

# Letters to the Editor

Send your letters to the Editor,  
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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.

LETTERS

## AVOIDING OVERHANG

Sir, I would like to comment on the paper *An in vitro study on the use of circumferential matrix bands in the placement of class II amalgam restorations* (BDJ 2008; 204: E10).

I feel that as well as the retainer used, the type of matrix band (thickness and precontouring of the band), wedging techniques, condensation force and condensation technique employed also play a major role in avoiding overhang of the proximal restoration. However, the authors do not mention the thickness of the matrix band used and since they have selected class II cavities on maxillary first premolars the wedging technique used is very important in preventing overhangs due to the root concavity. This is not mentioned in the study.

Additionally, the authors report that they checked for the contact point visually but provide no further details as to how they did this. Ideally the stability of the contact point is checked by means of passing dental floss between the contacts, which was not done in the present study. The authors have also not mentioned why they removed the maxillary second premolar and canine in the cast and duplicated it with an acrylic tooth. What was the clinical significance of doing this? Hence further studies using thin precontoured bands, proper wedging techniques and different condensation techniques should be done using different circumferential retainers to check for the proximal overhangs in a class II amalgam and composite restoration.

V. Ballal  
Manipal

*Dr Liam Addy responds: Thank you for your interest in our paper. I agree*

*with you that other factors could play an important role. This in vitro study had 20 different dentists place the restorations; this was intentional to simulate the clinical situation where you cannot control condensation force and technique. The type of wedge could potentially influence the outcome (as stated in the discussion and conclusion), but as we were specifically looking at two matrix systems (for a reason) we were trying to control all other factors and therefore only provided one type of wedge.*

*As stated in the aims 'the aim was to investigate if the Omnimatrix system was more effective than the Siqueland system at reducing overhangs...' The reason for this as mentioned in the paper was because the majority of dentists had been reported to use the Siqueland system and there had also been a reported issue of blood contamination. We therefore wanted to use a similar designed matrix system, ie a circumferential system which was disposable to compare with the Siqueland for its suitability as an alternative.*

*With regards to your comment on the contact point we do state that we could not validate the contact point measurements because no quantitative measurements were made. We also address it in the conclusion 'Quantitative data on contact point pressure would also add valuable information in aiding clinicians in their matrix selection.'*

*With regards to the rest of your observations we do state in the concluding paragraph that there is a need for further studies assessing the variables you mention.*

DOI: 10.1038/sj.bdj.2008.744

## LOCALISED CORROSION

Sir, we would like to add some comments to the recent, concise review of nickel

allergy associated with orthodontic materials (BDJ 2008; 204: 297-300).<sup>1</sup>

The authors state that 'If nickel is leached from orthodontic appliances, this Type IV hypersensitivity reaction can occur.' The occurrence of allergic contact sensitisation does not necessarily correlate with the release of nickel in the saliva from orthodontic appliances. Instead, by definition, allergic contact dermatitis occurs by strict contact with oral mucosa and/or skin.<sup>2</sup> Also, the authors state that 'most individuals who have nickel sensitivity do not report adverse clinical manifestations to orthodontic appliances containing nickel'. The authors did not mention the existence of adverse systemic allergic reaction to metal, mainly nickel allergy, contained in orthodontic appliances, which are often not recognised by dental practitioners and/or dentists.<sup>3</sup>

We have recently described a systemic contact dermatitis due to allergy to nickel in an adolescent who underwent orthodontic treatment, in absence of oral clinical signs and/or symptoms.<sup>3</sup> Our case is not unique. Studies by Trombelli *et al.*<sup>4</sup> and Veien *et al.*,<sup>5</sup> which Noble *et al.* cited in their review, and others,<sup>6,7</sup> reported similar findings.

The authors suggest that patients who have had adverse effects to Ni-Ti archwires may subsequently tolerate stainless steel appliances. We would like to draw attention to the problem that even stainless steel orthodontic archwires may undergo localised corrosion as well as oral galvanic corrosion due to electrochemical reactions, which accelerate the release of nickel and chromium in the oral cavity.<sup>8,9</sup>

In both cases discussed, although nickel hypersensitivity is an interesting

possibility, data about the potential delayed hypersensitivity to nickel (Type IV allergy) were lacking to support claims of adverse events to archwires due to allergy to nickel because the patch testing was not performed. Moreover, the authors did not distinguish between allergic sensitisation to metals from archwires and the potential local toxicity originating from the release of nickel and/or chromium, which are able to determine oral mucosal inflammation even in absence of delayed type hypersensitivity reactions.<sup>8</sup>

We believe that it is important to consider that metallic orthodontic appliances may cause local and/or systemic adverse events. Orthodontists and general practitioners should attentively consider all cases of dermatitis which may occur during orthodontic treatment.

P. D. Pigatto,  
G. Guzzi,  
C. Sforza  
Milan

1. Noble J, Ahing S I, Karaikos N E, Wiltshire W A. Nickel allergy and orthodontics, a review and report of two cases. *Br Dent J* 2008; **204**: 297-300.
2. Lachapelle J M, Maibach H I. The methodology of patch-testing. In: *Patch testing – prick testing*. pp 27-69. Springer, 2003.
3. Pigatto P D, Guzzi G. Systemic contact dermatitis from nickel associated with orthodontic appliances. *Contact Dermatitis* 2004; **50**: 100-101.
4. Veien N K, Borchorst E, Hattel T, Laurberg G. Stomatitis or systemically-induced contact dermatitis from metal wire in orthodontic materials. *Contact Dermatitis* 1994; **30**: 210-213.
5. Trombelli L, Virgili A, Corazza M, Lucci R. Systemic contact dermatitis from an orthodontic appliance. *Contact Dermatitis* 1992; **27**: 259-260.
6. Kerousou H, Kanerva L. Systemic contact dermatitis caused by nickel in a stainless steel orthodontic appliance. *Contact Dermatitis* 1997; **36**: 112-113.
7. Schultz J C, Connolly E, Glesne L, Warshaw E. Cutaneous and oral exposure to nickel in dental braces. *Dermatitis* 2004; **15**: 154-157.
8. Geurtsen W. Biocompatibility of dental casting alloys. *Crit Rev Oral Biol Med* 2002; **13**: 71-84.
9. Punckt C, Bölscher M, Rotermund H H, Mikhailov A S *et al.* Sudden onset of pitting corrosion on stainless steel as a critical phenomenon. *Science* 2004; **305**: 1113-1136.

*Dr James Noble responds: Thank you Drs Pigatto, Guzzi and Sforza for your additional comments. Although we do indicate that extra-oral manifestations of nickel allergy can occur, we do not elaborate on specific systemic manifestations that may occur as a result of contact dermatitis due to orthodontic appliances, as they are rare and most allergic reactions are intraoral as opposed to systemic and this is what we were reporting.<sup>1,2</sup>*

*Nonetheless, it would be beneficial for dental and orthodontic practitioners to be mindful to closely monitor dermatitis in patients who do report an allergy to nickel in the initial medical questionnaire.*

*Further, it is difficult to demonstrate contact mucositis in an intra-oral setting because of the flow of saliva transporting corrosion products. Still, lichenoid contact hypersensitivity lesions to restorative dental materials is generally accepted as a contact dermatitis. Also, it is difficult to distinguish between intra-oral toxic and allergic reactions,<sup>3</sup> challenging to control for the rate of intra-oral corrosion and the treatment for both is similar.*

*It is important to note that a positive patch test is not necessarily associated with intra-oral nickel reactions and therefore routine patch-testing of patients who report intra-oral symptoms is not necessary. This has been confirmed by Spiechowicz *et al.* who observed patients who had positive skin reactions over 15 years and found no development of a local or systematic reaction to a nickel containing alloy.<sup>4</sup> Further, these tests may cause sensitisation to nickel if there is no true nickel allergy present<sup>3</sup> and they also have false positive and negatives. Patch-testing was therefore not undertaken in the two reported cases. Therefore, if patients do develop signs or symptoms to Ni-Ti wires, the most practical, cost-effective and non-intrusive therapy is removal of the archwires and continuation of treatment with alternative archwires.*

1. Hensten-Pettersen A. Casting alloys: side-effects. *Adv Dent Res* 1992; **6**: 38-43.
2. Hildebrand H F, Veron C, Martin P. [Non-precious metal dental alloys and allergy] (in French). *J Biol Buccale* 1989; **17**: 227-243.
3. Geurtsen W. Biocompatibility of dental casting alloys. *Crit Rev Oral Biol Med* 2002; **13**: 71-84.
4. Spiechowicz E, Glantz P-O, Axéll T, Chmielewski W. Oral exposure to a nickel-containing alloy of persons with hypersensitive skin reactions to nickel. *Contact Dermatitis* 1984; **10**: 206-211.

DOI: 10.1038/sj.bdj.2008.745

## INACCURATE REPORTING

Sir, I read with interest the recent article by Cure and Ireland (*BDJ* 2008; **204**: 631) about an outreach centre for training members of the orthodontic team. Cure and Ireland refer to some ongoing research work being undertaken by

our team based at the Centre Research in Medical and Dental Education, the University of Birmingham in conjunction with Mrs Sue Noble, School of Dental Hygiene and Therapy, Birmingham Dental Hospital. However, the reference to this work was inaccurately reported and I would like to clarify for your readers the purpose of our study.

Cure and Ireland refer to an unpublished oral presentation delivered at the Birmingham Conference 2007 in which interim findings from the first phase of our study were reported (Firmstone, 2007). The authors stated that dental therapists trained at Birmingham Dental Hospital experience problems with the transition to primary care workplaces because they have been trained in a secondary care environment. It is important to highlight that this was not a message from my presentation and not an accurate reflection of the undergraduate programme. The ethos of the undergraduate programme is to equip newly-qualified dental therapists to work in primary care and up to 60% of their clinical time is spent in outreach, primary care settings. Also, the Birmingham Dental Hospital will pilot a foundation programme for newly-qualified dental therapists, the aim of which will be to provide a series of study days to complement the newly-qualified dental therapists' first year working in a supported primary care clinical environment. Notably, the purpose of our research is to investigate the continuing educational needs and teamwork implications of dental therapists working in primary care with the intention of informing targeted education programmes for qualified dental therapists. We hope to publish our work on this study in the near future.

V. R. Firmstone  
CRMDE

*Dr Richard Cure responds: We apologise if there was any unintentional misinterpretation of the oral presentation given by V. R. Firmstone at the Birmingham Conference in 2007. Our comments are based upon both the presentation and the ensuing discussion forum which followed. We are very pleased to hear that research is being undertaken to*

*investigate the educational needs of dental therapists and the development of teamwork in primary care and anticipate that when published this will make a valuable contribution to the important area relating to future educational programmes for dental therapists.*

DOI: 10.1038/sj.bdj.2008.746

## SAFEGUARD THE FUTURE

Sir, I have been saddened to recently receive a number of teenagers into my care with missing multiple front teeth. In particular an 18-year-old with six upper anteriors missing and a partial plate placed (please note the 12 UDAs efficiently attained, Mr Cockcroft would be pleased). All of the above courtesy of a local NHS emergency clinic.

While private dentistry gallops forward in both excellence and financial reward (bleaching society, implant training regulation, >£3 billion spend), the NHS, once a balm for the conscience of all private dentists, is no more.

Currently cosmetic dentistry is capitalising on previous NHS successes but this is running out. We need to safeguard the future by preventing extremes of dental disease using our own resources and truly become a responsible self governing profession.

May I request that private dentistry begin to think of pro bono schemes or partnerships with dental businesses as the way to improve the nation's dental health thus raising dental IQ (increased IQ leads to more private treatment anyway!) What about introducing CPD incentives to public service in this way?

Surely this will redeem a public/media opinion that believes us greedy and uncaring and possibly safeguard against governmental neglect as well as improving oral health.

Yours with passion.

I. Hewett

By email

DOI: 10.1038/sj.bdj.2008.747

## A BIT WORRYING

Sir, we have all become very conscious of the need for preventing cross infection. I have just received the June copy of *CDO Update* from the Department of Health.

On page 8, there is a photo of a masked

dentist. He has blue gloves on his hands and is holding the strings of his mask at his ears. This should never occur. If he is putting on the mask, he should do so before gloving. Otherwise he risks transferring his skin and hair microbes to the patient. If he is adjusting or removing the mask, he should do so after de-gloving. Otherwise he risks transferring microbes from the patient to himself.

I can see at least two further aspects of this photo which are questionable if the dentist is involved in a treatment procedure: his spectacles do not appear to have side-guards, and he is not wearing a disposable treatment apron.

I was so taken aback by all this that I showed it to a colleague, who pointed out also that the recumbent patient in the picture had her eyes unprotected anyway!

The irony of this photo is that it appears on a page headed 'Quality and Standards Update'!

Did they simply print the photo to see whether anyone complained about it? I think not. They sent me my copy with an incorrect postcode (which presumably is why it arrived in July), stating that the details came from the GDC, and asking me to contact the GDC if any details were incorrect. I did so, and found that the GDC had the correct details! It's a bit worrying that the DH can get so much wrong, but then I am not really surprised. They may not know the difference between a rump and an arm joint, and perhaps could not organise a bacchanalian revel in a place where hops are fermented.

T. Watts

London

DOI: 10.1038/sj.bdj.2008.748

## CDTs NEED LIMITATIONS

Sir, as a lecturer and clinical dental technician at Otago School of Dentistry New Zealand, I see first-hand the 'experience' of dental technicians training to be clinical dental technicians. There are some very talented dental technicians but they are not in any shape or form experienced enough or educated for that matter to deal in a clinical capacity with other than the simpler complete denture cases. The hardest part is to try and get them to think biologically rather than

technically. Dental technicians, and I have been one for 30 years, tend to believe that because they can do the technical work then they have 'some God-given right' to perform all things prosthodontically in a clinical sense. Really this is not so and it is about time some common sense was brought forward as to what type of education is necessary. Just because one spends in excess of £30,000 does not necessarily mean that one is competent to perform clinically. Clinical dental technicians need to remember that one needs a vast experience clinically before attempting the more in-depth cases. It is just not simply about an articulator on the bench anymore.

J. Egan

Dunedin

DOI: 10.1038/sj.bdj.2008.749

## PERCENTAGE VALUES

Sir, I was delighted to read the excellent article by Dougall and Fiske on communication in special care dentistry (*BDJ* 2008; 205: 11-21). It is splendid that the journal is giving such prominence to special care dentistry through this series. I look forward to learning yet more through the forthcoming parts.

Whilst it does not detract in any way from the thrust of the article, I would like to query the percentage values attributed to various aspects in the communication triangle in Figure 1 and within the text. I think that this is based on the original work of Albert Mehrabian<sup>1</sup> who investigated how people decide if they like a person when they meet them for the first time. He was clear that this should not be applied to the transfer of information between people. He stated that the percentage was approximately 7% on the basis of the actual words, 38% on paralinguistics (voice tone, speed of speech, accent, 'uhms' and 'ahs' and other factors that comprise how we speak) and the remaining 55% was attributed to facial expression, which is often interpreted to include body language.

M. Wanless

By email

1. Mehrabian A. *Silent messages: implicit communication of emotions and attitudes*. Belmont, California: Wadsworth, 1981.

DOI: 10.1038/sj.bdj.2008.750