Interview: “Naturally occurring substances will find their place in oral health”

By Kasper Mussche, DTI

A graduate of the specialisation programme in periodontics at the University of Zurich in Switzerland, Dr Alex Solderer mostly treats severe cases of periodontitis in his daily routine. In addition, he conducts research on periodontal and dental implant topics. In his latest research paper, Dr Solderer conducted a systematic review of the efficacy of chlorhexidine rinsing after periodontal or implant surgery.

Dr Solderer, chlorhexidine is considered the gold standard for oral antiseptics. In your experience, would you agree with this?

Yes, I would. Just with regard to the literature alone, a search for chlorhexidine on PubMed yields 10,000 results. It is clearly the best-documented oral antiseptic you can find. Every new antibacterial rinse is and has to be compared with chlorhexidine.

After writing your review, what is your conclusion about chlorhexidine’s efficacy after surgery?

Well, after surgery, patients should not brush the teeth in the operation area until the stitches have been removed. Until then, chlorhexidine works like a “chemical toothbrush” in this area. Formation of plaque and gingival inflammation can be successfully suppressed. From the point at which normal oral hygiene can be re-established, I do not see any indication that the patient should continue to rinse with chlorhexidine.

Chlorhexidine is good at reducing biofilm, plaque and inflammation, but your paper says it has no effect on periodontal pocket depth.

Only mechanical therapy, such as scaling, root planing and periodontal surgery, can reduce pockets, as these procedures include the removal of the aetiological factors for periodontal pockets: biofilm and biofilm retention structures, such as calculus. Oral antiseptics should always be seen only as an adjunctive therapy.

Chlorhexidine has a number of side effects, such as tooth discoloration and taste disturbances. It also tastes unpleasant. Have you had any problems because of this when treating patients?

Patients who come to me for treatment normally have severe periodontal issues and are aware of them. After informing patients thoroughly on their oral health and disease, the benefits of chlorhexidine therapy and its temporary side effects, they generally do not complain about taste and discoloration. Patients do not like the side effects, but owing to their temporary character, they normally accept them. However, in a few cases, patients suffer from mouth burning, and then we have to stop the rinsing therapy. I never prescribe a chlorhexidine rinse for longer than two weeks, as side effects begin to increase after this period. After termination of the prescribed rinsing time, I always schedule an appointment for removal of the discoloration.

What is the importance of compliance during periodontal treatment?

Patient compliance—especially correct oral hygiene at home—is crucial. In my opinion, it makes no sense to start periodontal treatment before adequate oral hygiene has been established. In a university department, this might work more easily than in a private practice. We work with plaque-disclosing methods to reveal biofilm and that helps patients to visualise their problem areas and to know where brushing is particularly important.

In other words, the key factor is to educate patients. This also includes instructing the patient how long, how often and in what manner the rinse should be used. After surgery, for example, in the time during which the patient should refrain from toothbrushing, the stitches are still in place and the wound needs to heal. Here, I instruct patients to bathe the operation...
site with chlorhexidine rather than rinse vigorously.

If we take a step back and look at non-surgical periodontal therapy, in my experience, I have found that people overestimate the efficacy of mouthrinses, and here I would say that the biggest problem is making it clear to patients that, although they are using a mouthrinse, for example, after scaling and root planing, it is still more important to brush properly and clean interdentally. As mentioned before, rinsing can be considered only an adjunctive treatment.

How can additives improve a chlorhexidine mouthwash?
By adding herbal extracts or essential oils, it is possible to reduce the concentration of chlorhexidine. The lower the concentration, the lower the staining will be. Moreover, it has been suggested that herbal extracts combined with toothbrushing might actively remove discoloration; however, further research is needed.

Furthermore, as we can see in the trials run by the Bernese periodontics group, herbal extracts can partially substitute for chlorhexidine, showing the same efficacy with less staining and irritation. Another study assessed a mouthrinse with a partial substitution of chlorhexidine with essential oils, showing no loss of efficacy. [i, ii]

Your paper discusses how rinsing with 0.2 per cent chlorhexidine reduces side effects; however, therapeutic doses of chlorhexidine are normally around 0.2 per cent. It is right that 0.2 per cent chlorhexidine was seen in the past as the gold standard. In our research, which included clinical trials, 0.12 per cent showed comparable antiseptic capacities with reduced side effects and better patient acceptance.

Do you see any potential for natural antiseptics in oral health?
I feel there is a lot of research going on in this area nowadays, and I am convinced that naturally occurring substances will find their place in oral health. For example, recently published research from our group showed promising results for the use of green tea during non-surgical periodontal therapy [iii] Further- more, my colleagues are currently investigating the role of superfoods in periodontics.