ASTONISHING DENTITIONS

Sir, I wish to applaud your innovative 'Wildlife Series' cover illustrations in Volume 213 of the *British Dental Journal*. Since the dropping of comparative odontology from the dental curriculum in most, if not all dental schools, dentists are woefully ignorant of the astonishing variety of dentitions that exist in the animal kingdom. The adaptation of teeth to various diets makes a fascinating study of the diversity of dentitions that range from the shark's polyphyodont (multiple sets) to the mammalian diphyodont (two sets) of teeth. The evolution of simple cone homodont (single cusp) to heterodont (multiple cusp) teeth determines the development of the complex human dentition, and ought to underlie dentists' knowledge of the organs upon which their profession is based. I trust that you will feature such widely diverse dentitions as those of dinosaurs, reptiles, fish, rodents, tusks of walruses, narwhals and elephants to illustrate how diverse the organs of predation, capture, ingestion, mastication, speech, aggression, comeliness and even sensory input are manifest in the huge range of odontological oddities.

I enclose a photo showing the outline of a narwhal male spiral tusk (Fig. 1).

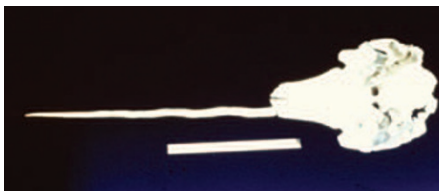

Fig. 1 Left side canine spiral tusk protruding from a male narwhal (Monodon monocerus) skull. The female lacks a tusk, representing the most extreme dental sexual dimorphism. Scale rule is 45 cm long. Photo courtesy of the University of Alberta Dental Museum

G. H. Sperber, Canada

Reading

1. Sperber G H. The place of physical anthropology and comparative odontology in dental education. *J Dent Educ* 1970; **34:** 413–417.
2. Nweeia M T, Eichmiller F C, Hauschka P V *et al.* Vestigial tooth anatomy and tusk nomenclature for monodon monocerus. *Anat Rec (Hoboken)* 2012; **295:** 1006–1016.

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A SUITABLE METHOD

Sir, with reference to the article *Amelogenesis imperfecta: the orthodontic perspective* (*BDJ* 2012; **212:** 485–489), the use of sodium hypochlorite to remove excess protein surrounding the enamel crystals and improve the quality of etch in amelogenesis imperfecta cases has been described. However, this study was conducted in primary teeth and the evidence for improved bracket retention with these methods remains weak, as does increasing etch times in this group of patients.

A case of amelogenesis imperfecta (19/F) is being treated in our department with a fixed orthodontic appliance. We have followed the recommendations of D. R. Venezie *et al.*[1] for preparing enamel for bonding brackets. The bracket was bonded on permanent teeth. Enamel was pre-treated with 5% sodium hypochlorite for one minute, rinsed and air dried. The bracket was bonded using Transbond™, Unitek/3M composite. The patient has been undergoing the therapy for the last six months and we have not witnessed any bond failure so far. We are even able to disimpact a blocked out upper incisor into position (Figs 1 and 2). Thus it provides evidence that the above procedure can be considered a suitable method for achieving clinically successful bond strength.

Fig. 1 Intra-oral photograph showing bonded brackets and NiTi wire in position

Fig. 2 Intra-oral photograph showing aligned incisors

Prasanna T. R., Sachin G. Tumkur, India

1. Venezie D R, Vadikas G, Christensen J R, Timothy Wright J. Enamel pretreatment with sodium hypochlorite to enhance bonding in hypocalcified amelogenesis imperfecta: case report and SEM analysis. *Pediatr Dent* 1994; **16:** 433–436.

DOI: 10.1038/sj.bdj.2012.785

PERITENDINITIS CREPITANS

Sir, a healthy 45-year-old, right handed male dentist, working in a dental access centre, presented with acute incapacitating pain over the extensor aspect of the right forearm associated with a sausage-shaped swelling. He had had no previous musculoskeletal problems and was not a sportsman. Movement of the thumb was associated with audible and palpable crepitus in the forearm. The condition was treated with steroid injection and rest; it gradually settled to enable the dentist to return to work.

Peritendinitis crepitans, also known as intersection syndrome, is an unusual condition of the forearm. Thought to be inflammatory, it presents with acute pain, crepitation and a sausage-shaped swelling on the lower part of the extensor aspect of the forearm 4-10 cm proximal to Lister's tubercle.[1] It has a low incidence and generally settles with conservative treatment, sometimes requiring ultrasound guided steroid injection. Peritendinitis crepitans tends to occur following an increase or change in upper limb activity or after a period of rest.[1,2]

Dental access centres undertake a large number of surgical procedures, in particular extractions and endodontics, both of which require either gripping or rolling movements with the thumb against the fingers. With limited preventive work in between such surgical procedures, the level of activity of the hand and in particular the thumb during the working day becomes significant.

Upper limb disorders are usually of unknown aetiology but are sometimes thought to be activity related and this is particularly the case with regards to this condition. Nevertheless, given the nature of the role, a dentist would not necessarily be expected to develop a condition that would normally be associated with heavy manual or assembly line work. There are no previous case reports in the literature in the dental profession. Were peritendinitis crepitans a purely work related condition one would have expected cases to have occurred in dentists in clinical practice when extractions were common and

education and preventive work not a major feature of the dentist's working day. Furthermore the anatomy of the area where tendons cross muscles with no mechanism of separating and protecting the two conditions suggests that this condition may be triggered by, rather than caused by, work.

M. Cosgrove
Cambridge

1. Howard N J. Peritendinitis crepitans. *J Bone Joint Surg* 1937; **19:** 447–459.
2. Thompson A R, Plewes L W, Shaw E G. Peritendinitis crepitans and simple tenosynovitis; a clinical study of 544 cases in industry. *Br J Ind Med* 1951; **8:** 150–158.

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THE REAL DILEMMA

Sir, I am in full agreement with S. Wilson regarding the *BDJ*'s CPD scheme.[1] In the nine years of its operation I believe that his is one of only three published letters that have been critical of the service. The first,[2] *An easy ride*, was published shortly after its launch and the second,[3] *Accumulating CPD hours*, written by myself, was submitted in response to the last editorial on CPD in 2007,[4] *CPD revisited*. My letter generated only one published reply,[5] which offered some valuable opinions but did not address the central theme of quality assurance.

I would like to make two further contributions that should help to resolve the apparent dilemma facing the journal and its partners. First, does the existing scheme meet the requirements for verifiable CPD? I can obtain a certificate for logging in and selecting any answer. All this verifies is my computer skills. There is no attempt to verify that the learning intervention (reading and comprehending a paper) has occurred.

Second, and most importantly, lifelong learning was not introduced primarily for the benefit of dental professionals but rather for that of the public so that patients can have confidence in those charged with caring for them.[6] Perhaps you should address your question to the letters pages of the national newspapers, media organisations and patient representative groups. I am sure that you will receive an unambiguous response.

The real dilemma faced by the journal and its partners is how the existing CPD scheme can be justified to patients. Accusations of tokenism and rewarding superficial participation in education will be difficult to defend. We have seen public confidence in our bankers and politicians gravely undermined. Most recently school examination boards have been accused of competing to provide the easiest to pass GCSEs: the parallel with the journal's CPD scheme (and others) should be obvious.

The question regarding a scoring system is one of much greater significance than might at first be apparent, as Mr Wilson has identified so ably.

A. Gould
By email

1. Wilson S. Asinine system. *Br Dent J* 2012; **212:** 574.
2. Storrar I. An easy ride? *Br Dent J* 2003; **195:** 230.
3. Gould A. Accumulating CPD hours. *Br Dent J* 2008; **204:** 478.
4. Hancocks S. CPD revisited. *Br Dent J* 2007; **203:** 703–704.
5. Shah S. CPD variety is good. *Br Dent J* 2008; **204:** 658.
6. Grieveson B. Proposals for validation and revalidation of the dental profession: a postgraduate dental dean's perspective. *Dent Update* 2009; **36:** 198–200.

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LOZENGE RISKS

Sir, a 24-year-old female with widespread metastatic disease (multiple peritoneal and liver deposits) from a primary GIST underwent a full clearance of her adult dentition due to rampant caries under general anaesthesia (Fig. 1). Four years previously, she had been started on fentanyl lozenges (Actiq - Cephalon Ltd) for pain control and had a sound dentition.

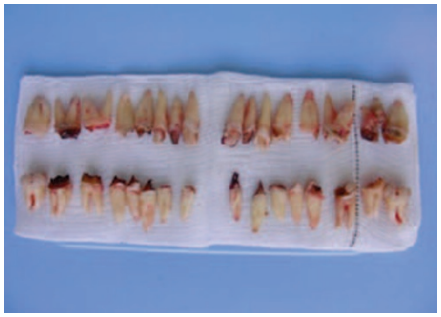

Fig. 1 Full clearance of 24-year-old patient prescribed fentanyl lozenges

The fentanyl lozenges are supplied as the citrate salt and contain hydrated dextrates equivalent to approximately 2 g of glucose per lozenge.[1] A low pH environment combined with fermentable carbohydrates within the oral cavity as a result of the fentanyl lozenge, compounded by the reduced salivary flow associated with opioids,[2] provided an ideal environment for the rapid progression of dental caries.[3] In this case a full dental clearance of 32 teeth was necessary (Fig. 1) due to advanced dental caries.

Oro-mucosal preparations of fentanyl are available as tablets (Abstral, ProStrakan Ltd, and Effentora, Cephalon Ltd). However, faster blood levels are achieved from buccal/sublingual use of a lozenge (Actiq - Cephalon Ltd). The tablets contain mannitol and do not cause caries.[1] The lozenge patient advice leaflet does mention that a dry mouth and dental decay may be caused by the product but only recommends 'normal oral hygiene'.

Fentanyl is demonstrably a highly effective opioid analgesic which has an important role in the management of oncology patients. The rapid delivery of the fentanyl through the buccal mucosa in the form of an oral lozenge further enhances its usefulness. However, it is essential that patients are aware of the risks to their dental health, and that they employ preventative measures such as the use of high fluoride toothpastes and mouth rinses. Ideally, these patients should see their own general dental practitioners before starting fentanyl treatment and have regular dental check ups during the course of treatment.

V. Sharma, M. Miah, M. Cameron
Cambridge

1. Electronic Medicines Compendium. Search on 'fentanyl'. www.medicines.org.uk/emc
2. Carver A; Federman D D, Nabel E G (eds). *Pharmacologic management of pain.* New York: ACP Medicine, 2010.
3. Kidd E A M. *Essentials of dental caries*, 3rd ed. Oxford University Press, 2005.

DOI: 10.1038/sj.bdj.2012.788