

Letters to the Editor

The radiological appearance of gold thread cosmetic treatment

A female patient aged 64 had bitewing radiographs in February 2006 (Figure 1a and b) – no pathology or abnormalities were observed.

The patient was an irregular attender and, on returning for a check-up in January 2009, further bitewings were taken (Figure 2a and b). The patient had no complaints and, on examination, both intra-orally and extra-orally, there were no apparent abnormalities present.

Multiple wavy thin linear, but irregularly positioned, radio-opacities were noted superimposed bilaterally over the teeth, mandible, ramus and soft tissues. Intra- and extra-orally there was no evidence of any 'fibres' which could be held responsible for the radiographic picture. Furthermore, these radio-opacities did not seem to bear resemblance to any of the more commonly found superimposed radio-opacities, such as calcifications of acne, phleboliths associated with soft tissue haemangiomas which are calcified, or miliary osteomas of the soft tissues.

The patient did not return for a further check-up until May 2011 when further bitewing radiographs were taken (Figure 3a and b).

The distribution of thin wavy radio-opacities was different from those in Figure 2a and b and assumed to be due to changed angulations of the x-ray tube during the exposure.

Only after prolonged discussion regarding the radiological picture did the patient disclose that she had undergone cosmetic treatment involving gold to improve her wrinkles while on holiday in Poland in 2006. Similar cases have been documented by Mizrahi and Scully¹ and Alsaadi *et al.*²

The 'Gold Thread Facelift' is offered most frequently in Eastern Europe and Russia. It is often named 'gold filament rejuvenation', claiming to be a low impact and highly effective technique for improving youthfulness of the skin.

The main promotional points are that gold threads are inert materials that thicken the skin while simultaneously increasing its elasticity. Providers claim the most profound benefit of this treatment is found when used in conjunction with cosmetic procedures.

Gold thread implantation

Pathological changes have been identified post gold thread insertion. These threads are usually 0.1 mm in diameter, 99.9% pure 24 carat gold and inserted subdermally. Collagen production by fibroblasts is

stimulated on insertion and a fibrous capsule is formed around the gold thread. Angiogenesis is also promoted in the implantation area and there is an increase in mast cells over time.

Shin *et al.*³ state that this gold thread implantation is a prophylactic procedure which is intended to 'slow the ageing process, achieve fine wrinkle elimination, smooth deep wrinkles and improve skin elasticity and reinforcement'. The 'skin rejuvenation' effects are reported to last 8–15 years⁴ and be at an optimum after 1 year.

Practitioners should be aware that there are multiple names for this procedure, including the gold thread procedure, gold thread rejuvenation, gold filaments, gold reinforcement and the gold face lift.⁴ It is important that GDPs are aware of the radiographic presentation of this so-called 'Gold Thread Implantation' so that an appropriate history can be elicited and a differential diagnosis made.

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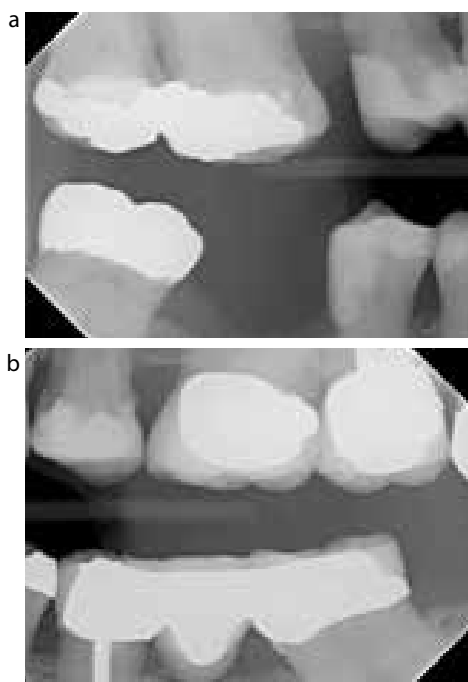


Figure 1. (a) Right bitewing radiograph taken 02/06. (b) Left bitewing radiograph taken 02/06.

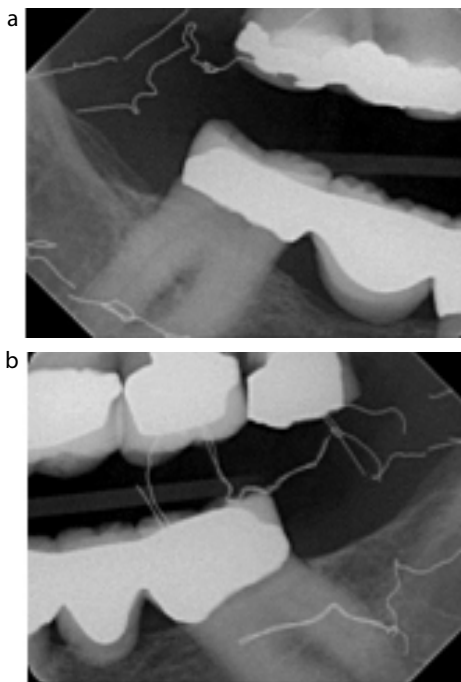


Figure 2. (a) Right bitewing radiograph taken 01/09. (b) Left bitewing radiograph taken 01/09.

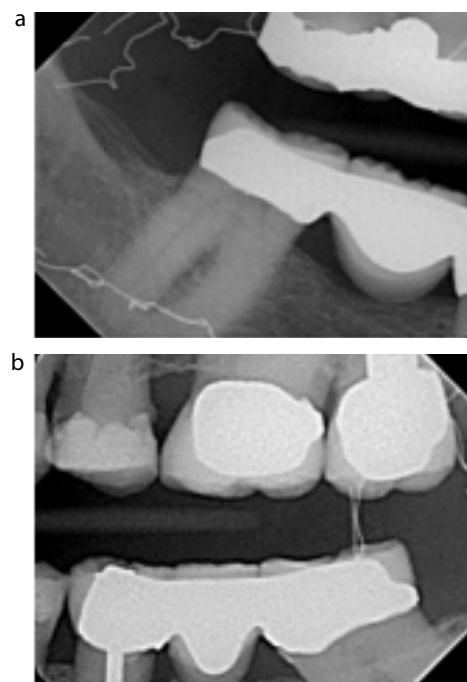


Figure 3. (a) Right bitewing taken 05/11. (b) Left bitewing taken 05/11.

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Impacted inverted parapremolar

The presence of supernumerary teeth in a maxillary premolar region is not uncommon. Supernumerary teeth in the premolar region are known as parapremolars.¹ According to orientation, supernumerary teeth can be vertical, inverted or transverse.² The presence of these teeth may result in various clinical problems like failure of eruption of adjacent teeth, displacement, crowding, and dentigerous cyst formation.³

A 12-year-old patient reported to Faculty of Dentistry, SEGi University with the complaint of spacing between upper right back teeth. Intra-oral examination revealed spacing between the maxillary right premolars. An intra-oral periapical radiograph showed an impacted inverted supernumerary tooth present between the maxillary premolars. To rule out the possibility of bilateral supernumerary teeth, an orthopantomogram was taken (Figure 1). The need to extract the inverted, impacted parapremolar followed by orthodontic treatment for space closure was explained to the parents and informed consent was obtained from them. A portion of root of the inverted parapremolar was removed by sectioning. Guttering around the buccal bone was performed and a crown portion of the tooth was removed. Orthodontic therapy is currently ongoing to close the space between the premolars (Figure 2).

A clinician needs to be aware of the possibility of impacted supernumerary teeth and should recognize signs suggestive of their presence. Clinical problems associated with impacted inverted mesiodens has been previously reported,³ but spacing associated with impacted inverted parapremolars has not



Figure 1. Orthopantomogram shows an inverted parapremolar between the right maxillary premolars. Inset shows the intra-oral periapical radiograph depicting the inverted parapremolar.



Figure 2. Clinical image shows the closure of the space with continued eruption of maxillary right second molar and orthodontic treatment. Inset at the top end of the image shows the extracted supernumerary teeth. Inset at the bottom shows the closure of the space between maxillary right premolars.

been reported thus far. Surgical management of the impacted supernumerary teeth, orthodontic management and management of keratinized gingival tissue are critical factors that can affect the prognosis in such cases.⁴ Early identification and appropriate treatment of impacted supernumerary teeth and the associated conditions can prevent or minimize the complications.²

References

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Dear Sir

I have been reading with interest the articles on Modern Endodontic Principles. In the article in the April issue (Managing Complex Situations) it states that chlorhexidine irrigation in retreatment cases has been shown to have a negative effect. I seem to remember reading in a paper in *Update* some years ago by Good, El Karim and Hussey that chlorhexidine had a place in retreatment cases as it was effective against *Enterococcus faecalis*, a known pathogen in this situation. Consequently, I have been using it instead of NaOCl since then. As a general practitioner it is difficult to know what to do. Clarification would be greatly appreciated.

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Author's response

Thank you for the letter on the subject of chlorhexidine (CHX) in endodontic retreatment cases. Without wanting to appear equivocal and unhelpful we must recognize that there will always be conflicting evidence and opinion on correct protocols in many aspects of dentistry. The prospective survival study by Ng and Gulabivala (2011) suggests worse outcomes when CHX is used but the authors struggled to provide anything other than scientifically plausible speculations as to why this may be. Other papers have supported the use of CHX. We would draw Dr Foxton's attention to the paper in this series on irrigation. In short, CHX has some limitations as an irrigant and in our humble opinion sodium hypochlorite should remain the gold standard.

Occasionally cases present that remain symptomatic after preparation or completion of root canal treatment. If the clinician knows that the treatment was undertaken to a high standard using copious irrigation with sodium hypochlorite, one may suspect a variety of pathologies from missed anatomy and root fractures to more virulent intra- or extra-radicular infections. *E. faecalis* is just one of many pathogens that are troublesome to remove and may explain failure. In these cases it is not unreasonable to add CHX to the irrigation protocol, but it is important to be realistic of what additional benefits this may offer when we are only second-guessing the pathology. It should be used in concentrations of 2% or more and

clinicians should take care not to mix it with other irrigants, especially sodium hypochlorite, as the precipitants formed may not only impede disinfection but could be carcinogenic. It may simply be more prudent to continue with sodium hypochlorite but take measures to improve its efficacy through ultrasonic or sonic agitation.

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Flossing, remoaning and remania – dentistry in denial

It is uncomfortable to be asked to face up to a reality which does not agree with our long established beliefs. In the past the powers that be just 'knew' that the sun went round the earth (which was, of course flat). Heretics were denounced, dismissed and even martyred for challenging dogma with evidence. But that couldn't happen today; could it?

Just as we are daily being told by the wise and totally informed 48% that the ignorant, misled 52% of the UK population should all be allowed to take a re-sit in plebiscites; so the internet is replete with those who 'know' that the recent AP report highlighting the ineffectiveness of flossing is obviously wrong; it's just the useless patients who can't master it! The lay press has merely noticed that 'Dental Heretics' have dared to question the benefits of flossing; how can they say such a thing?

The problem is we have known about flossing for almost a decade. Berchier *et al*,¹ after reviewing more than 1350 papers, found that these overall '...did not show a benefit for floss on plaque and clinical parameters of gingivitis' and concluded that '... a routine instruction to use floss is not supported by scientific evidence'. In relation to caries reduction, Hujoel *et al*,² in another systematic review (in the dental journal with one of the highest impact factors), found no reduction in interproximal caries when comparing patients who flossed and those who did not. There was, however, a significant reduction in high risk children when they received daily professional flossing. Reassuring, if only by bringing closer together dental professionals married to each other! If it doesn't prevent gingivitis or caries what is it for?

Fortunately, brushing works and some power brushes are more effective than

manual brushes.^{3,4} Fluoride toothpaste reduces caries.⁵ Let's tell patients the scientific facts and give up our long held and much cherished dogmas. Brush your teeth thoroughly at least once a day⁶ and make sure that your kids' teeth are also thoroughly brushed and are exposed to fluoride toothpaste twice a day.⁵

Cognitive Dissonance makes it tempting to make up all kinds of reassurance to patients to keep flossing, however, let's not go into denial and continue to mislead our patients. Over 80% do not floss regularly and it is hard to accept that these 'the great unflossed' were right and we, 'the highly educated intelligencia' may actually have been wrong. They will welcome the news with open arms and free of cyanotic fingertips.

Flossing doesn't work – get over it! And we are also leaving the EU – if you are also within the 48% highly educated intelligencia who just know the ignorant, misled 52% were wrong; get over that too!

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