

Infection Control Early Detection of Peri-implantitis

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Peri-implantitis prevention

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In addition to maintaining a specialist periodontics practice in West Perth, Australia, and serving as the Editor-in-Chief of the *Clinical Oral Implants Research* journal, Periodontist and implant specialist Dr Lisa Heitz-Mayfield holds several academic positions, including that of adjunct professor at the University of Western Australia and the University of Notre Dame Australia.

Dr Heitz-Mayfield has emphasised the importance of preventive strategies and early diagnosis regarding peri-implant disease, and found time for an interview on the topic which she also addressed at the 26th Annual Scientific Meeting of the European Association for Osseointegration (EAO), held in October in Madrid in Spain.

What were some of the key messages of your presentation during the EAO meeting?

In brief, my presentation focused on diagnosis and treatment planning for implant procedures in relation to the high prevalence of peri-implantitis. I emphasised the importance of achieving infection control prior to implant placement—this involves conducting a comprehensive examination of the patient to determine whether there are any problems, such as periodontal disease or any other intraoral infections.

I highlighted the need, particularly for a periodontal patient, to have been fully treated beforehand so that he or she doesn't have active periodontal disease when any implants are placed. The patient should have already gone through the entire process of infection control and should ideally be in a supportive periodontal therapy

programme with good compliance and maintenance before receiving an implant.

What is involved in this infection control?

Firstly, one needs to eliminate any deep periodontal pockets. We have good evidence today that supports the idea that the presence of residual periodontal disease is a risk factor for patients developing peri-implantitis at a later date. Infection control also means that patients must have really good oral hygiene. They must have low full-mouth plaque scores, which again is strongly supported by evidence that suggests patients with poor plaque control are at a much greater risk of developing peri-implantitis.

Of course, once one has achieved good infection control, one then needs to ensure that there will be good access for cleaning the implant site once the prosthesis has been placed. This will allow the patient to continue infection minimisation practices at home. If one designs a prosthesis that is inaccessible through the patient's cleaning habits, it is simply more likely that he or she will contract an infection later on.

As a practising periodontist, how have you implemented a preventive approach to infection control?

Having good infection control before placing implants is crucial, as it is the best way to prevent these infections occurring later on. When I am planning for implant procedures, I make sure that I start with a good foundation where any infection has been dealt with and that the patient has displayed good compliance and is likely to con-



heavy smoker
FIFO worker
married
bruxer



Figs. 1 & 2: Dr Lisa Heitz-Mayfield at the 26th EAO Meeting in October 2017, highlighting the importance of infection control. Photos: © DTI

tinue to do so. That is the key to prevention: to make sure that the patient has a healthy oral cavity with little plaque and no periodontal disease before one starts.

A preventive approach requires several elements to work effectively: regular monitoring and supportive periodontal therapy with professional biofilm control, a healthy and regular at-home oral hygiene routine, and controlling for other risk factors, such as smoking and uncontrolled diabetes. By managing these potential issues, dental professionals and patients can work together to help prevent the recurrence of periodontal disease and occurrence of peri-implantitis.

How important is it to properly motivate a patient to engage in these preventive measures and understand what the role of a good oral hygiene routine is?

It is extremely important. Again, it is key that, right at the beginning of the treatment planning phase, patients are informed of the risk of complications if they do not maintain good oral hygiene supplemented with regular professional care. Recent literature shows that patients with implants must receive check-ups and supportive care at least twice a year. For patients who have lost their teeth owing to periodontal disease, we know that they are at a higher risk of having similar problems around their implants. These patients then really need to understand and be informed of the importance of good oral hygiene and regular preventive, supportive care prior to engaging in the rather costly business of getting an implant.

What role does regular professional prophylaxis play in preventing peri-implantitis?

It comes back to the responsibilities of dental professionals: they need to identify early signs of inflammation, such as peri-implant mucositis, which is an inflammation of the soft tissue, and treat that before it develops into peri-implantitis and initiates bone loss. Evidence shows that management of peri-implant mucositis is a prerequisite for the primary prevention of peri-implantitis.

Removing the harmful biofilm from the exposed surface of an implant with peri-implantitis, though, can be very challenging. There is a different morphology to it, along with a modified surface that is often rough and tends to harbour the biofilm in a way that it is very difficult to remove. However, as with periodontal disease, it's much easier to manage and treat peri-implant disease before it becomes too severe. The best way to prevent it is through early detection of the signs of inflammation so that treatment that reverses this process can take place.

From a prophylactic point of view, the periodontally healthy patient is the best patient. Do you agree?

Of course. It is really important that patients have good periodontal health so that they do not have deep periodontal pockets and reservoirs of bacteria that could lead to colonisation of biofilm around the implants. Patients need to come for check-ups on a regular basis so that the early signs of disease can be identified and dealt with. In addition, we should remember that, sometimes, things can go wrong around implants; for example, if a patient has a screw-retained restoration and there is a mechanical problem or technical issue, such as a loosened screw, then a problem with bacterial accumulation may arise and peri-implantitis may develop. Though periodontal health is important, regular check-ups of the prosthesis and the patient's overall oral health are also crucial in preventing not just peri-implantitis but other intraoral issues as well.

Thank you very much for the interview.

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