Founded in 2014, the International Society of Metal Free Implantology (ISMI) held its 3rd annual meeting under the topic “Metal free implantology—Defining its position”. With more than 150 participants and speakers from eight countries and a broad programme, the society’s 3rd annual meeting, held on 5 and 6 May 2017 in Constance, Germany, was a total success. Participants were presented with a programme of seminars, various live surgeries as well as in-depth scientific lectures. On both congress days, international speakers and participants discussed their practical experiences and current trends regarding the use of ceramic implants. Following the recent IDS in March, the society’s 3rd annual meeting highlights once again, a particularly innovative area within the field of implantology.

ISMI congress 2018 will take place in Hamburg

Jürgen Isbaner, Germany

The 4th annual meeting of the International Society of Metal Free Implantology (ISMI) will be held on 22 and 23 June 2018 in Hamburg, Germany.

SAVE THE DATE
The meeting started on Friday morning with pre-congress symposia and various live operations as well as seminars focusing among others on implant surgery and biological dentistry. The highlight of the first congress day was the ISMI White Night at Villa Barleben, where participants could end the day enjoying culinary specialities in a relaxed atmosphere. Saturday was entirely dedicated to scientific lectures. The range of topics being dealt with covered all areas of metal-free implantology, although the main focus was placed on practical experiences regarding the use of ceramic implants. In addition to such topics as implant design and questions concerning the materials’ characteristics, the lectures addressed in particular, the specific nature of bone and tissue regeneration as well as biological aspects. The discussions concluded that ceramic implants have become indispensable in modern implantology, and, based on aesthetic and biological considerations, they are the better alternative.

ISMI was founded with the aim of promoting and enhancing metal-free implantology’s innovative direction and pioneering approach within the field of implantology. In this context, ISMI supports its members by providing advanced training offers as well as regular specialist and market information. By reaching out to expert circles and patients alike, ISMI actively promotes the comprehensive establishment of metal-free treatment concepts. A particular highlight of this year’s meeting was the simultaneous broadcasting of live surgeries to the audience in Constance as well as to the German dental news platform zwp-online.info.
From 16 to 18 February, the International Academy of Ceramic Implants (IAOCI) invited participants to its 6th International Annual Congress in Miami, Florida. Providing a range of expert speakers, the three-day symposium enabled nearly 100 participants from all parts of the world to deepen their knowledge regarding the basics as well as further possibilities of ceramic implantology.

In his opening words to the 6th IAOCI World Congress on 17 February and speaking in front of a large audience, founder and President of IAOCI, Dr Sammy Noumbissi, referred to the fact that “in 2011, when the International Academy of Ceramic Implants held its first annual congress, 25 people, including members of the exhibiting companies, participated in the event”. Dr Noumbissi was clearly proud to present the international auditorium with a similarly international as well as renowned team of excellent expert speakers. The focus of this year’s congress were implants made of zirconium dioxide which aim to reach the capability of titanium implants. However, before this can be achieved numerous long-term studies and case numbers must show reliable results and convincing outcomes to firmly establish and underpin this claim. With this in mind, the IAOCI has set itself the task, to compile and assemble the required data in regular panels, such as the one in Miami, Florida. Hence, participants of the 6th IAOCI World Congress discussed in great detail material specific data, surface texture, prosthetic possibilities as well as the biological characteristics of ceramic implants which must be measured against those of their implant siblings made of titanium.

Ceramic implants have a seemingly clear mission: They are set out to make peri-implant inflammation less likely and reach better aesthetic results in, for example, the an-
terior region than their titanium counterparts. In fact, implants made of titanium are more and more suspected to accelerate inflammatory processes in certain cases, or to even initiate inflammation. A few years ago and in a rather dramatic way, such cases were referred to as titanium allergy. Nowadays it is simply described as a hypersensitivity or intolerance to titanium. However, today’s knowledge also include that fact that, due to abrasion and corrosion, small titanium particles can become detached from the implant surface and cause intolerances. Aspects of this phenomenon were extensively outlined by such speakers as Volker von Baer, Dr Daniel Olmedo and Dr Elisabeth Jacobi-Gresser in their respective lectures. Furthermore, Dr Jacobi-Gresser and colleagues strongly recommend a patient risk assessment prior to an implant therapy in order to filter out those patients who might develop an intolerance due to titanium debris. “There is an individual and/or genetic predisposition of certain patients to inflammatory reactions caused by titanium particles which could jeopardise an implant therapy’s long-term success,” said Dr. Jacobi-Gresser. For those identified as risk patients, treatment options with implants made of zirconium dioxide are, according to expert opinions, particularly suitable.

In addition to their immunological compatibility, osseointegrative properties are a decisive aspect of the application of ceramic implants, highlighted Dr Richard J Miron in his speech. Thus, he pointed out that the osseous integration of titanium implants was improved and accelerated by specific modifications in their surface (mainly by sandblasting and etching). Recently, similar procedures have become available for the manufacturers of ceramic implants, adding an improved osseo integration to their advantageous effect on soft tissue regeneration. Moreover, Dr Jens Fischer described in his speech how the diameter of ceramic implants plays an important role in their application. According to Dr Fischer, a recently published study implies that implants made of zirconium dioxide should not feature a diameter smaller than 4.0 mm as this would disproportionately increase the risk of fracture.

In his speech on the phenomenon of low-temperature degradation (LTD) in the humid milieu, Dr Jerome Chevalier illustrated that we still need to do some homework on ceramic implants. In certain zirconium dioxide implants, this milieu may lead to a loss of stiffness and stability due to the transition of the chemical phase from tetragonal to monocline. Dr Chevalier added that further efforts in materials research will be necessary in order to further evaluate this phenomenon.

Dr Jaafar Mouhyi added another aspect in his speech on Saturday: Not only do the material features of the implant surface, the physical properties of the implant body and its design affect possible peri-implant complications, but implant positioning is another important factor. If a functional prosthetic restoration cannot be achieved due to a disadvantageous implant position, this could be the starting point of peri-implant inflammations, states Dr Mouhyi. However, ceramic-implant manufacturers have recently found a way to prosthetically adjust incorrect implant positioning to some extend: Dr Jens Tartsch and Dr Jochen Mellinghoff, M.Sc., discussed the prosthetic flexibility and advanced prosthetic applications of screwed two-piece zirconium dioxide implants.

In conclusion, the congress makers behind the 6th IAOCI World Congress must be complemented for giving the topic “ceramic implants” a rare but broad basis for discussion. However, further investigations and symposia of this calibre will be necessary in order to establish zirconium dioxide as a fully adequate alternative to titanium implants. As predicted, there were even more ceramic implant manufacturers after the last International Dental Show in Cologne, Germany,—good prospects for patients who wish to be provided with a metal-free implant-based restoration.

The 7th IAOCI World Congress will be held in California, USA, from 15 to 17 February 2018. For more information please visit: www.iaoci.com.
About 70 specialists from ten countries met in the middle of June in sunny Nice for an update about ceramic implants. The high-quality presentations both amazed and convinced the participants.

It’s all about ceramics

The first day was devoted to well-known concepts from dental practice. Dr Gabor Roza (Switzerland) started the presentations, and focused on treating patients without teeth, with special consideration to decreasing manual skills in later years. Thus, he uses a two-piece ceramic implant with straight and angled Locator® abutments. Dr Christoph Blum (Germany) then compared various ceramic systems and proved the clear clinical benefits of Z-Systems. In particular, he assessed the ability to grind abutments and the implants in collaboration with the laboratory as an important benefit.

Subsequently, Dr Georg Bayer and ZTM Norbert Wichnalek (Germany) gave an impressive presentation. Both have many years of experience in implantology and are personally convinced of the benefits of ceramic implants. Dr Bayer showed many successful immediate insertions of one-piece Z-Systems implants and immediate provision with temporary crowns. They also focused on the material and its handling. All ceramic implants are treated with plasma in their practice before implantation, which stimulates cell growth and leads to faster osseo-integration. Dr Bayer and ZTM Wichnalek also showed that implant integration with plasma-treated ceramic functions better than titanium surfaces. They strongly advise against the use of PEEK and PEKK, because these two materials are a true plaque magnet. Further, the speakers pointed out that, for patients with a suspicion of periodontitis, one must conduct a titanium tolerance test, in order to meet their obligation of patient clarification.

Dr Jean-Louis Roche closed the programme in his practice which was only 50 metres away, with a smooth, live surgery with the new, two-piece bone-level implant. Afterwards, all participants enjoyed a social gathering in a nearby beach restaurant to the early morning hours.
High-calibre ceramic specialists

The second day started with Dr Ted Fields from Texas, who showed impressive results in terms of case numbers and clinical quality. He has placed over 500 two-piece Z-Systems implants in addition to a large number of one-piece ceramic implants, and impressively showed their aesthetic superiority as compared to conventional solutions. Dr Fields’ very interesting presentation showed the benefit of grinding the implant shoulder, which provides functional and aesthetic optimisation of the soft tissue.

Dr Jochen Mellinghoff was then presented as another high-calibre ceramic specialist. His many years of experience, now with the two-piece Z-Systems implant, convinced the participants. His conclusion: the screw-type, two-piece Z5s bone-level implant has the potential to exceed the usual standard of titanium implants in the near future, and to revolutionise the market.

Dr Giancarlo Bianca from Marseille then presented convincing aesthetic photos. As a scientific referent for the French Association for Periodontology, as well as Continuing Education in Implantology at Corte University (France), he values serious documentation and predictable treatment protocols. His conclusion was quite practical: Soft tissue loves ceramic, and accumulates very well there.

Two substantive scientific lectures about zirconium oxide by Prof. Corrado Piconi and Dr Pascal Eppe again filled the auditorium to its maximum. Prof. Piconi, as a materials scientist (University of Rome, Italy) specialising in ceramics technology, demonstrated the strengths and, of course, the special characteristics of zirconium dioxide in a very systematic manner. Dr Eppe (Belgium) on the other hand, pointed out various critical health aspects through a number of publications which have not yet received the attention they deserve on the use of metals in general, and in particular about titanium. Dr Ralf Lüttmann concluded the congress with an entertaining outlook on BoneWelding® in dental implantology, and showed new opportunities for the future which will be very exciting.

At its fifth international congress, Z-Systems proved with a good mixture and selection of speakers and topics why the company has achieved a technological leap over other ceramic systems. This concentrated skill in Nice was both clearly visible and tangible. The next congress will take place on 29 and 30 June 2018 in Valencia, Spain.

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