

# Letters to the editor

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## Oral health

### Hidden sugars and vaping

Sir, as will be the case for many of us, a significant and increasing number of my patients report that they 'vape' or use an 'e-cig' when I ask them about smoking. Recently, a vaping shop sales assistant attended our practice for a new patient examination. Whilst discussing his sugar intake, he revealed that he tries to avoid 'e-cigarette juices' with a high sugar content, many of which, he claimed, are produced in the USA.

Whilst the literature in this area appears to be sparse, non-clinical *in vitro* studies regarding the cariogenic potential of e-cigarettes have been undertaken.<sup>1</sup> Recent research published in this journal suggested that GDPs did not feel comfortable

recommending e-cigarettes to their patients who smoke.<sup>2</sup> Current guidance from NICE encourages healthcare workers in primary care to cautiously present positive information to some patients regarding the use of e-cigarettes in smoking cessation.<sup>3</sup> If the sugars are cariogenic *in vivo*, frequent exposure whilst vaping combined with dietary sugars will put these individuals at high risk of dental disease.

The basis for this letter is anecdotal, but maybe, it is prudent to advise patients under our care who vape to opt for lower sugar concentration 'juices' where possible.

*P. J. Radford, Rotherham, UK, by email*

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2. Ahmed Z, Preshaw P M, Bauld L, Holliday R. Dental professionals' opinions and knowledge of smoking cessation and electronic cigarettes: a cross-sectional survey in the north of England. *Br Dent J* 2018; **225**: 947-952.
3. Pemberton M N. Oral cancer and tobacco: developments in harm reduction. *Br Dent J* 2018; **225**: 822-826. <https://doi.org/10.1038/s41415-019-1047-3>

### Correction to: Cant in the interpupillary line

The original article can be found online at <https://doi.org/10.1038/s41415-019-0954-7>.

The above letter, published in the 8 November issue (*Br Dent J* 2019; **227**: 762) gave an incomplete list of authors. The correct list of authors is as follows:

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<https://doi.org/10.1038/s41415-019-1060-6>

## CASE REPORT

### Oral surgery

#### A difficult diagnosis

Sir, actinomycotic osteomyelitis is rare, however, it is important to retain a high index of suspicion for this infection. Diagnosis can be delayed and difficult due to the atypical presentation of infection, long culture times and difficulty isolating

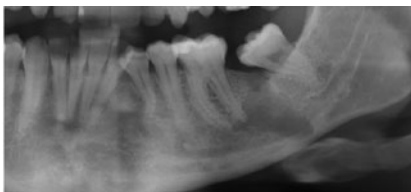


Fig. 1 Orthopantomogram (OPG) showing a radiolucent lesion between the left mandibular first (36) and second molar (38), extending from the alveolar crest to the cortex of the lower border of the mandible

actinomyces. Fewer than 50% of cultures from actinomyces-related infections manage to isolate a species; as a result many diagnoses rely on histopathological visualisation of actinomyces over microbiological isolation.<sup>1</sup>

A fit and healthy 33-year-old male attended our oral surgery unit with a history

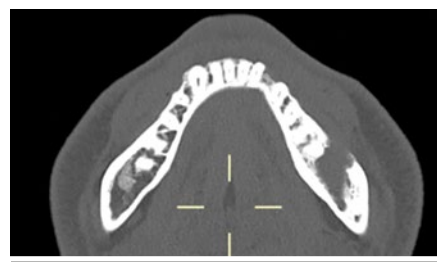


Fig. 2 Dental cone beam computed tomography (CBCT). Axial view of mandible showing radiolucent lesion in the 37 region with erosion of the left buccal cortical plate. The lesion had an intimate association with the inferior dental canal with no intervening bone

of tightness in his left jaw and no other symptoms.

On examination there were remnants of a sinus tract in the mandibular left second molar (37) region, with no paraesthesia, drainage or swelling. The 37 had been extracted 20 years previously. An orthopantomogram showed a radiolucent lesion extending from the alveolar ridge of the 37 region to the cortex of the lower border of the mandible (Fig. 1). Cone beam CT revealed there was erosion of the buccal cortical plate and the bone surrounding the inferior dental canal (Fig. 2).

Histopathological analysis of the lesion following curettage and stent placement under local anaesthetic showed large colonies of actinomyces-like bacteria present indicating actinomycotic osteomyelitis. However, initial microbiology

culture did not isolate actinomyces species. A second microbiological culture using 16s rDNA sequencing was carried out following stent placement which isolated *Eikenella corrodens* but again no actinomyces.

Actinomyces osteomyelitis was confirmed from the clinical history, radiographs and histopathology. Management is typically surgical debridement and long-term intravenous penicillin antibiotics for two to six weeks, followed by oral penicillin 2–4 g per day for six to 12 months. However, antibiotic regimes should be tailored to the patient and reviewed regularly.<sup>2</sup> Ceftriaxone was given intravenously in this case to target both actinomyces and *E. corrodens*. Extended antibiotic exposure is recommended as actinomyces have a slow rate of lysis compared to other bacteria, and the risk of developing penicillin resistant actinomyces is considered low.<sup>2</sup>

Actinomyces-related infections are always polymicrobial, relying on mutualistic relationships with other oral commensals to create a favourable environment for survival.<sup>3</sup> In this case, stent placement prior to the second microbial sample likely shifted the balance to a more advantageous environment for another opportunistic gram-negative anaerobe: *Eikenella corrodens*.

Actinomyces-related infection was not listed as a differential diagnosis, likely resulting in a shorter incubation time and a storage environment not conducive to the culture of actinomyces, which requires a minimum seven days compared to the normal three to five days for anaerobic bacteria.<sup>3</sup>

Due to the chronic burrowing, slow growing nature of these infections, it is possible that the extraction socket of the 37 never fully healed following extraction 20 years previously and the diagnosis had been missed.

A. Hamilton, N. Rahman, Edinburgh, UK

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<https://doi.org/10.1038/s41415-019-1059-z>

## Spread of cancer to the oral cavity

Sir, an 83-year-old gentleman was referred by his general dental practitioner to the A&E department at our unit for what appeared to him to be a dental abscess associated with the lower right 7. On further questioning about the history, the patient mentioned that he had noticed that the swelling had been rapidly increasing in size over the last four weeks and that he was beginning to experience an increasingly numb lower lip. Given the patient's general appearance it transpired that he had also begun to notice unexplained weight loss.

On examination, we found an unusual exophytic growth (Fig. 1) on the lower right mandibular ridge which had encapsulated the patient's lower right 7. It was noted that there was obvious buccal and lingual expansion of the mandibular cortex.



Fig. 1 Unusual exophytic growth on the lower right mandibular ridge

The patient was treated acutely which included excision of the lesion and extraction of the tooth. A histological diagnosis of metastatic renal cell carcinoma was made, and the patient underwent further investigation and management of his primary cancer.

Metastatic spread of cancer to the oral cavity is a rare phenomenon; it accounts for approximately 1% of malignant oral tumours<sup>1</sup> and when found it usually represents a poor prognosis<sup>2</sup> for the patient and late stage disease.

We believe this case highlights not only the importance of the prevention and detection of mouth cancer but the impact it can have on a patient's life. This patient, despite experiencing systemic symptoms, had not sought medical

advice. Although not suspecting it was cancer, it was his general dental practitioner who referred the patient in a timely manner, kickstarting his oncological care.

There is a wide array of resources available for general dental practitioners to aid in the screening of oral cancer, one of which is the Oral Cancer Recognition Toolkit<sup>3</sup> which we believe is a helpful adjunct to use at dental check-up appointments. Where oral cancer is suspected, an appropriate referral via the 2-week-wait pathway to their local maxillofacial unit would be required.

K. Matharu, M. Amin, Slough, UK

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## Primary care dentistry

### Ectopic canine sequelae

Sir, a 20-year-old lady presented to our emergency dental department complaining of pain, swelling and a loose front tooth. A detailed history revealed the patient had undergone a previous open exposure and alignment of a palatally ectopic 23, having been initially referred at 15-years-old. Clinical and radiographic examination revealed severe root resorption of the 21 and 22 (Fig. 1). The prognosis for the 22 was deemed hopeless and the patient is currently undergoing assessment for an implant.

Evidence suggests lateral incisor resorption induced by palatally ectopic maxillary canines is a frequent complication with one study demonstrating a prevalence of 66.7%.<sup>1</sup> However, we know that even severe incisor resorption can cease through early orthodontic alignment by resolving the contact between the teeth.<sup>2</sup> Despite resorption often progressing rapidly, the long-term prognosis of resorbed incisors is positive with the literature indicating minimal loss when early intervention is implemented.<sup>2,3</sup>