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FJ Trevor Burke

Voleurs

Dentists have never been the most popular folk, given that a percentage of our patients don't actually want to be sitting in our chairs, hence we have become thick-skinned regarding adverse publicity. However, the scale of this has risen during and after the first pandemic lockdown. First, because patients could not receive emergency treatment, and secondly, when they did, this often amounted to a prescription for antibiotics, a practice credited with a rise in antibiotic overprescription, as detailed in Dr Wendy Thompson's superb November Guest Editorial.[1] On re-opening, dental practices were limited in the treatments that they could prescribe as a result of anxieties concerning the presence of virus in the aerosol generated by a turbine handpiece, with these worries continuing to the present time. Although I have argued on more than one occasion that clinicians should therefore limit their treatments (where possible) to those that could be managed without an aerosol,[2] I am unsure that that advice has changed working patterns substantially. Add to this the Government advice on payment, which had the knock-on effect of reducing the number of patients seen, therefore, there remains (adverse) publicity regarding patients being unable to get an appointment for a check-up and/or substantive treatment. We are, therefore, at a time when public opinion on the dental profession appears to be low, as a result of failure to offer treatment in the way that we did before the pandemic.

'So what?' readers say. This is beginning to read like a follow up to the Editorial of this time last year, entitled 'It was not a good year.'[3] Daresay this one could be called a 'slightly better year' (although some may disagree), but, some of what I wrote a year ago still holds true, namely, that some patients will be so worried about the perceived risks of contracting COVID-19 when attending a dental surgery as to put off their visit, with potential risks to their oral health. I also wrote about vaccine euphoria and the development of a 90% effective vaccine, writing that 'There is no question that this is positive news.' All readers will be aware that this actually did come to pass, but, as I write, immunity is waning, and England has 50,000 new COVID cases per day. In that regard, I have now rewritten this Comment just prior to going to press, to include a systematic review published in the *British Medical Journal* in mid-November by authors from Monash University in Australia and the University of Edinburgh.[4] This included 72 studies and provided a strong conclusion, namely, that their work indicated a benefit associated with mask wearing, handwashing and physical distancing in reducing the incidence of COVID-19. They added that 'further control of the COVID 19 pandemic depended, not only on high vaccination coverage and its effectiveness, but also on ongoing adherence to effective and sustainable public health measures'. Perhaps someone has brought this systematic review to the attention of the Government in England, especially as it starts to wrestle with the arrival of a new coronavirus variant.

Which brings me to '*voleurs*'. I was fortunate enough to be able to holiday in France once the various restrictions had been lifted and this led me to use my dubious command of the French language to respond to a couple of dentally related queries. One was from a friend of around my age whose six-unit anterior bridge had debonded, having been *in situ* for more than 15 years. The dentist who had provided it had retired, and the (new) dentist who she visited recommended a series of dental implants and a new fixed prosthesis

at substantial cost. Sensibly, she visited another dentist, who advised that the bridge was still serviceable and recemented it. The first dentist was a *voleur*, she opined! Not good for the implant-orientated dentist's reputation and/or the profession at large.

At lunch one day, I was joined by the 40-year-old (I know his age because he had recently held a party for his birthday!) proprietor of the restaurant: he ate his *morue* (a type of cod) with relish, as he regaled me with the story of his visit to a (new) dentist. He had received a written quotation for over 23,000 Euros for several implants to replace missing lower premolars and one to replace his upper left first premolar. On advising that I had observed that he did not appear to be in need of additional masticatory capacity, I asked if he was anxious about the UL4 space. He added that, now that the dentist had drawn his attention to that, yes, he was. I advised him to go away and Google 'Maryland bridge', given that dental implants do not last forever, and that an implant placed in a 40 year old would be likely to need replacing at some point during his lifetime. He has found a different dentist who is happy to provide the bridge. Although I did not have the information that would have been provided by a dental examination in these cases, the word '*voleurs*' again sprang to mind. It is worth adding that the restauranteur had never needed a dental restoration in his life.

In that regard, results of recent research on information provided on implants on 200 Scottish dental practice websites[5] may be considered relevant. Of the 118 practices that offered implant treatment and provided accessible patient information, the authors gleaned that two-thirds of the websites that they analysed did not mention potential implant complications, and only eight mentioned the six major complications outlined on BAOS and ADI websites. Given that patients, these days, may often seek information on potential treatment from the (non-peer-reviewed) Internet, it would seem important that practice websites should provide information that could enable a patient to reach a non-misleading decision regarding their treatment.

I do not plan to write an exhaustive review of the survival rates of dental implants, but, while the following indicate wide variation, there is one common theme, namely, that implants do not last forever, prompting Jan Lindhe,[6] who has been associated with dental implants since their inception, to comment 'There is an overuse of implants in the world and an underuse of teeth as targets for treatment'.

- Research has indicated that 65% of implants are still functional at 16 years,[7] although there is recent evidence that up to 30% of dental implants may be affected by an inflammatory reaction in the gingival tissues around them – this being known as peri-implantitis,[8] a further reason why the dental implant should be the last, rather than the first option.
- On the other hand, the results from a study[9] of 1964 implants placed over 16 years (1981–1997) indicate 4.3% loss. Mandibular implants were generally more successful than maxillary implants.
- A success rate of 95% at 5 years was demonstrated in a study[10] of 660 Brånemark system implants placed in the posterior maxilla and restored with metal–ceramic restorations. Thirteen of the implants were lost between loading and the end of the first year, 10 failed thereafter. The conclusion adds that '*careful surgical planning and execution*' was involved.
- In a study[11] that retrospectively followed all consecutively treated patients from 1992 to 2003, the results indicated that increasing age was strongly associated with risk of implant failure. Smoking, head and neck radiation were associated with a significantly increased failure rate. Overall implant failure rate was 8.16% in the maxilla and 4.9% in the mandible.

These data suggest that, given that implants do not last forever, particularly when there are risk factors involved, for the two cases which I have outlined, the simpler approaches should suffice.

Just in case the Association Dentaire Française feels that I am unjustly accusing its members of overtreatment, I shall relate my views of three treatment plans that I have seen closer to home, these being representative of a larger number that I have reviewed. One was sent to me anonymously, regarding a middle-aged male whose main complaint was that he was unhappy with the appearance of his upper front teeth, with fillings that were repeatedly breaking. Examination indicated that he had failing Class IV resin composite restorations in his upper central incisor teeth, mild tooth wear principally due to erosion, with a diagnosis of heavily restored teeth at risk of fracture. The aim of treatment was stated to be to 'strengthen your weak teeth, reducing the chances of these teeth breaking, provide a beautiful smile and manage the grinding habit'. The optimum treatment plan involved orthodontics 'to put teeth into the correct position' (I did not notice any irregularities, but it was stated that this would involve less drilling of the teeth) plus ceramic crowns for the upper six anterior teeth and UL6. The 'compromised' advice was still to prepare these teeth, but without orthodontics. This scary treatment plan involved the preparation, for crowns, of six teeth, two of which were moderately restored with dentine exposed on the palatal surface, and four of which were unrestored with small areas of dentine exposed. At what risk was this loss of tooth substance and at what risk of pulp death? To strengthen the teeth, by cutting them down? Seems to be a crazy way of treating tooth wear by multiplying the tooth tissue loss exponentially with a turbine drill. Fortunately, the patient declined acceptance of this treatment plan and had his teeth restored with composite by another dentist.

Two other cases were presented at a webinar that I watched. A (perhaps unsuspecting) female won a smile makeover from a dentist. My first thought was – is this an ethical way to recruit patients, but, although it was not immediately apparent what was happening, the patient was seen in the dental chair having extensive drilling carried out

so that she would have the white and even smile that we briefly viewed. The same dentist also took responsibility for the smile makeover of a football manager who was seen on video reporting that, in the middle of a lengthy treatment session, he needed to visit the bathroom. When he looked in the mirror and viewed how small his teeth had become, he exclaimed 'we're at the point of never come back'. Whether he is happy with his large and very white teeth I will never know, in the same way that I will never know whether the sequelae of the extensive tooth preparation for crowns have come home to roost.

In the same way as the French potential *voleurs* might have been guilty of taking their patients' money if they had placed unnecessary implants, crowning teeth unnecessarily could be considered worse, in the famous words of Martin Kelleher,[12] who, when talking about 'double mugging' (in relation to unnecessary preparation of teeth), stated – 'these unfortunate patients are robbed twice – first of their money and again of their enamel and dentine', when teeth are unnecessarily prepared for crowns. Why is this wrong?

- Because the actual lifespan of teeth that are crowned is reduced when compared to those that are provided with direct-placement restorations.[13,14] Indeed. It should be the longevity of the tooth, rather than the longevity of the restoration, should be the aim for all clinicians when contemplating any restorative intervention.
- Because there is a finite incidence of pulp death after crowning. The oft-quoted work of Saunders and Saunders[15] has been updated[16] using cone beam to examine the root apices of teeth crowned in Dundee Dental School over a 3-year period. The results are not dissimilar to the original paper, namely, that peri-apical periodontitis was present in 17.7% of crowned teeth that were vital at preparation.
- Because teeth that are crowned lose tooth substance and strength. A few clicks on Google can lead to the following untruth: '*Do crowns make teeth stronger?*' Answer: *'Dental crowns are the perfect solution for repairing teeth that have broken, weakened by tooth decay or by a large filling. These are artificial restorations that fit over the leftover part of a prepared tooth,* **making it stronger** *and giving it the shape of a natural tooth*'. Suffice to state that the internet is not peer reviewed (which *Dental Update* is), so I will quote a peer-reviewed paper from Edelhoff and Sorensen.[17] Using preparations on typodont teeth, these workers found that 63–72% of the coronal tooth structure was removed when teeth were prepared for all-ceramic and metal–ceramic crowns. For a single crown restoration, the tooth structure removal required for a metal–ceramic crown preparation was 4.3 times greater than for a porcelain laminate veneer.

Also in that regard, one of dentistry's longest serving commentators, Gordon Christensen,[18] wrote that 'dentistry has yet to discover a restorative material that serves better than human enamel and dentine', adding that dentists in the US were providing too many crowns, and, that there was obviously an economic factor in their decision (to provide a crown) (or an implant – my insertion) given that the revenue produced by crowns is among the highest in dentistry when compared to other treatments. Put more bluntly, provision of an excessive number of crowns may simply be a money-making exercise. Finally, the comments of Opdam and Hickel[19] published in 2016 are worthy of note. In writing about operative dentistry in the present changing environment, these authors state that, in the past, it was (incorrectly) assumed that crowns protected damaged teeth and that 'the bur can remove more tooth substance in a few seconds than caries can destroy in months or years'. Need I say more?

How do I relate the start of this discourse with the foregoing? There is an even greater need today, as a result of the disruptions of the past 2 years, to prioritize the needs of our patients and use wholly appropriate treatments if we are to retain their trust. This involves the provision of sensible, rational treatment, rather than suggesting expensive alternatives when simpler, less costly, less destructive treatments exist. As has been recently described by Holden *et al*,[20] dentists may be under financial pressure, especially those who are employed, for example 'to find a crown on a patient that has a more high income earning than a filling' or 'how many crowns are you doing per week?', or, you are seeing a new patient, see if you can get this much revenue out of that one'. I fully realize that dental practices have to be viable, not only to provide income for the practice owner, to pay the extensive costs of running a practice, and also for the staff whose incomes contribute to mortgages and school fees and the like. The advice of Holden and colleagues, therefore, is to be heeded, namely, that 'dentists should be encouraged to invest time into developing business skills to safeguard their ability to provide high-quality patient care in a commercial environment'.

Finally, I should draw readers' attention to the excellent, thought-provoking recent article on Professionalism, by Kevin Lewis.[21] As is always the case with Kevin, there are many excellent advice lines, but there are several that are particularly relevant to this discourse, namely: 'A professional will behave honourably, appropriately and properly'. They can be relied upon to 'do the right thing', and, 'even the highest quality treatment, in a technical sense, is of questionable quality if it is not necessary, or not in the patients best interests'. In summary, by following one's ethical brain, being aware of the damage that certain treatments might bring and providing truthful information in our communications with patients when drawing up treatment plans, will help to keep the profession's reputation intact, this being particularly important in these times of criticism, and will avoid the accusation of being *voleurs*. Often the best treatment is the simplest treatment that will meet the patient's needs.

It's the December issue, the last of 2021! Therefore, as we approach the end of another year of *Dental Update*, I wish all readers, everywhere, Season's Greetings, a happy and peaceful, and above all healthy, 2022. I also thank you, the readers of *Dental Update*, for continuing to subscribe to our journal during these difficult times – I hope that you have enjoyed this year's issues, and also to have found the articles that were related to COVID-19 helpful. I also wish to thank the Editorial Board for their input and wisdom, our superb authors for sifting through the voluminous dental literature and telling us what it really means by way of the review articles that they write, our peer reviewers for their

advice and, finally, the excellent team at Guildford, led by Stuart Thompson, and including Fiona Creagh, Georgia Critoph-Evans and Lisa Dunbar, for producing each super issue.

PS I am delighted to report that, having quoted Kevin Lewis in this Comment, he has agreed to write a Guest Editorial for the January 2022 issue of *Dental Update*, expanding on the comments that I mentioned.

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Dental Update Team News

David Russell, Marketing Manager for *Dental Update*, is one of this year's Professional Publishers Association 30 under 30 winners. The award recognizes young upcoming talent in media publishing. Since joining *Dental Update*, David has been key in revolutionizing the way the dental division markets its products. The judges particularly liked 'David's willingness to go above and beyond, working across a variety of platforms. He used changes caused by the pandemic to further digital strategy, showing David has his eye on the future.' Speaking with David he said 'A huge thank you to my work family who help me push boundaries every day at MA Dentistry Media'.