

condition which although apparently rare can have a significant effect on the quality of life of affected patients.

P. Ryan, London

1. Patel S, Choyee S, Uyanne J *et al.* Non-exposed bisphosphonate-related osteonecrosis of the jaw: a critical assessment of current definition, staging, and treatment guidelines. *Oral Dis* 2012; **18**: 625–632.
2. Pichardo S E, Kuypers S C, van Merkesteyn J P. Denosumab osteonecrosis of the mandible: a new entity? A case report. *J Craniomaxillofac Surg* 2012; pii: S1010-5182(12)00229-6. doi: 10.1016/j.jcms.2012.10.014 [Epub ahead of print].

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## BONE CRUSHING HABITS

Sir, we are concerned about tooth wear in patients from African and Afro-Caribbean origin and in particular the prevalence of a bone crushing habit as a risk factor for tooth wear. There is a cultural habit of crushing chicken and fish bones as part of their daily diet.

We prospectively audited 50 successive patients of African and Afro-Caribbean origin aged between 20-50 years who were examined in a general dental practice in southeast London to determine the prevalence and symptoms of bone crushing. We found that 80% of the patients had a score of 2 or more on the Smith and Knight tooth wear index. Sixty-six percent indicated that they crush chicken and fish bones with their teeth. In 26% of the patients other risk factors such as teeth grinding and acid erosion were found. In 64% of the patients tooth wear was not the presenting complaint. In 24% the major presenting complaint was aesthetic concerns (short teeth), followed by 12% with teeth sensitivity. Eighty-two percent were not aware that crushing bones is an important risk factor in tooth wear.

The association between tooth wear and bone crushing in patients from African and Afro-Caribbean origin has been known for years but the prevalence of the habit may have been underestimated. This audit demonstrates the high prevalence of tooth wear related to bone crushing. It is important that dentists educate patients and discourage them from bone crushing habits. Specific questions need to be asked when taking a history from patients about their dietary habits and specifically about bone crushing. One important consequence of this problem is an asso-

ciation with failure of prosthodontic and restorative treatments. Hence these patients tend to attend regularly for repair and replacement of their dental restorations and fractured cusps.

D. Nasser, S. Dunne, London

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## ORAL MUCOSAL PEELING

Sir, peeling of the oral mucosa is rarely encountered in clinical practice and consequently it can cause diagnostic confusion for unfamiliar practitioners. Therefore, we would like to share an interesting case of oral mucosal peeling that we have recently encountered.

An 80-year-old Caucasian woman presented with a three-month history of asymptomatic peeling of her oral mucosa. The medical history was unremarkable and there was no history of mechanical and chemical trauma, nor any recent changes in her usual oral hygiene practices. Clinical examination showed only grey-white strips of oral epithelium sloughing from the buccal mucosae and dorsal tongue (Fig. 1, arrows). These epithelial layers sloughed spontaneously or could be peeled off easily leaving a normal tissue base with no bleeding or erosions. A clinical diagnosis of oral mucosal peeling (epitheliolysis) was made and the patient reassured and discharged.

Oral epitheliolysis (also known as shedding oral mucosa or oral mucosal peeling) is a rarely described and often unrecognised superficial desquamation of oral mucosa that may be caused by sodium lauryl sulphate (SLS) containing oral hygiene products, though some

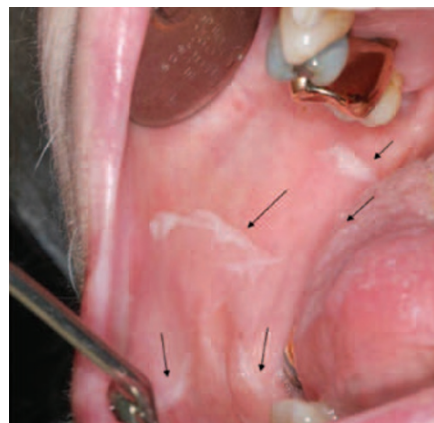


Fig. 1 Grey-white strips of oral epithelium sloughing from the buccal mucosae and dorsal tongue

cases appear idiopathic. The condition has no significant clinical consequences and usually resolves spontaneously or upon discontinuation of any implicated toothpastes or mouthwashes.<sup>1-3</sup>

Y. Hassona, Bristol/Jordan

C. Scully, Bristol

1. Zegarelli D J, Silvers D N. Shedding oral mucosa. *Cutis* 1994; **54**: 323–326.
2. Herlofson B B, Barkvoll P. Oral mucosal desquamation caused by two toothpaste detergents in an experimental model. *Eur J Oral Sci* 1996; **104**: 21–26.
3. Plonait D R, Reichart P A. Epitheliolysis of the mouth mucosa (mucosal peeling) as a side effect of toothpaste. *Mund Kiefer Gesichtschir* 1999; **3**: 78–81.

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## EVOLUTION OF A CHARITY

Sir, I am pleased to give readers an update to my article in the *BDJ* in 2007 giving an insight into my experiences working for the Northern Cleft Foundation (NCF).<sup>1</sup> The charity has been travelling around India for the last 13 years and has grown in size to include clinicians that normally form part of the cleft multidisciplinary team.

The fundraising for this year's trip took a slight twist on the previous five years. We developed a new website ([www.northerncliftfoundation.co.uk](http://www.northerncliftfoundation.co.uk)) and also created Facebook and Twitter accounts to improve our online profile and to create awareness of the trip. International charities such as SEWA UK ([www.sewauk.org](http://www.sewauk.org)) have also rallied to our cause to raise money.

I travelled with my friend and fellow registrar in oral and maxillofacial surgery, Chris Sweet, and we were overwhelmed that the team this year had grown to 48! This included a mix of surgical, anaesthetic, ward and specialist cleft nursing and recovery staff. When we arrived in Nagpur, the local Indian Rotary Club of Nagpur West had worked relentlessly for ten months prior to us arriving distributing leaflets in a radius of 500 km to recruit patients. Ten days of back-to-back operating for approximately 12 hours each day ensued under the supervision of Miss Beale and Mistery Penfold, Drake, Van Eeden and Russell.

The aim of the charity has always been to provide quality, safe surgery, and not to operate on large volumes of patients at lower standards. Our final tally included 121 cases successfully treated; the youngest patient was three months of age

and the oldest a gentleman in his sixties who worked as a caretaker at a school.

For those who wish to help with our cause, or who would even like to come and help next year, then please visit our website, as above. Our latest video for this camp can be found on YouTube by searching for Northern Cleft Foundation. Alternatively, just press 'like' on our Facebook page and follow our progress.

We would like to thank Dr George, Dr Venkat, all the cleft surgeons from the UK and all the 48 members of the NCF 2013 camp that worked relentlessly to provide a brighter future for those who thought it was beyond their reach. We of course must also extend our sincere thanks to all of the individuals who made generous donations to the Foundation.

J. Parmar, C. Sweet, by email

1. Parmar J. Hands-on training: working with a charity cleft team in Hyderabad. *Br Dent J* 2007; **205**: 291–293.

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## MRI SCAN HAZARD

Sir, I came across a case when it was not possible to perform Magnetic Resonance Imaging due to previous routine dental treatment. One of our patients stated that during the MRI scan procedure 'the magnet nearly pulled his crowned teeth out'. The procedure was stopped due to the potential hazard. We tracked the patient's record down and discovered that a non-precious alloy with high nickel content (82%) was used in this case to make cast posts and crowns on 12 and 11. The interaction between dental restorations and MRI scans is an interesting topic which has not received much attention in the dental literature.

MRI units use strong magnetic fields and radio-frequency waves to create images. The magnetic field generated by the MRI scanner will attract objects containing ferromagnetic metals (iron, nickel, cobalt) with considerable force. While the MRI examination is a very useful non-invasive imaging technique with no known side effects, it may sometimes provide confusing results due to dental restorations.

Since the MRI scan was introduced in the 1970s, numerous studies have confirmed that precious alloys, amalgams and titanium implants generally cause minimal artefacts. Non-precious dental

alloys have the potential of causing image deformation or image voids.

Dentists are not the only professionals implanting metal devices. Heart pacemakers and defibrillators, aneurysm clips, cochlear implants, insulin pumps, vascular stents, artificial joints etc are widely used in other branches of medicine. MRI technicians must conduct a careful evaluation of each patient and may alter the field strength to ensure the safety of the procedure. In some cases it is not possible to perform an MRI scan due to the risk of device dislodgement (eg some aneurysm clips) or malfunction (pacemakers). Extensive dental hardware with a high content of ferromagnetic metals, in some rare cases, can become a reason for a patient's ineligibility for an MRI procedure as well.

Every imaging modality can produce artefacts. Dental restorations can generate artefacts on both MRI and CT scans, with CT images being more affected by dental alloys due to the high attenuation of X-ray beam by metals.<sup>6</sup> Severe image distortion or inability to perform the MRI scan due to dental restorations are rare problems, but cannot be completely eliminated. Precious alloys are superior not only in terms of biocompatibility, but also as they produce fewer artefacts on the MRI scan.

D. Sinkiewicz, Peterborough

1. Eggers G, Rieker M, Kress B, Fiebach J, Dickhaus H, Hassfeld S. Artefacts in magnetic resonance imaging caused by dental material. *MAGMA* 2005; **18**: 103–111.
2. Shafiei F, Honda E, Takahashi H, Sasaki T. Artifacts from dental casting alloys in magnetic resonance imaging. *J Dent Res* 2003; **82**: 602–606.
3. Costa A L, Appenzeller S, Yasuda C L, Pereira F R, Zanardi V A, Cendes F. Artifacts in brain magnetic resonance imaging due to metallic dental objects. *Med Oral Patol Oral Cir Bucal* 2009; **14**: E278–E282.
4. Starcuk Z, Bartusek K, Hubalkova H, Bachorec T, Starcukova J, Krupa P. Evaluation of MRI artifacts caused by metallic dental implants and classification of the dental materials in use. *Measurement Sci Rev* 2006; **6**: 24–27.
5. Lissac M, Coudert J L, Briguet A, Amiel M. Disturbances caused by dental materials in magnetic resonance imaging. *Int Dent J* 1992; **42**: 229–233.
6. Klinke T, Daboul A, Maron J *et al*. Artifacts in magnetic resonance imaging and computed tomography caused by dental materials. *PLoS One* 2012; **7**: e31766.

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## JAW SURGERY ALTERNATIVES

Sir, I recently treated a 14-and-a-half-year-old boy with an overjet of over 12 mm with his lower incisors in contact with the palatal mucosa. He had previously been told by two consultants and

a specialist orthodontist that he needed jaw surgery, although one consultant did suggest a 'compromise' result might be achieved with functional appliances. We said in advance that we saw no difficulty in correcting him with the 'postural' system that we use called orthotropics. This was achieved in two years although the postural training continued for a further two years, resulting in a correction of the overjet and substantial forward growth of the whole face.

Overjet correction of this severity has been achieved with functional appliances in the past but uniquely in this instance there was no increase in facial height. One of the greatest concerns in orthodontics is iatrogenic vertical growth which is endemic within all current treatment, reducing the dental arch length and damaging facial appearance, sometimes severely. As I had never before seen such a severe case corrected without an increase in vertical growth, I thought the profession should be aware that changing oral posture may have some merit and wrote a short case report for the *BDJ*. Unfortunately, the referees strongly rejected this saying 'the quality of the submission is less than I would expect from an undergraduate student' and 'in all likelihood this patient simply grew favourably'. This was clearly their opinion but I do not know of any evidence of conventionally treated cases having achieved an equivalent amount of favourable growth and one might ask 'why not'? The other referee dismissed the result as unremarkable saying 'all orthodontists who use functional appliances will have seen patients who have achieved a similar result', again a matter of personal opinion unsupported by any evidence and certainly the general evidence suggests that functional routinely increase vertical growth.

We should not forget that several hundred children and young adults are sent for surgery in the UK each year, many of them much less severe than this one, and I feel the profession should be allowed to consider alternative possibilities. Patients should have choice and perhaps the personal opinions of these two referees should not prevent this.

J. Mew, by email

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