For the next three days, dental professionals have the opportunity to enhance their scientific knowledge and to share clinical experiences at the 27th annual congress of the European Association for Osseointegration (EAO). From 11 to 13 October, attendees are welcome to immerse themselves in the rich programme of the scientific meeting that is set to take place at the Messe Wien Exhibition Congress Centre in the Austrian capital.

The programme covers various stages of dental treatment and is presented under the motto “Dreams and reality in implant dentistry”. It aims to explore the clinical possibilities and boundaries of implantology, emerging techniques and patient expectations. Each of the three days of the congress is focused on a specific topic: the first, on diagnostics, the second, on surgical treatments and the final day, on prosthetics. Furthermore, the programme features 70 renowned speakers from all over the world, hands-on workshops and surgical video sessions. For the first time, the EAO will introduce live surgery sessions that will be directly broadcast into the main auditorium.

The EAO congress provides a forum for dentists to share the latest scientific advances, to meet old friends and make new ones, and to build connections all over the world. At this year’s congress, Russia and the Baltic countries will be hosted as the guest region. With that, a “Russia and Baltic countries corner” is showcased in the exhibition area. In addition, cultural events will be organised to encourage exchange and networking between attendees from different countries. While the majority of presentations are held in English, the Austrian society sessions will be translated into English and the plenary sessions into Russian.

Attendees can furthermore seize the opportunity to learn about the newest innovations at the accompanying industry trade exhibition, where 120 companies will present their products, among them Nobel Biocare, Straumann and Dentsply Sirona. Aside from the main programme, EAO visitors can learn about the most recent clinical solutions in more detail at ten industry symposia.

Founded in 1991 in Munich, the EAO has become one of the leading associations within the art and science of osteointegration. The EAO was created as an international and independent exchange forum for all dentists interested in the science of implant dentistry. The very first congress was held in Leuven in Belgium in 1992.

The congress website, as well as the EAO 2018 congress app (see additional information on the last page of this today) offer information about the scientific meeting and programme. Current news, interviews, photo galleries and an e-paper version of this today will be available at www.dental-tribune.com or on the Dental Tribune International Facebook page.
The third summer camp of the Junior Committee of the European Association for Osseointegration (EAO) brought together 40 scientists and clinicians in the field of dental implantology. The aim of the meeting was to discuss four major topics concerning the development of the discipline: certification, societies and associations, continuing education and innovation. Four working groups outlined the present state and problems of the respective area with the objective of recommending solutions to be implemented in the following ten years.

Since the evolution of new dental treatment techniques and modalities has led to the development of various dental specialties, recognition and certification of dental specialties are important in order to ensure educational standards and clinical skills. Therefore, the EAO has proposed the establishment of a certification programme for implant dentistry and the accreditation of training programmes. These regulations would lead to an improved quality of care, benefiting patients.

Concerning dental associations and societies, the EAO has suggested improvements in communication with dental students, professionals and patients. The guidelines furthermore involve the development of a positive partnership between dental associations and enterprises to ensure transparent communication, and increased support of independent research, the promotion of oral health and standard of care.

In order to ensure continuing dental education, a European dental board should be established and assume responsibility for supervision of continuing dental education, as well as continuing professional development. The board would establish a continuing dental education quality assessment, while junior committees of various societies could contribute to the process of annual consensus on new treatment techniques and relevant scientific outcomes.

The EAO found that dental professionals currently have limited tools for dental procedures and these do not guarantee predictable results. Therefore, future innovations should focus on less-invasive techniques that make use of improved biomaterials and medications with local effects. The role of digital dentistry will be strengthened in the future, according to the committee, because increased efficiency in diagnosis and treatment will help to lower the costs of the healthcare sector.

The full recommendations, titled “Guidelines for development of implant dentistry in the next 10 years regarding innovation, education, certification, and associations,” were published in the June 2018 issue of Clinical Oral Implants Research.

Why the rush?

Dr Scott D. Ganz

For the past several decades, the scientific literature has supported immediate treatment protocols that can deliver single-tooth to full-arch reconstructions with accuracy, consistency and predictability. Therefore, clinicians may want to deliver high-quality care to patients and significantly shorten the treatment time involved in dental implant procedures, but should these immediate implant-supported procedures be considered for every patient without consideration of conventional dental solutions such as root canal therapy, apicectomy, crown lengthening, or crown and bridge alternatives? Does the new digital workflow provide clinicians and dental laboratory technicians with improved tools to facilitate these accelerated treatment modalities? Is the rush justified? Of course, these questions may relate mostly to an individual clinician’s training and education in diagnosis, treatment planning, and surgical and restorative skill set. Perhaps education is the key, and today there are many opportunities to gain the skills necessary to make decisions for each patient, to determine whether immediate or delayed implant protocols are warranted.
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Nanostructured surface fights bacteria growing on dental implants

Micro- and nanotechnology are gaining importance in the medical field and particularly in implantology. Dental implants provide a great way of improving patients’ quality of life. However, the risk of inflammation still exists and could, at worst, lead to the removal of a patient’s implant. To address this issue, researchers at the Karlsruhe Institute of Technology (KIT), together with experts in dental implants, have now developed a nanostructured surface that reduces the growth of bacteria to accelerate wound healing after implantation.

Titanium is the material of choice for implants because it is bio-compatible and ensures good osseointegration. So far, optimization of dental implants has focused mainly on the titanium surface in order to further improve this process. However, tissue around dental implants may become inflamed even after successful osseointegration.

The main target for bacteria is the abutment. If the gingival tissue does not properly grow onto the abutment, pockets may form through which bacteria can reach the jawbone and cause inflammation. If this occurs, the whole implant has to be removed. KIT’s Biomedical Microtechnology (BioMEMS) team at the Institute of Microsystems Technology (IMT) wanted to solve this problem. Their research is based on an optimized abutment developed by the implant manufacturer Abutments4life, a partner of FOR expert network member Dr Kenji Higuchi to initiate this project.

Kenji Higuchi to initiate this project.

In the weeklong mission led by these two surgeons, 11 Easter Island patients with mandibular edentulism underwent definitive treatment with a fixed full-arch solution. Higuchi is the innovator behind this treatment, the recently launched Trefoil system. Introduced by Nobel Biocare in 2017, it features a premanufactured bar placed on three dental implants. The final screw-retained bridge can be placed on the day of surgery.

In Rapa Nui’s small hospital, a volunteer team of surgeons, prosthodontists, laboratory technicans, nurses, support staff, and the island’s primary resident dentist, Dr Felipe Collao, performed the treatments. The surgeries were completed within two days, and all patients received their final prostheses by the third. Utilising only the Trefoil protocol, the treatments were performed in a small, basic clinical setting without the help of sophisticated dental equipment and technology. With surgery and restoration now complete for all 11 patients, Collao will provide follow-up services along with Rosenberg and the rest of the team, who intend to provide ongoing support and care for all 11 patients in the years ahead.

FOR Executive Director Michael Hotze said, “We are deeply honored to have taken part in this project, reaching out to an underserved population in providing their much-needed treatment. It is part of our long-term mission to support better implant treatment around the globe, and I look forward to seeing their successful follow-ups in the months and years to come.”

Higuchi added, “With a chair time of only three days, I am very proud to report that our team completed the Trefoil surgical, restorative and laboratory protocols for 11 patients. While we achieved an unimaginable accomplishment, the appreciation and gratitude from the patients humbled our entire clinical team. The improvement in their quality of life will be witnessed by the community for years to come.”

FOR is an independent, international initiative that unites professionals from various disciplines to improve oral healthcare and support humanitarian leadership. Since its inception in 2013, FOR’s mission has been to help treat more patients in a humanitarian manner that best reflects innovation and the highest standards of scientifically based treatment. To record this project, a professional film crew followed the progress at every step for a video documentary. “Microtechnology can sustainably improve dental implants,” concluded Prof. Andreas Guber and Dr Ralf Ahrens, who head the BioMEMS research group.

The project was funded by the Federal Ministry for Economic Af
Revenue of global dental implant market expected to further increase

A new report on the global dental implant market features key industry trends across the product, material, end-use, and regional landscapes. The report was compiled by research and consulting provider Global Market Insights and projects that the market’s revenue will exceed $5.2 billion by 2024.

The surging prevalence of oral health issues such as dental caries and periodontal disease, coupled with the soaring geriatric population base susceptible to tooth loss, has significantly fueled the dental implant market growth. In addition, rapid developments in implant technology and the increasing rate of dental and cosmetic surgery for aesthetic reasons have positively influenced the industry share in the recent years.

Dental implant supply to clinics accounted for the largest revenue share in 2017, followed by hospitals. The availability of advanced technological procedures for dental implantation surgeries in clinics and hospitals has been responsible for driving this segment.

According to the report, the German market held the largest share in Europe, accounting for $249.6 million in 2017, owing to a large edentulous geriatric patient base generating high demand for dental implants across the country.

The US implant market grew to over $1.1 billion last year, owing to a rapid rise in the number of baby boomers reaching geriatric age along with an increase in prevalence of oral disorders in the country. The Canadian implants industry size was valued at over $84 million in 2017 and is projected to register a commendable compound annual growth rate (CAGR) over the next six years. The regional growth can be attributed to the presence of a favourable reimbursement scenario in the country coupled with the rising geriatric populace.

For the Asia Pacific region, a rapid CAGR of 6.5 per cent is forecast over the projected time frame. Emerging markets in India and China will grow at a robust rate because of the expanding geriatric population, rising dental tourism, and increasing disposable income and healthcare expenditure.

According to a recent report, the global dental implant market will continue to rise in value for the next six years.