requests, that in this past year I have had to pay two lots of interest charges to HMRC of £220 and £580 on outstanding tax owed. This is not my fault but that of NHS Pensions!

Do I have recourse? Apparently not.

Will HMRC understand and let me off on the interest? You must be joking!

Do I feel angry? You bet!

M. Hussain, London, UK, by email

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Historical context

The gigantic tooth of St. Christopher

Sir, the cult of the sacred relics, general physical remains or personal effects of a saint is a very important part of Christian religious and cultural tradition. According to Petaros *et al.*, 'teeth represent a common type of Saints' relics because of their durability and the ease with which they can be acquired'.¹

The numerous teeth of St. Apollonia have been described and analysed in previous studies.^{1,2} The authenticity of these sacred objects has been debated since the Renaissance and this is the case with St. Christopher's 'gigantic tooth' – one of the most remarkable examples of a non-authentic relic.

According to the legend, St. Christopher was a giant, five cubits (7.5 feet or 2.3 m) tall, who once carried a child through a deep river and finally discovered that the child was Christ.

Indeed, his name derived from the Late Greek name Χριστοφορος (Christophoros) meaning 'bearing Christ', derived from Χριστος (Christos) combined with φερω (phero), 'to bear, to carry'. The relic of the gigantic tooth was therefore a proof of the enormous size of the Saint.³

In the Late Middle Ages, the Humiliati friars purchased the relic and deposited it in a shrine of silver and gold in the church of St. Christopher in the town of Vercelli (Piedmont, Northern Italy). It attracted pilgrims from all parts of Europe, worshipping and praying to it.

Juan Luis Vives (1492–1540), a Spanish Renaissance humanist, stated that it was 'a molar tooth bigger than a fist' ('dens molaris pugno major').^{4,5}

After the suppression of the Humiliati in 1571, the members of the religious order of Barnabites continued to venerate it until the end of the eighteenth century,³ when a naturalist analysed the relic. He surprisingly declared it to be a hippopotamus's tooth.⁶

As a consequence, Barnabites decided to keep it away from the altar and forbade its public veneration.

A few decades after, the Italian preacher Alessandro Gavazzi (1809–1889) reported this episode in a lecture against the Catholic cult of relics, stating that the Barnabites still kept the non-authentic relic as a curiosity in their monastery in Vercelli.⁶

In conclusion, the gigantic tooth of St. Christopher demonstrated that the authenticity of some tooth relics was also questioned and critically analysed in ancient times.

E. Molteni, M. Vergani, and M. A. Riva, from the School of Medicine and Surgery, University of Milano Bicocca, Milan, Italy, by email

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Mouthwash

Mouthwash: more harm than good?

Sir, we read with great interest the article titled 'Mouthwash use and risk of diabetes'¹ in the November 2018 issue of the *BDJ*. The contents of mouthwash coupled with common habits surrounding the use of mouthwash could potentially have consequences on the oral as well as general health of our patients.

We have come across many patients who use mouthwash straight after brushing their teeth. This is a problem because a lot of mouthwashes have a fluoride content of 450 ppm whereas toothpaste contains 1450 ppm.

Using mouthwash straight after brushing reduces the fluoride concentration around the teeth, subsequently reducing the overall benefit of using toothpaste. Some patients, especially children, may be more likely to substitute toothpaste with mouthwash as this is less time consuming and requires less effort.

Additionally, *in vitro* and *in situ* research has found that some mouthwashes have a low pH which can lead to erosion.^{2,3}

This is especially worse if patients use mouthwash straight before bed when their

saliva flow is reduced. More importantly, it has been found that chlorhexidine containing mouthwashes can also trigger a severe anaphylaxis in allergic patients.⁴

Using mouthwash incorrectly alongside the supporting evidence that mouthwash is linked to diabetes/high blood pressure,⁵ raises the question on whether the potential harm of over the counter mouthwash can outweigh its benefits.

Although mouthwash still has its role, whether it is for post-surgery use or for xerostomia, its usefulness may be questionable and limited when it comes to daily use by the general population.

In our opinion, as more research is gathered surrounding the benefits and risks of regular mouthwash use, there may be various outcomes.

It might be worth considering the idea of restricting mouthwash advertisements or perhaps limiting mouthwash to prescription only.

We believe the dental team has a vital role in encouraging correct use of mouthwash or discouraging its use if they are being used incorrectly. It will be interesting to see the turn of events as new research is brought to light.

A. Dagher and N. Hannan, London, UK, by email

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Veganism

Gelatin: a chewy debate

Sir, with veganism becoming more popular and a rise in awareness of the ingredients of foods, should this be something as dentists that we need to be more aware of?

There are materials that we use which contain products such as gelatin and patients, if given the choice, may opt out of using on moral or religious grounds. If we are aware of this should we inform our patients prior to its use?

This triggered a debate in my head and it occurred to me that as dentists I feel we have a duty to inform patients of this and offer an alternative if available. Consequently, do we universally ask all patients prior to an extraction if they consent for a product containing gelatin to be used to achieve haemostasis?

This debate was recently brought up as part of our special care dental general anaesthetic newsletter to dentists and nurses. Sixteen people responded and 87.5% voted to have this question added to our consent forms, indicating we should consider changing our practice.

There is a lot of conflicting information out there regarding the subject and a variety of opinions especially when products are being used for life saving medical reasons or if no alternative is available.¹

Each faith has its own rules and I am certain there would be variations within each as well making it hard to have a clear answer. Furthermore, as health professionals we often have difficulty obtaining information relating to the origins of the ingredients in the materials we use, and is it practical to do this for each and every material?

Food for thought. Vegan gummy bear anyone?
J. Thakrar, London, UK, by email

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Dental amalgam

Illogical dental amalgam policy by WHO and UNEP

Sir, Fisher *et al.* have briefly commented on mercury-free materials for dental restoration.¹ Dental amalgam, an alloy of mercury and silver, has been in use for over 150 years for the treatment of dental cavities, due to its excellent mechanical properties and durability.²

Dental amalgam toxicity has been investigated by reliable research institutes including US FDA (Food and Drug Administration),³ European Commission,⁴ and the American Dental Association.⁵ They have concluded that dental amalgam is regarded as safe.^{3,4,5}

However, in the Minamata Convention, dental amalgam is the only mercury-added material subject to a phase-down.^{1,6,7} All other mercury-added materials addressed in the Convention are subject to a ban or

phase-out. The conclusion is based on aiding mercury pollution policy.

However, according to the data by United Nations Environment Programme (UNEP) which has initiated the dental amalgam policy,⁸ a large part of produced mercury has been used in small scale artisanal gold mining which has been seriously causing mercury pollution – 1,735 tons per year.⁸

The global mercury supply in 2015 was in the range of 3,850–4,400 tonnes.⁸ Therefore, the mercury pollution has been largely from gold mining. Natural emissions, such as those from volcanic activity or forest fires, are estimated to be at around 87 tonnes per year in 2010.²

Releases into the air from dental practices are estimated to be at around 19 tonnes per year.² In other words, WHO and UNEP have made the illogical conclusion on dental amalgam policy.

Y. Y. Takefuji, Fujisawa, Japan, by email

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Sugar tax

Sugar off the shelves

Sir, it is with great interest we write in response to the *BDJ* November 2018 editorial titled 'Sugar; tax and reformulation'. As highlighted in the article, the introduction of the sugar tax in April of 2018 has led to a considerable reduction in the consumption of high sugar containing beverages.¹

Although this is a start in the changes we can make, the outcome gives us insight into only one element in the war against sugar.

There are other important ways in which the population's consumption patterns can be shaped. In recent years, due to the influence of concerned campaigners, supermarkets have actioned policies to lower the amount of unhealthy foods at checkouts.²

A recent UK study has collected data from 30,000 households and compared their consumption of sugary snacks before and after these changes were made in major UK stores.

The most noteworthy results were that around 17% less sugary snacks were brought home directly after the policies were put into place. In addition to this, 76% fewer sweet snacks including chocolate and crisps were bought and eaten immediately after checking out from the stores with checkout policies.²

These alterations have potential in subtly shaping consumer habits and diets. The future could see the replacement of sugary foods with healthier alternatives at checkouts. Furthermore, supermarket layouts can be extended to other shelves – by placing foods and snacks with high sugar content on higher shelves, it means they are out of reach and sight of young children.

With the government's endeavour to reduce obesity amongst youngsters in the next decade, they may consider a permanent ban on sugary snacks at checkouts.³

The pressures that supermarkets will face to make changes might not only affect obesity but also caries incidence in the UK. Although the sugar tax appears to be promising, this may lead to expansion of tariffs to other areas as mentioned in another *BDJ* editorial.⁴

We expect there to be some more interesting findings in the future as new transformations are brought into action and hopefully a reduction in decay rates in children.

N. Hannan and A. Dagher, London, UK, by email

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