

Connection between periodontal and peri-implant health emphasised



Fig. 1



Fig. 2



Fig. 3

Fig. 1: Good individual oral hygiene and professional biofilm management, e.g. with cups and brushes, helps support periodontal and peri-implant health. **Fig. 2:** An air scaler efficiently performs the initial debridement, as part of initial periodontal therapy. **Fig. 3:** Implants and superstructures can be successfully cleaned with ultrasonic devices and special plastic instruments during postoperative care or non-surgical therapy. (Source: © W&H)

EuroPerio9 was held in Amsterdam from 20 to 23 June and was the largest congress to date with more than 10,000 attending. There was great interest in the causes and successful management of periodontitis and peri-implantitis. Two new classifications provided answers to the aetiology. Scientifically based and practice-oriented presentations demonstrated how to prevent and, if necessary, treat these inflammatory diseases.

Three out of four Swiss patients state that prevention is the main reason for them to visit the dentist.¹ They want to make sure that their teeth stay in good condition. They aim to keep previously restored teeth or implants for as long as possible. However, not all patients are aware of the fact that dental health also depends on intact periodontal or peri-implant tissue.

At EuroPerio9, renowned experts presented two new classifications as the basis for all preventive, as well as therapeutic measures. They were developed at a workshop conducted by the American Academy of Periodontology (AAP) and the European Federation of Periodontology (EFP) in November 2017: According to the classification, there is only one form of periodontitis, for which the treatment is classified into four stages, depending on its severity and complexity.² As explained in detail in Amsterdam, current research results indicate that what was formerly considered aggressive periodontitis cannot be distinguished from chronic periodontitis by microbiological or immunological criteria. According to the new diagnostic system, the disease is classified as chronic, which means that recall treatment is necessary for the remainder of the patient's life.

Periodontal therapy largely unchanged

Every dental examination is based on a detailed medical history combined with targeted diagnostics containing as much detail as possible: The dentist records systemic risk factors such as diabetes or smoking and identifies any potentially increased tendency to inflammation³. Hard and soft tissues are examined and periodontal pockets are probed in a screening test according to PSR (Periodontal Screening and Recording). In case of abnormal findings, the periodontal status is then recorded and therapy is initiated where necessary. This treatment begins with professional biofilm management, by using, for example, rotary cups and polishing com-

pounds (Fig. 1), and comprehensive instructions in oral hygiene. Sonic or ultrasonic systems remain an effective alternative or supplement to manual instruments for subgingival debridement and biofilm management (presentation by Prof. Dr Ulrich Schlägenhauf; Fig. 2). Supplementary use of photodynamic therapy, air polishing or local and systemic antibiotics is not adequately documented (Prof. Dr Sema Hakkı).⁴ According to Dr Sergio Bizzarro, improved biomarker diagnostics may lead to an increase in customised patient therapy in the future.

Primary prevention of inflammations

The key statement of the first classification for peri-implant inflammations is that periodontitis, mucositis and peri-implantitis are a result of biofilm.⁵ One has to admit, however, that therapy is not always successful.⁶ These inflammatory diseases need to be prevented before they occur by means of good oral hygiene and professional biofilm management.⁷⁻⁹ A practice-based randomised study found that most patients maintain their peri-implant health by attending recall visits two to four times a year, regardless of the mechanical means of treatment that are used.¹⁰ The risk of peri-implant inflammation is significantly higher in periodontitis patients.¹¹ The same goes for patients who have had initial treatment, but are not yet included in a recall programme (UPT).¹² Good biofilm management and preliminary periodontal treatment are particularly important preconditions for a planned implantation.

Proper implantation

Implantation and implant restoration are performed following standard surgical and prosthetic protocols. High-performance implantology motors combined with surgical contra-angle handpieces are available for the insertion of the implant. Large volumes of cooling fluids at low speeds are required to prevent the bone from overheating.¹³ Once the implant has been screwed to its end position, its eventual stability can be measured safely and accurately by utilising resonance frequency analysis (RFA). A load protocol oriented to the ISQ value prevents the implant from developing micro-movement, thus improving the prognosis.¹⁴ As stated in the consensus document presented at EuroPerio, the potential role of the above-mentioned biological and biomechanical factors in the development of peri-implantitis still requires clarification.⁵

First probe, then treat

Healthy peri-implant tissue does not show any signs of redness, swelling or bleeding, neither does it secrete pus when probed.⁵ Based on the consensus document, Prof. Dr Giovanni Salvi explained the importance of regular probing—preferably with a flexible probe, as implant components often tend to obstruct the procedure.⁵ In the

case of mucositis or initial peri-implantitis already being present, the non-surgical removal of hard deposits and biofilm should be attempted first. For this purpose, ultrasonic power and special instruments designed to protect the implant should be employed (Fig. 3; piezo scaler Tigon+ with 1l, W&H). In case of no remission, the recall frequency needs to be increased. However, specific recommendations, applicable to individual cases, are not yet available in this context.¹⁵

According to an unpublished study presented by Prof. Salvi, the supportive use of photodynamic therapy or locally applied antibiotics does not significantly reduce bleeding on probing in patients presenting with mucositis or initial peri-implantitis. This finding is similar to the one with periodontitis and, according to a systemic overview, also applies to subgingival air polishing.⁶ Professor Stefan Renvert states that whether an implant can remain in position with peri-implantitis depends on the possibility of retaining the implant-based prosthesis. Additional factors include the patient's general health, as well as their financial resources. Regenerative treatment may be indicated with 3- or 4-wall bone defects. Moreover, an implant can be removed rather atraumatically using piezosurgical instruments.

No implantology without periodontology

In a small symposium presented by the Austrian dental company W&H, oral surgeon and periodontologist Dr Karl-Ludwig Ackermann explained that he does not insert implants in affected patients without prior periodontal treatment. This procedure is based on many years of experience and a clinical strategy, which is based on the so-called NIWOP-workflow, meaning “no implantology without periodontology”. This workflow, developed on the basis of the 11th EFP workshop⁸, was impressively confirmed at EuroPerio9. EFP President Prof. Anton Sculean, who chaired the symposium, stated: “A large number of implants are being placed these days and periodontitis has become a major problem. W&H has recognised this and is pursuing the right strategy, following the principle of *NIWOP*.”



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