

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.

Readers may now comment on letters via the *BDJ* website (www.bdj.co.uk). A 'Readers' Comments' section appears at the end of the full text of each letter online.

CHOKING IN PERSPECTIVE

Sir, regarding the letter *Malteser compromise* (*BDJ* 2012; 213: 197); although I empathise with the parent of the child who choked on the Malteser this is an anecdote that has no place in a professional journal.

To answer the question 'do we need to give additional warnings of choking hazard during the period of adaption to fixed braces?'; I would answer no and that we should all exercise a little more common sense.

Should the parent not have been present and serious harm had come of the child, would clinical records need to be investigated to determine whether such warnings were given?

Please, let's keep things in perspective.

S. Fletcher, Plymouth

DOI: 10.1038/sj.bdj.2012.991

ADEQUATE KNOWLEDGE

Sir, I write in response to the letter *Inadequate knowledge*.¹ I am unsure why Professor Renton is under the impression that the dental profession has inadequate knowledge in relation to local anaesthetic (LA)-related nerve injuries.

LA-related nerve injuries are rare and thankfully are not complaints that dentists deal with on a regular basis. The process of obtaining consent from patients requires consideration of two important aspects: firstly the probability of a particular risk arising and secondly the seriousness of possible injury. This risk of nerve damage associated with IAN blocks is very low. Professor Renton published an article in *Dental Update* in June 2010: *Prevention of iatrogenic inferior alveolar nerve injuries in relation to dental procedures*.² This article cites the incidence of local

anaesthetic related nerve injury to be '1:588,000 for prilocaine and 1:440,000 for articaine, which is 20-21 times greater than for lidocaine injections'. As lidocaine is the gold standard for IAN blocks in the United Kingdom, the assumed risk in these cases is very low. Also, this article states that recovery takes place at eight weeks in 85-94% of cases. Therefore in the majority of patients that are unfortunate enough to sustain nerve damage following IAN block, the symptoms are insignificant and fade over time. Bearing the above points in mind, I think that the risks associated with IAN block LA are unlikely to change the patient's decision to proceed with treatment, even if explained in full to patients. To expand upon the potential risk of nerve damage to each patient receiving treatment under local anaesthetic would be unnecessarily pedantic.

By comparison the risk of permanent harm associated with spinal nerve blocks, as reported by the Royal College of Anaesthetists, is considered to be one in 23,500 to 50,500 and the risk of paraplegia or death one in 54,500 to one in 141,500.³ The potential consequences associated with this technique are substantially more significant and warrant mentioning.

To conclude, in my opinion the dental profession has adequate knowledge of the incidence and nature of these injuries and this knowledge has been enhanced by the regular publications by Professor Renton on this topic.^{1,2,4-6}

N. O'Connor, Edinburgh

1. Renton R. Inadequate knowledge. *Br Dent J* 2012; 213: 197.
2. Renton T. Prevention of iatrogenic inferior alveolar nerve injuries in relation to dental procedures. *Dent Update* 2010; 37: 350-352, 354-356, 358-360.

3. Information for Patients: The Royal College of Anaesthetists. *Risks associated with your anaesthetic. Section 11: Nerve damage associated with a spinal or epidural injection*. Revised. The Royal College of Anaesthetists, 2009. www.rcoa.ac.uk/system/files/PI-Risk11.pdf.
4. Renton T, Adey-Viscuso D, Meechan J G, Yilmaz Z. Trigeminal nerve injuries in relation to the local anaesthesia in mandibular injections. *Br Dent J* 2010; 209: E15.
5. Renton T, Yilmaz Z. Profiling of patients presenting with posttraumatic neuropathy of the trigeminal nerve. *J Orofac Pain* 2011 Fall; 25: 333-344.
6. Renton T. Minimising and managing nerve injuries in dental surgical procedures. *Faculty Dent J* 2011; 2: 164-171.

DOI: 10.1038/sj.bdj.2012.992

A SENSIBLE PROTOCOL

Sir, Professor Renton makes some very important and pertinent points in her letter published in the *BDJ* (*Inadequate knowledge*; *BDJ* 2012; 213: 197). The direct inferior alveolar nerve block (IANB) has been the corner stone of mandibular anaesthesia in dentistry for over 80 years but we do have a problem with it, as evidenced by the 63 patients with neuropathic injuries (NIs) resulting from IANB injections, seen on her clinic. The morbidity of prolonged anaesthesia or paraesthesia in the lingual nerve or inferior alveolar nerve has been highlighted by Professor Renton and it is sobering that over a dentist's working life, statistics suggest he or she may be responsible for 1-3 permanent NIs in their patients.

My feeling is that we need to look closely at the direct IANB and to see if we can minimise the risk of this injection leading to NI. Professor Renton mentions the increasing use of articaine as a buccal infiltration in the mandible for routine conservation or even extractions and the placement of implant fixtures. This technique obviates the need for an IANB altogether and so should be used wherever possible. There are two

indirect approaches to anaesthetising the IAN, namely the Cow Gates injection and the Vazirini-Akinosi injection.¹ These approaches have the great advantage that the injection is given some way away from the IAN and lingual nerve and so are much less likely to lead to NI. I think it is essential that every dental student graduating from a UK dental school should be proficient in giving these injections. They carry a high success rate but do take longer to take effect than the traditional direct approach.

Wherever possible, it is important not to give repeat, direct IANBs. A second injection can be responsible for further trauma and/or ischaemia to the lingual nerve or IAN and this might lead to a permanent NI. If it is felt that a second direct IANB has to be given, it is essential to use a brand new needle as the tip of a 27 gauge needle blunts the moment it penetrates the mucosa and so repeated use of the same needle could also lead to significant trauma to the tissues and the nerves.

The role of the vasoconstrictor in local anaesthesia should be investigated. For example, does ischaemia play a part in the causation of NI? Would it be better to use a plain local anaesthetic for a direct IANB rather than one containing a vasoconstrictor? Finally, I cannot understand why we continue to use 2.2 ml cartridges in the UK. Surely we should use the MINIMUM amount of a drug to achieve the desired effect and 1.7 ml or 1.8 ml is perfectly adequate. There is always a tendency for dentists to administer the entire contents of the local anaesthetic cartridge when giving an IANB. Reducing the amount of the drug by 23% might be helpful in reducing neurotoxic effects of the higher concentration local anaesthetic solutions.

There is no escaping the fact that permanent NI can occur as a result of a direct IANB injection and Professor Renton raises the point of warning patients about this potentially devastating complication. How can we do this in a potentially anxious patient with an acute irreversible pulpitis, where a high level of analgesia is required for root canal treatments? I think a discussion needs to be entered into on this topic

with dentists, researchers, teachers, the defence organisations and our patients. Hopefully we can come up with a sensible protocol that warns patients but does not unduly frighten them.

N. Foot, Newbury

1. Malamed S F. *Handbook of local anesthesia*, 5th ed. Mosby, 2004.

DOI: 10.1038/sj.bdj.2012.993

HOT TOOTH

Sir, we read with interest Professor Renton's letter regarding the risk of nerve injuries (NIs) in relation to local anaesthetic (LA).¹ Professor Renton had previously reported that LA is the second most frequent cause of NIs.² Since endodontics is the fourth most frequent cause of NIs after LA and implants, we wish to share the results of a recent cone beam computed tomography study on the anatomical relationship between mandibular second molars and the inferior alveolar nerve (IAN) in which we found that 54.8% of root apices were within 3 mm of the IAN. The clinical implication is that endodontic treatment of mandibular second molars may pose a more significant than previously thought risk of IAN injury. This is in addition to LA-related NI risk with inferior dental blocks especially if the mandibular second molar also happens to be a 'hot tooth'.

A. Quinn, S. K. Sidhu, B. S. Chong, London

1. Renton T. Inadequate knowledge. *Br Dent J* 2012; 213: 197.
2. Renton T. Minimising and managing nerve injuries in dental surgical procedures. *Faculty Dent J* 2011; 2: 164–171.

DOI: 10.1038/sj.bdj.2012.994

INTERPRETATION CONSIDERATION

The Editor-in-Chief would like to personally apologise to Dr Arman Maqbool for any confusion regarding his commendable letter titled *Interpretation consideration* (*BDJ* 2012; 212: 304).

DOI: 10.1038/sj.bdj.2012.995

ETHICS OF HEALTH SCREENING

Sir, I wish to add to the views expressed by Geddis (*Systemic health screening*; *BDJ* 2012; 213: 146). The mindset of screening of medical conditions at dental clinics is intriguing, but it also raises important ethical and methodological questions that should not be overlooked.

For example, as dental professionals have traditionally focused on oral conditions, often not regarded by the patients as medical, dental patients are not primarily focused on general health issues when visiting a dental practice. However, the same patients may consent to participate in a general health screening if one is offered in conjunction with the dental visit.

If the screening test turns out to be negative for a certain marker that might indicate a general health problem (eg a certain blood sugar level for diabetes), the patient will probably leave the dental clinic without further thoughts, believing everything is all right. But, if the screening test result turns out to be positive, the patient will leave the practice with a tentative diagnosis. Although feeling perfectly well a moment ago when entering the dental practice, the patient is now probably worried about his or her health.

To this it should be added that screening tests are generally limited in their accuracies by imperfect sensitivities and specificities. Therefore, the interpretation of the test result may lead to wrong conclusions in both directions. Thus, if the test is falsely negative, the patients will consider themselves healthy, when being ill. And vice versa, if the test result is falsely positive, a healthy patient will leave the practice with a false diagnosis that may take some time to prove wrong. This may of course have a negative effect on the individual's quality of life.

Considering both the ethical issues and the limitations of the screening test methods, one might ask: is it justified to screen individuals for medical conditions at dental practices when the individuals do not feel unwell and do not ask for medical care?

P. Sjögren, Göteborg

DOI: 10.1038/sj.bdj.2012.996

The *BDJ* website now includes a facility enabling readers to immediately comment on letters. All comments must comply with the nature.com Terms and Conditions and Community Guidelines – visit the *BDJ* website to find out more and to post your comment now.