level of antibodies to oral pathogens.

As far as the second point is concerned, the selection of CHD patients as a control group does not exert an effect on clinical measurements like bleeding on probing and OHI-S in spite of there being a difference in ambulatory condition between the two groups which may affect the oral hygiene maintenance. As already mentioned in the article, the patients in the AMI group were examined within three days of their admission and it takes one week for gingival bleeding to manifest itself after cessation of all oral hygiene procedures.¹ Moreover, it takes around two weeks for plaque to mineralise into calculus.² Hence, we can conclude that difference in ambulatory condition was not responsible for any of the clinical parameters examined.

Thirdly, I strongly believe that a cut off point for probing depth and serum lipid levels would not affect the outcome of the study in any way.

Smoking can be considered as a confounding factor and it has been statistically adjusted by using multivariate logistic regression analysis. I accept that further stratification of this parameter would prove to be handy but at the same time I feel the results of the study are still valid.

After thorough discussion with various statisticians it was unanimously decided that stratification of the age parameter could be omitted.

I would like to emphasise that the unique sample design chosen was to help us to match the cases and controls to a significant extent and should not be mistaken for creating a bias in the study.

I hope this reply is adequate in answering most queries.

1. Kinane D F, Lindhe J. Pathogenesis of periodontitis. In Lindhe J, Karring T, Lang N (eds). *Clinical periodontology and implant dentistry*, 3rd ed. pp 189-225.

Copenhagen: Munksgaard, 1997.

2. Lang N, Mombelli A. Dental plaque and calculus. In Lindhe J, Karring T, Lang N (eds). *Clinical periodontology and implant dentistry*, 4th ed. pp 81-105. Copenhagen: Munksgaard, 2003.

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Supernumerary roots

Sir, I would like to put forth my opinion on the interesting case of a patient who presented with an anomalous upper third molar (BDJ 2007; 203: 119). The author's case is very interesting but at the same time provokes many doubts in my mind. In my view I feel that this may be a case of an anomalous third molar with supernumerary roots. The author refers to it as double teeth, based on clinical examination, and also suggests that it might have resulted from fusion between a maxillary third molar and a paramolar. However, the author did not show the occlusal aspect of the anomalous tooth, which would have been more useful for the readers. The photographs shown do not prove it to be double teeth. The dental panoramic radiograph shown is also inconclusive to the diagnosis. I agree that double teeth are not always discernible on radiographs, especially when they are located palatally as has been assumed in this case. In such cases occlusal radiographs should have been the choice.

The third molars are generally anomalous and most of the time are wider in the mesio-distal dimension and may have supernumerary roots. Thus I believe this case represents a third molar with supernumerary roots.

M. Juneja
Lucknow

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Profound ignorance

Sir, in response to the letter *Downsides of implants* (BDJ 2007; 203: 228-229) by J. A. Loudon, regarding the risks he fears will result from the long-term use of dental implants, he indeed cites an interesting and valid concern. However, had he written this 20 years ago his point would have been topical, but sadly he displays a profound ignorance of the literature. Can I suggest that amongst

the papers he reads he studies those presented to a workshop initiated by Professor Brånemark and held in London in September 1998 entitled *Osseoperception and musculo-skeletal function* (ISBN: 91-630-83469)? In this publication it is shown that a neuroplasticity exists which allows the brain to be aware of mechanical contacts with an inanimate metal implant. A remarkable finding, with implications far beyond dentistry. Dr Loudon can now refer his patients with 'no worries' to those who are proficient in their understanding of implant techniques. Osseointegration itself is a remarkable phenomenon, which has revolutionised all forms of prostheses by allowing functional loads to be transferred directly from a prosthesis to the bone over many years.

Professor P-I Brånemark and all those who have worked with him over his lifetime deserve our thanks, as well as those of our patients. P-I Brånemark gave us a means of solving one of dentistry's major conundrums: how to replace missing teeth satisfactorily. His lifelong commitment to the study of the integration of living bone with titanium, as well as to those patients who might benefit from the techniques, is a wonderful achievement, happily now recognised worldwide.

R. Johns

Winchester

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Inadequate courses

Sir, it is a requirement of the Ionising Radiation (Medical Exposure) Regulations 2000 that dentists regularly update on the use of ionising radiation and radiation protection. The GDC recommends that GDPs include these topics as part of their CPD. We write to highlight our concerns regarding the inadequacy of some so-called 'IR(ME)R courses' in dental radiography and radiation protection that are available nationally. In particular, we wish to draw to colleagues' attention that some courses do not cover all the required topics.

Four categories of individuals involved in medical/dental radiography are identified under IR(ME)R 2000. The categories include: the *employer*, the *referrer*, the *practitioner* and the *operator*. All GDPs are designated as *IR(ME)R practitioners*, although they may well assume additional roles as well. The *IR(ME)R practitioner* is entitled 'to take responsibility for individual medical exposures', and is required to be 'adequately trained'. Regulation 4(4) also requires *IR(ME)R practitioners* to 'undertake continuing education and

training after qualification including, in the case of clinical use of new techniques, training related to these techniques and the relevant radiation protection requirements'. GDPs have therefore had a legal responsibility since 13 May 2000 to undertake CPD in this area. This is separate from any requirements of the GDC to undertake CPD in radiography and radiation protection.

The document *Guidance Notes for Dental Practitioners on the Safe Use of X-ray Equipment*, published in 2001 by the Department of Health and the then National Radiological Protection Board, brings together the relevant legislative requirements of the Ionising Radiations Regulations 1999 (IRR 1999) and IR(ME)R 2000, as they apply to dentistry, together with guidance on 'good practice'. Within this document, paragraph A3.6 recommends, regarding CPD, that 'within the five yearly 250 hour re-certification cycle, an average practitioner would be expected to devote at least 5% of the hours to radiology and radiation protection'. Paragraph A3.7 goes on to state that 'Practitioners are recommended to attend formal courses covering all aspects of radiation protection' and that 'such courses would normally be expected to provide at least 5 hours of verifiable CPD'. In 2006 this recommendation was finally acknowledged by the GDC when 'Radiography and Radiation Protection' was included as one of their three 'core CPD subjects'.

The content of 'appropriate courses' are specified in the 2001 Guidance Notes as:

- (a) The principles of radiation physics
- (b) Risks of ionising radiation
- (c) Radiation doses in dental radiography
- (d) Factors affecting doses in dental radiography
- (e) The principles of radiation protection
- (f) Statutory requirements
- (g) Selection criteria
- (h) Quality assurance.

Other dental care professionals (DCPs) who have trained to take radiographs and may have acquired a Certificate in Dental Radiography, such as dental nurses and hygienists, can act as *IR(ME)R operators* under IR(ME)R 2000. They are also legally required to regularly update. One crucial factor, however, that differentiates their requirements from those of dentists is that DCPs are not required to *prescribe* radiographs. As specified in the 2001 Guidance Notes, the content of updating courses reflects the differing requirements of these two groups. Specifically

DCPs do not need to cover 'Selection Criteria'. Dentists must, however, cover this aspect since it is they that control the choice of any radiographs, thus impacting critically on patient dose. Courses without this element would therefore be suitable for DCPs but would NOT, in our opinion, be adequate for GDPs. We regard this topic, which underpins the whole legal requirement of *justification* of any radiograph (a GDP's key legal responsibility as an *IR(ME)R practitioner*) as a fundamental element of any course for dental practitioners.

The main issue of contention is that some so called 'IR(ME)R courses', particularly those delivered by non-dental clinicians, may satisfy the requirements of the GDC to update in radiation protection but may not necessarily satisfy the full requirements of the dental IR(ME)R Guidance Notes since they do not include 'Selection Criteria'. We would urge all dental practitioners to ensure that any IR(ME)R course they choose to attend does indeed cover all aspects of dental radiography and radiation protection.

J. Brown

K. Horner

E. Whaites

British Society of Dental &

Maxillofacial Radiology

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Laser list

Sir, I read with great interest the article on lasers in endodontics (*BDJ* 2007; 202: 377-386) and would like to add other uses of lasers in this context:

1. Vitality testing: (a) Laser Doppler flowmetry (He-Ne). It measures the presence or absence of blood flow by detecting the velocity of RBCs moving in the blood vessels. (b) Heat stimulation by laser instead of hot gutta percha, eg Nd:YAG
2. Differential diagnosis: (a) Normal *vs.* acute pulpitis - Nd:YAG laser (2W & 20 pulses/sec) is used. (b) Acute serous *vs.* acute suppurative pulpitis
3. For removal of pulp remnants and debris at the apical foramen, eg Nd:YAG
4. In combination with irrigants, eg Nd:YAG, Er:YAG, Er:Cr:YSGG is used along with NaOCl and EDTA
5. Closure of apical foramen by lasers, eg Nd:YAG
6. Prevention of microleakage of root end filling, eg Pulsed Nd:YAG, carbon dioxide laser
7. Apicoectomy, eg carbon dioxide, Nd:YAG
8. Root canal filling with gutta percha

and laser, eg Nd:YAG along with segments for gutta percha using vertical compaction technique

9. Removal of temporary root canal filling, eg Nd:YAG, Er:YAG, Er:Cr:YSGG
10. Laser treatment of periapical lesion with sinus tract - Nd:YAG - improves wound healing
11. Prevention of fracture of pulpless tooth - Nd:YAG and carbon dioxide laser with 38% silver ammonium solution.

N. Vasudev Ballal

Manipal

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Gum side effects

Sir, while doing a Google search for the side effects of Big Red gum I came across a letter written by R. Pollock (*BDJ* 2006; 202: 550). I have experienced the same symptoms as those described in the letter.

After using about six of a 17 pack of Wrigley's Big Red gum over a number of days, I experienced dryness of the mouth, soreness of the tongue, and the pin lines in the roof of my mouth.

I have stopped using this product and my mouth is getting better.

J. Mayers

Barbados

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Correlated at conception

Sir, I recently had cause to consider some of the associations which have been established between periodontal disease and a number of medical conditions. It occurred to me that in the case of pre-term births, the association could extend back to conception. I made a limited search to determine whether the inflammatory and bacterial elements of this dental disease have been putatively or directly correlated with earlier conception processes, ovulation and implantation. I did not find any papers on the matter and therefore, I searched for papers which report research on inflammatory mediators and lipopolysaccharide influences on ovulation and implantation. I have only looked at abstracts, however, if my extrapolation from those findings is correct then Interleukin 1 beta induced by putative periodontal pathogens could potentially influence the ovulation process¹ while lipopolysaccharide directly derived from (subgingival) dental plaque or following a bacteraemia inducing dental procedure may suppress an LH surge.²

P. McCrory

Manchester

1. Kol S, Kehat I, Adashi E Y. Ovarian interleukin-1-induced gene expression: privileged genes threshold theory. *Med Hypotheses* 2002; **58**: 6-8.
2. Akema T, He D, Sugiyama H. Lipopolysaccharide increases gamma-aminobutyric acid synthesis in medial preoptic neurones in association with inhibition of steroid-induced luteinising hormone surge in female rats. *J Neuroendocrinol* 2005; **17**: 672-678.

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Avoiding adverse events

Sir, we read with interest Carter *et al.*'s paper on the changing patterns of prescribed drugs in dental patients over the last 20 years.¹ We agree that it is both important to take a thorough drug history from all patients seen in dental practice and to maintain contemporaneous knowledge of pharmacology and drug interactions in order to avoid potential adverse clinical events. We would also like to stress the importance of asking patients about alternative medicines that they may be taking; few patients readily admit to this without direct questioning. Dentists need to be aware of the pharmacology of common alternative medicines, this is important as several commonly taken alternative medicines including garlic, ginseng, and ginkgo are known to potentially impair coagulation particularly when taken in combination with antiplatelet medicines such as aspirin or clopidogrel, leading some authors to recommend that patients stop these therapies for up to seven days prior to surgical treatment.² We urge all dental practitioners to read the cited article which is freely available from PubMed in order that they have sufficient knowledge of this important subject.

E. Carstairs, S. McLaughlin

London

1. Carter L M, McHenry I D, Godlington F L *et al.* Prescribed medication taken by patients attending general dental practice: changes over 20 years. *Br Dent J* 2007; **203**: E8.
2. Ang-Lee M K, Moss J, Yuan C S. Herbal medicines and perioperative care. *JAMA* 2001; **286**: 208-216.

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Close your mouth

Sir, the *British Dental Journal* of 25 August carries an interesting report of larvae in the mouth in a person with mental health problems seen in the West Indies¹ and the authors compare their case with some other reports. The important points are that myiasis is exceedingly rare in the resource-rich world and where hygiene is good; most cases have been reported from resource-poor areas of the world, frequently in people with mental health problems, even children,² but also in mentally competent individuals - although one

case we reported³ was after a tooth extraction in a Brazilian who pre-medicated himself with liberal doses of ethanol, and was presumably infected during his post-operative stupor. It is best to sleep in such areas and under such circumstances with the mouth closed!

C. Scully
London

1. Philip J, Matthews R, Scipio J E. Larvae in the mouth. *Br Dent J* 2007; **203**: 174-175.
2. Al-Ismaily M I, Scully C. Oral myiasis: report of two cases. *Int J Paediatr Dent* 1995; **5**: 177-179.
3. Bozzo L, Lima I A, Almeida O, Scully C. Oral myiasis caused by sarcophagidae in an extraction wound. *Oral Surg Oral Med Oral Pathol* 1992; **74**: 733-735.

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Eagle eyes

Sir, I am surprised that an august publication such as the *BDJ* has succumbed to the grammatical pitfall of the use of the word 'biannual' (*BDJ* 2007; **203**: 198-199). This may be a case of poor proof-reading (it occurs in the complete paper online together with another grammatical faux-pas 'practicing') or editorial oversight – as it appears a couple of times in the printed Research Summary. Indeed reference is made to 'routine eye examination at least every two years' but the correct term 'biennial' never appears. I do not think I am merely being pedantic in drawing your attention to this as there is an actual four-fold difference in the time intervals referred to by either word!

J. Yeung

By email

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Dental standards

Sir, may I add a partisan postscript to the excellent article on International Standards by Derek Jones (*BDJ* 2007; **203**: 361-369).

The United Kingdom is one of the member countries of ISO TC 106 and CEN TC 55, referred to in the article. The UK participation is delivered through the British Standards Institu-

tion (BSI) and there are six national dental technical committees in that organisation. The committees deal with restorative and orthodontic materials, prosthodontic materials, instruments and equipment, oral healthcare products, and implants.

Membership of the committees is composed of dentists, scientists and representatives of industry. Several of the dentists are nominated by the British Dental Association. The members participate in national meetings discussing the various draft standards that are issued by CEN and ISO, and several attend the international meetings as members of the UK Delegation. Most committee members do not receive payment for the work they do on behalf of dentistry. BSI is very keen to recruit more committee members and dental clinicians can be valuable members, even if they have no formal materials science training.

Most ISO and CEN standards are published in the UK as British Standards and may be used by public purchasers such as the NHS. The CEN standards can form the basis of an application by a manufacturer for a CE Mark for a dental product.

Anyone interested in participating in UK dental standards work may contact me in the first instance.

P. Jacobsen

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Leader of the UK Delegation to ISO TC 106
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Racial pseudoscience

Sir, I would be most grateful if the authors of the paper *Senior dental students' career intentions, work-life balance and retirement plans* (*BDJ* 2007; **203**: 257-263) could address my concerns.

What criteria did the authors use to classify an individual as white or non-white and how did they classify those of mixed ethnicity? Was the purpose of this ethnic sifting to demonstrate some

racial rather than cultural behavioural pattern; stereotyping an individual's behaviour based purely on the colour of their skin? How, for example, would their study have dealt with the choices of an overseas white Polish student compared with a second generation British Asian student?

This type of racial pseudoscience, although very popular in the nineteenth century, is dangerous, flawed and has in recent times fallen into disrepute to reside alongside the likes of eugenics. No respected scientific journal should assist in the revival and perpetuation of Social Darwinism. I await the authors' response with great interest and thank you for taking the time to consider these points.

A. S. Naru

Newcastle upon Tyne

Lead author Fiona M. J. Stewart responds: Thank you for your comments regarding our paper. The students were asked to classify their ethnic origin in the questionnaire, simply with the purpose to see if there was a difference in career intentions based on ethnic origin, in the same way as we compared responses by gender of the students. The authors also felt it important to represent non-white ethnic minority experience. We do, however, accept that recording of ethnic origin is a flawed process. As stated in the paper, given the small numbers of respondents in some of the ethnic groups, we collated the responses into two categories and took the advice of a referee for a previous paper to refer to them as 'white' and 'non-white'. There is documented evidence on different work patterns between the genders, as well as anecdotal suggestions of differences between ethnic groups, and these are of importance when it comes to workforce planning. Analysis by ethnic group, gender, age etc is carried out routinely, and in the appropriate context, which this is, is entirely acceptable.

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