

Press release

Peri-implantitis treatment:

Morita experts present an innovative and revolutionary method for treating peri-implantitis

Dietzenbach, August 2012. The clinical picture of peri-implantitis presents a serious dental problem, whose spread constantly increases and which, as yet, lacks a definitive evidence-based treatment method. The long-standing dental company Morita has once again led the way with an innovative solution and presented a method for the treatment of peri-implantitis at this year's Europerio 7 in Vienna, Austria, that has already been used successfully in Japan and was developed in cooperation with renowned Japanese dental practitioners. In a seminar the inventor Dr. Atsuhiko Yamamoto explained the treatment procedure for the first time in Europe and demonstrated the effectiveness of the method and the equipment used in the treatment.

Peri-implantitis – a major clinical challenge

Previous research has shown that there is no definitive, evidence-based treatment, which leads to a long-lasting, predictable outcome. The problem becomes even more apparent if the number of peri-implantitis cases is taken into account: according to Mayfield the number is increasing significantly, with about 30 percent of all implant patients affected by peri-implantitis to varying degrees after five years. In intensive cooperation with Dr. Atsuhiko Yamamoto from the Japan Institute for Dental Advanced Studies/Perio-Implant Hospital AUTIS, the dental supplier Morita has been running studies for five years in Japan which document the efficacy of a new therapy for peri-implantitis in combination with Morita's Er:YAG Laser "AdvErL Evo".

This effective treatment method was presented for the first time in Europe at the Europerio 7 in Vienna, Austria. The largest specialist congress for periodontology and implantology in the world was an important platform for knowledge transfer and exchange of ideas from 6 to 9 June 2012 for more than 7800 dental practitioners and experts from all over the world. On 8 June 2012 many of the participating experts attended the Schubert hall 1 and 2 of the Vienna Exhibition & Congress Center, where, at the invitation of Morita, the advantages of the highly promising newly developed method for treating peri-implantitis were presented.

3D imaging and microexplosions as the keys to success

The participants of the seminar were among the first to whom the treatment method as well as the technologies and equipment used in the treatment was demonstrated. The Er:YAG Laser "AdvErL Evo" from Morita is used in this treatment. The treatment method is based on surface activation by microexplosions and has proven very successful in Japan for over five years. The practitioner achieves the main effect using laser energy, which is absorbed by water. Each treatment begins, however, with the diagnosis and it is very helpful to have precise, high-resolution 3D images for peri-implantitis treatment using a laser. Dr. Yasukazu Miyamoto (Kyoto, Japan) presented the advantages of 3D Accuitomo digital cone-beam computed tomograph (cbct) from Morita in the diagnosis of different regions, while Dr. Atsuhiko Yamamoto (Osaka, Japan) reported on the success of his newly developed treatment method in combination with the "AdvErL Evo" – using numerous clinical case studies and visualisations. Prof. Dr. Anton Sculean, Director of the Periodontology Department, University of Bern, Switzerland, presented the lectures, which were given in English.

Dr. Yasukazu Miyamoto – Director of the Shijo-Karasuma Perio Implant Center and the Japan Institute for Advanced Dental Studies – lectured in the first part of the seminar about the efficiency of three-dimensional diagnosis for periodontology and implant treatment. Miyamoto has 25 years of experience in the treatment of implant patients and pointed to the enormous efficiency gain in implant treatment for the practitioner and patients since the introduction of digital diagnosis and three-dimensional images. In his institute, Miyamoto has used the 3D Accuitomo from

Morita for several years for diagnosis and treatment planning. For Miyamoto the use of this technology is an absolute must, particularly in diagnosis of the morphology of bone defects in periodontal regenerative therapy, in preoperative and postoperative implant treatment and especially in assessment of the labial bone thickness on anterior implants. Since acquiring the machine, it has effected “major changes” in clinical practice and has undergone continuous improvement by the manufacturer over the years of use. Miyamoto’s elementary motivation for use: the extremely high image resolution using a comparatively low radiation dose – wherewith sharp, contrast-rich images are generated, without subjecting the patient to unreasonable exposure. He referred to the importance of limiting the field-of-view (FOV), which should be selected as small as possible depending on the clinical situation. In addition to the 3D Accutomo, the Veraviewepocs 3D R100 from Morita also provides numerous FOV selection options and therefore low dose values. Using a large number of case studies Miyamoto demonstrated the diagnosis and treatment of complex bone defects. The most important success factor in these cases is: as accurate representation of the defect morphology as possible before the surgical operation. CBCT images show the extent and depth of the bone defect and also help during postoperative analysis of the bone thickness. In conclusion the Japanese implant specialist showed the advantages of three-dimensional diagnosis in contrast to simple 2D x-ray images using informative comparative images.

In the second part of the seminar Dr. Atsuhiko Yamamoto – Japan Institute for Advanced Dental Studies/Perio-Implant Hospital AUTIS and Director of the Japanese Society for Laser Dentistry – presented the eagerly anticipated new peri-implantitis treatment method. Yamamoto, who as one of the first practitioners in Japan uses the Er:YAG laser in dentistry, is one of the leading experts in this field. He regards peri-implantitis as a global problem, which occurs after implant treatment in all population groups worldwide. In his lecture the laser specialist showed the advantages of the newly developed treatment method and compared the effectiveness of the concept with conventional methods. He impressively demonstrated in his presentation that even in complex peri-implantitis cases concrete treatment success can be achieved for the dentist and patient by using his treatment measures. Yamamoto considers it important in the treatment of peri-implantitis that the focus is concentrated on the underlying causes for the

inflammatory disease. For him the key to success is the combination of three factors: his comprehensive peri-implantitis treatment, the advantages of the patented Morita “Laser tips”, in combination with use of the Er:YAG laser “AdvErL Evo”. The laser triggers microexplosions in the treatment site and surrounding area using water absorption, ensuring efficient disinfection of both the visible and hidden treatment sites. The microexplosions are created when the laser energy is absorbed by the water and the volume expands in the next instant by 800 to 1,000 times. After removal of the contaminated tissue, the microexplosions produced eliminate both the accretion on the implant surface and the contaminated, oxidised titanium layer – without affecting the osseointegration. The unique wavelength of the “AdvErL Evo” plays an important role in this case, as its water absorption is much higher in comparison with other lasers. Using x-ray images taken at timed intervals, Yamamoto also showed that in the presented patient cases satisfactory bone formation could be established after a certain time and that the implant had stabilised. Finally he discussed the laser technology and treatment units used in greater detail and answered questions from participants. In addition to the technical aspects, the treatment methodology and specifications of the Morita instruments used for the treatment were of particular interest for the audience.

Following successful documentation of the new treatment method in Japanese studies, reference practices are now being set up in Europe and the United States. In the first stage, “AdvErL Evo” laser systems of Morita are being installed at leading European and American universities and will undergo evaluation within the following months. Morita hopes to gain further important information regarding the performance of the laser units used and the new treatment methods from the results of the studies.



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