

A natural approach

Anthony McGee describes his protocol for stabilising peri-implant mucositis and peri-implantitis.

As a GDP with a keen professional interest in bone regeneration, I have noted a growing number of patients with implants presenting with peri-implant mucositis affecting the soft tissues around their implants, along with an increase in the more serious follow-on condition, peri-implantitis.

As increasing numbers of people choose implants as a treatment option; peri-implant mucositis and peri-implantitis are also on the rise. Half a million adults in the UK have at least one dental implant according to the latest Adult Dental Health Survey. That number is only set to grow as more patients find the choice of implant over denture a much more attractive option. Studies have suggested that one third of these patients will develop peri-implantitis and two thirds have the precursor condition, peri-implant mucositis. However, because bone loss is painless, many patients don't realise they have the condition until their implant becomes loose. So, unless something can be done, we are going to be seeing more problems with implants year on year.

The reason for writing this article is to explain how, with a simple protocol, I have managed to not only stabilise these conditions, but also, in many cases, to reverse them.

In the past, corrective treatment has been limited to hygienically cleaning the tissues around the implant and treating with chlorhexidine or



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Fig 1a: Pre-treatment.



Fig 2a: Pre-treatment.

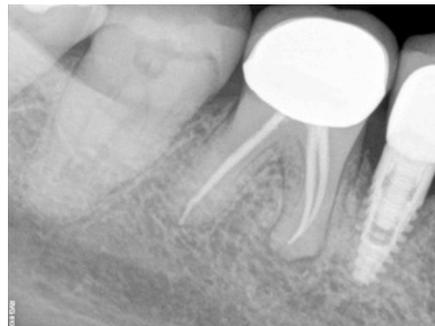


Fig 1b: Eight months into treatment.



Fig 2b: Five months into treatment.

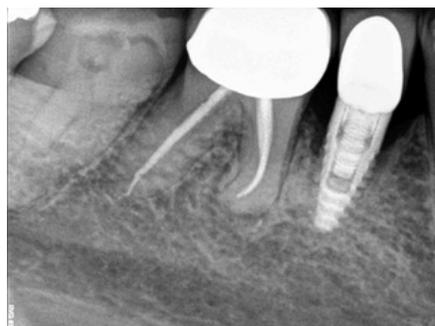


Fig 1c-d: One year post treatment.



Fig 2c: 18 months post treatment.



Fig 1c-d: One year post treatment.

another anti-bacterial product to prevent reinfection. In order to ensure that any problems are caught early, scrupulous oral hygiene and regular

follow-up appointments after implant placement are generally considered to be essential. When the problem results in serious bone loss, additional techniques have been used, including the use of various augmentation/regeneration products to recreate a sound base for reattachment of the implant.

Paradoxically, advances in implant design may also have contributed to the rise in cases. The first implants had a smooth, machined surface with fine threads, but they were prone to detaching from the bone around

them. In the mid-nineties, clinicians found that implants with a rougher surface integrated better with the bone. However, this textured surface with thicker, deeper threads, if exposed, is much more likely to harbour bacteria as the bone recedes. It is difficult to extract the detritus completely with soft tip or plastic scalars, which compounds the problem.

So, how did I do it? As the head of the implant, once exposed, is considered contaminated and therefore damaged, I cleaned around the implant using an ultrasonic scaler. This has the capability of removing bacteria as well as any debris. There is also evidence to show that ultrasonic cleaning works beyond the level of the tip.

After cleaning with the ultrasonic scaler, I syringed BlueM oxygen-releasing oral gel, using a thin, blunt needle, into the base of the pocket around the implant, completely filling the pocket. BlueM oral gel, toothpaste and mouthwash release oxygen to provide a positive and rapid effect on the healing process of damaged soft tissue around teeth and implants, helping to create healthy conditions in which tissues can repair and reverse the effects of infection. The manufacturers state that it increases the availability of active oxygen around the implant, stimulating the wound healing process by increasing leukocyte recruitment, cell motility, angiogenesis, revascularisation and extracellular matrix formation, thereby improving overall oral health (plaque score, bleeding index) and killing anaerobic bacteria.

This treatment was repeated three or four times with a seven to 10 day gap between appointments. The number of appointments depended on the size of the lesion around the implant and was purely a subjective call. From the first appointment, the patient was put on a regime of using a corresponding oxygen-releasing mouthwash and toothpaste as part of their daily routine. This was repeated twice a day.

Now, we know that oxygen is good to have around for intracellular processes, cell survival, cell proliferation and re-epithelialisation, collagen production and bactericidal



Fig 3a-b: Pre-treatment.



Figs 3c-d: Results after one application.

activity, however, what I saw when my patients returned for their follow-up treatments and examinations took me completely by surprise.

Case one

The first case was that of a female,



Figs 4a-b: Results after one week.

non-smoker who was 53-years-old at the time of her implant placement in July 2004. I first saw her for treatment in February 2016.

Figure 1a shows the bone loss around the implant which, in this case, was due to peri-implantitis. Counting the screw threads from the bottom upwards, we can see that there is bone loss down to the third bottom thread.

Figure 1b was taken eight months later, after treatment with the oxygen-releasing oral gel as described above and with continued management by the patient at home with the related toothpaste and mouthwash.

Figures 1c and 1d were taken one year after treatment and, as you can see, the bone is now stable and recovered. ➔

Case 2

The second case was that of a female, non-smoker who was 37-years-old at the time of her implant placement in May 2010. Oxygen therapy treatment started in December 2015.

As the figures show, a crown was removed to take any weight off the implant as I thought it might help recovery. However, I no longer remove the crown as there was no discernible benefit in the cases in which I did this.

Figure 2a shows considerable bone loss around the implant at the start of treatment; figure 2b shows the progress made five months later; and figure 2c is the result 18 months later. Together, the images illustrate the bone recovery over that period of treatment.

Case 3

The third case was that of a male, non-smoker, whose implant was placed in January 2007, when the patient was 32-years-old. Treatment began in November 2016.

In this case it can be clearly seen that the gingiva changes after only one treatment of the oxygen-releasing oral gel.

Figures 3a and 3b both show the

deep pocket and bleeding associated with severe peri-implant mucositis.

Then, after one treatment with the liquid oxygen gel, and subsequent twice daily use with the toothpaste and mouthwash, the patient presents 14 days later with pink healthy gingivae (figs 3c-d). The patient also noticed a massive reduction in bleeding when brushing and so compliance was easily attained.

Case 4

Finally, the fourth case was that of a female, non-smoker whose implant was placed in September 2006, when the patient was aged 51. Treatment commenced in November 2016.

Figures 4a and 4b demonstrate again what can occur after only one week of treatment.

Conclusions

I believe the reason that all of these cases show such improvements in implant stability is that the treatment encourages a tightening of the cuff of gingivae around the top of the implant, allowing the bone to recover and, although this recovery is not 100 per cent, you can see from my X-rays that there is a definite improvement.

Out of interest, I decided to apply this technique to periodontitis around natural teeth. Already, patients are very happy with the results – they have less gum bleeding and one patient even reported a reduction in his halitosis.

I think that what we are basically doing is creating the right conditions for the body to repair itself. As the results are so fast and so noticeable there is a high degree of treatment acceptance and patient compliance and, as such, this treatment is simple to administer and cost-effective.

I accept that this is not a clinical trial in the traditional sense and there are no controls. There are also no recordings of quantitative results or strict methodology to follow. However, I am quite confident in stating that in each and every case treated in the manner described earlier, I have achieved stabilisation of the condition at least.

In light of the potential increases in peri-implant mucositis and peri-implantitis that we will all be facing, I feel that this is a credible treatment option in many cases. When you consider how relatively easily these improvements have been achieved, I believe that the results are very interesting and exciting.

