

## On the recreation of keratinised mucosa around dental implants

One of the questions I am often asked is on what topic it could be useful to conduct clinical research. In scientific research there are fashions, but I am not a fashion enthusiast. I am keener to identify those issues from which patients could benefit, because in my personal opinion research in dentistry and medicine is still, and should remain, a semi-precise science that should guide therapeutic choices.

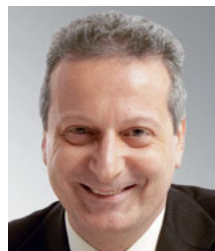
A topic I feel to be controversial is the need for recreation of keratinised mucosa around both teeth and implants. The current issue includes the 5-year prospective cohort study of Dr Todisco, which showed results that may be unexpected for most dental practitioners: the absence of keratinised mucosa at the vestibular or lingual sides of dental implants was associated with less bone loss. In fact, it was concluded that: "Although the height of the keratinised mucosa did not seem to alter the clinical outcomes, its presence both at vestibular and lingual sites was associated with an increased marginal bone loss when compared to implants having at least one side without keratinised mucosa." Obviously these results should be interpreted in context, and require confirmation by other trials.

I am not suggesting that we should remove keratinised mucosa around dental implants, nor am I opening a discussion on the reason why God or evolution created a keratinised gingiva. I can clearly see the usefulness of keratinised mucosa, as I can clearly see the usefulness of a periodontal ligament around teeth. But I wonder if there are tangible benefits for patients in recreating what they have unfortunately lost. In the past, a legitimate clinical research question has been whether implants that do not have a periodontal ligament can function over time. You probably know the answer already. Another legitimate question could be whether implants that are not surrounded by keratinised mucosa function, and whether keratinised mucosa should be recreated.

We are well aware that huge numbers of soft tissue augmentation procedures are systematically conducted in many centres around the globe – but are these procedures justified by some tangible clinical benefit for our patients? Of course, if the aesthetics is compromised from the patient's viewpoint or oral hygiene is impaired, a soft tissue graft may improve these conditions. But are we really sure that implants without keratinised mucosa have a poorer long-term prognosis? Where is the evidence for this widespread belief?

The types of studies needed to answer this question are large prospective multicentre cohort studies with follow-ups of at least 5 years, in which the outcome of sites with adequate keratinised mucosa is compared with that of sites without keratinised mucosa. Relevant outcome measures will be, apart from implant success, complications (and in particular the incidence of peri-implantitis), peri-implant marginal bone loss, soft tissue recessions and patient satisfaction/preference. Randomised controlled trials (RCTs) should also be conducted augmenting or not peri-implant tissues with little (or even better in total absence of) keratinised mucosa. Once it is clearly established that there is a tangible benefit for these soft tissue augmentation procedures, it will be interesting to test in RCTs which could be the best procedure.

In the meantime, please let's maintain some reasonable critical sense and not jump to clinical conclusions just because things look obvious or logical. We need proven facts on which to base our decisions and not just hypothesis and opinion.



Happy reading!

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