Try a little tenderness...

Getting patients to feel comfortable and to comply when it comes to maintaining a high level of oral hygiene at home can be tricky, says Alison Lowe who reveals how a new product and a stern example might just help.

I’m sure we all get days when at least one patient presents with either raging toothache or a localised gum infection. And, without wanting to sound unsympathetic, although it’s distressing for the patient, it can also be time consuming for the hygienist. This is mainly because the appointment is likely to involve a discussion of the problem and finding a free slot with the dentist. Not to mention the fact that they still want their scale and polish.

Now, imagine if next time this happened you could simply pop a little medicine-filled ‘cap’ on the tooth and send them on their way. No, I’m not dreaming. This little idea could soon be a reality, with research being carried out on a product called ‘Denticap’ – a topical treatment aimed at treating localised dental problems.

Traditionally, patients would either be prescribed painkillers or antibiotics, which although are extremely effective, often have side effects. For example, some painkillers produce hyperacidity and gastric irritation when taken orally and antibiotics can be slow to work and undergo hepatic ‘first pass’ effect. And liquid dental formulations don’t last for long after they’ve applied before being washed away by saliva. However, it is hoped that Denticap will counteract these problems.

So, what exactly is Denticap? Well, it’s a soft polymeric, cylindrical mould (a bit like a temporary crown) that attaches to the tooth surface. It contains both antibiotics and analgesics, which should spell double trouble for any dental problems.

And now for the science! Denticap is prepared using a mixture of Eudragit, Carbopol, gum karaya powder and ethyl cellulose; don’t worry if this all sounds Greek to you, the main thing you need to know is that the active ingredients are lidocaine hydrochloride and amoxicillin trihydrate. And as would be expected, Denticap has been subject to several clinical trials including tests for:

- Macrophagosis
- Water absorption capacity
- Swelling index

So far, drug release studies have shown a slow, sustained release of the active ingredients in simulated saliva for up to 24 hours following application.

A main concern is its adhesive qualities – the last thing you want are patients inhaling or swallowing it. But trials have shown that Denticap is sticky enough to stay on the tooth until it is levered off using a little extra force. However, further studies are needed before Denticap is widely available for use, but it’s a product that shows great promise.

Patient compliance

On another note, and returning to the present moment for now, if you attended GlaxoSmithKlein’s Talking Points in Dentistry conference in the summer or were a delegate at the British Society of Dental Hygiene and Therapy conference in Bournemouth, you would probably have seen Phil Ower speak. He is a mine of information and his presentations always remind me just how critical a high standard of oral hygiene is in the success of all forms of periodontal therapy, especially as a healthy periodontium is essential if other forms of dental treatment are to succeed.

Conveying this message to patients isn’t always easy though and as we all know, lack of patient compliance is the key problem in the prevention of periodontal problems – this is why it’s so important to explain the disease process in detail. One particular gem of information I learned from the lecture, relating to an article published in The Times back in 2004. It’s called ‘Bug the Builder’ and it describes the formation of biofilm and its role in the development of dental disease in a way that is really easy for patients (and us!) to understand. Here is a short extract from the article:

‘Dentists might be more successful in getting you to brush your teeth and floss more if they told you what the consequence were. Bacteria are building evil smelling cities in and between your teeth – what we nicely call ‘plaque’.

Plaque is anchored to your teeth by a dense opaque slime about five micrometers (1/5,000 in) thick. Above this, colonies of different strains of bacteria, shaped like mushrooms or cones, soar to between 100 to 200 micrometers. Each miniature metropolis is permeated at all levels by channels for transporting water, waste and oxygen. Mmm… tasty!’

Have you ever had a patient comment on the awful smell when you have flossed or TePe’d their teeth in the surgery? Well just think, now you can tell them that ‘bug’ and his bacterial buddies are busy building ‘evil smelling cities’ on their teeth. If this information doesn’t improve their oral hygiene, nothing will.

About the author

Alison Lowe is a dental hygienist based at The Orthodontic Centre in Cardiff, a private practice specialising in implants, cosmetic work and perio and Cardiff Dental School. She has won several awards including Hygienist of the Year 2008 and is a columnist for the Western Mail. She thoroughly enjoys what she does and is delighted to be contributing to Dental Tribune UK.

References: