

Implantology as a teamwork— Implantology is a teamwork!

Dr Georg Bach, Germany



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“**Implantology is teamwork**—no ifs and buts!”—this was the opening statement by Dr Georg Bach, President of the German Association of Dental Implantology (DGZI), at the 52nd International Annual Congress, which took place in Hamburg on 6 and 7 October. What was true at the beginning of oral implantology in the late 1960s/early 1970s is just as valid today—if not more so. Reason enough for the DGZI, as the oldest European specialist society, to place this year’s congress under the motto “Team”: while the first day of the congress focused on 25 table clinics and two surgical tutorials, Saturday was entirely dedicated to science: 50 renowned speakers delivered outstanding scientific presentations to over 350 participants. The annual congress was completed by the oral hygiene day and seminars for practice teams as well as by a large adjoining dental exhibition featuring a three-dozen selected, “hand-picked” industry partners.

Future podium/young generation DGZI

A first highlight was offered to the participants at the very beginning of the congress with two remarkable lectures with completely different directions, but which together drew a clear picture of the future options of implantology, even of dentistry as a complete discipline. Just a few years ago, AI was not yet a topic in dentistry—this has completely changed at a rapid pace. Therefore, Prof. Dr Falk Schwendicke set the bar high right at the start of the congress with his presentation “Artificial intelligence in dentistry—benefits for the entire team?”. As a leading specialist in AI in den-

tistry, Prof. Schwendicke stated that the prerequisites for AI are based on the availability of digital data and the development of new algorithms. Dentistry, however, is one of the difficult sectors for AI: on the one hand, due to the smaller amount of digital data compared to other fields and, on the other hand, due to the complexity of the matter, which requires many experts. Schwendicke sees major areas of application for AI in dental radiology (caries identification/recognition of anatomical structures, etc.) and in periodontology (e.g. periodontal staging). Schwendicke concluded his lecture with a glimpse into the future: based on an increase in the availability of digital data by a factor of 23 in the last ten years (“data explosion”), everyday data will therefore also gradually be used for medical AI applications, which will be beneficial for personalised medicine.

The Swiss speaker duo Dr Malin Stranding and MDT Vincent Fehmer, who presented “Collaboration 2.0—a concept for success in everyday practice and laboratory work”, fully lived up to the congress motto. They introduced the Geneva concept—starting with digital diagnostics and digital treatment planning, followed by digital implantation and digitally supported dental technology. The crucial advantage of digital treatment planning is the predictable result for both, the patient and the dentist.

The intensity of the subsequent panel discussion and the number of questions posed by congress participants confirmed that the three speakers were exactly the right choice for this podium.



OP tutorials

It is already a tradition at DGZI congresses to present certain topics in more detail using animated images: a broadcast of surgical tutorials enabled congress participants and DGZI members to experience a unique insight into the work of renowned colleagues—and all in HD quality!

The event kicked off with a spectacular start given by Dr Dr Markus Schlee, who spoke on the topic “Update augmentation—is autologous bone still the gold standard?”. From the very first minute of Schlee’s presentation, it was obvious that this topic is also his main discipline. During his lecture, the Forchheim-based periodontist and implantologist discussed numerous patient cases. The speaker’s conclusion: “Autologous bone has never been the gold standard, but today we do have material alternatives!”

In the second surgery tutorial, Dr Paul Schuh and MDT Bastian Wagner presented their reflections on “Digital disruption. Planning—surgery—restoration—is everything digitally possible?”. Again, a clear credo: “Communication between dentists and dental technicians is of crucial importance for the success of treatment.” The speaker duo presented their jointly developed concept for synoptic patient care and ultimately fully agreed with the statements of the previous speakers: “Implantology is teamwork—and the interface between dental technology and dentistry is extremely significant here!”

DGZI Implant Dentistry Awards in three categories

The DGZI Implant Dentistry Award, which went this year to Dr Diana Heimes from Mainz for her work on a vestibuloplasty using a collagen membrane, was embedded in the two surgical tutorials. Second place stayed in the Hanseatic city of Hamburg and went to Dipl.-Ing. Sandra Fuest from the research group led by Prof. Dr Dr Ralf Smeets. Alongside the congress theme, the DGZI also presented for the first time a team award, which went to the Schoebel and Reuleke dental practice in Hanover.



Table clinics

The table clinics were set up as round tables in the style of banquet seating instead of the usual parliamentary seating facing the stage and were an unusual view for some congress participants. At these tables, demonstrations on a wide variety of special implantology topics took place in three stages. Each exhibiting company had been provided with a table and engaged speakers to provide the demonstrations. The discussions and exchanges that took place immediately after the demonstrations proved to be very informative and the format was once again very well received by both congress participants and industry partners.

Second congress day—the “science day”

While the first day of the congress had a strong practical orientation, the following day focused on the scientific aspects. Based on a review of current trends, the focus here was also increasingly on the question: “How will implantology of the future be?”

The Saturday programme thus offered scientific overview lectures on all relevant areas of oral implantology, such as digital implantology and prosthetics, bone and tissue as well as materials and design.

The DGZI congress organisers once again pursued the goal of primarily presenting the future in the lectures, which is why the focus was not on case reports or the presentation of individual studies, but rather on current development directions and visions.





Three thematic blocks captivated the auditorium:

Session 1: Bone and hard-tissue regeneration

When it comes to bone and implant issues, there is only one expert speaker, and it was he who took the microphone: Prof. Dr Dr Peer Kämmerer with his lecture “Bone lost—don’t despair!”. “I have a little coup de main planned for you,” said Kämmerer, who dedicated the first part of his presentation to patient-specific factors that can reduce the success of oral implantation. In this regard, the use of antidepressants and proton inhibitors had proved to be detrimental to implant success.

The second part of his presentation addressed the options for augmentation. If all materials are available, simple defects can best be augmented using a membrane.

For more complicated dehiscence defects, the Mainz-based oral surgeon recommends the combination of autologous bone and bone substitute materials as well as the use of PRF (platelet-rich fibrin) and a membrane.

The lecture given by Prof. Dr Dr Daniel Rothamel, who investigated the question “Blocks, shells, granules: which makes sense for bone augmentation?” was an ideal addition to the first presentation on the second day of the congress. Implantology can be very simple, although it can also be complicated from time to time, said Rothamel in his opening remarks. In complex cases, the oral and maxillofacial surgeon recommends not only looking at the defect alone, but also at its surroundings: “Stability and rest” were defined by him as the most important prerequisites for the success of augmentation. Numerous excellently documented case studies underpinned Rothamel’s explanations.

Afterwards, Dr Torsten Conrad presented the concept developed by Prof. Dr Dr Shahram Ghanaati on blood concentrates as mediators for promoting wound healing in oral medicine and asked: “Which role does PRF play?”. “We are actually talking about autologous platelet concentrates,” said Conrad, which however differ in the num-

ber of leukocytes, the concentration of fibrin and in the centrifugation protocols. While initial experience was gained with PRP (platelet-rich plasma) and PRGF (plasma-rich in growth factor) concentrates, the breakthrough in dentistry came with the development of the PRF concentrate. This is characterised by its simple extraction and wide range of possible applications.

The final evolutionary step is the i-PRF, which is characterised by a liquid matrix. Reducing the centrifugal power increases the number of available cells that can have a biologising effect. The advantages of the procedure, which could also be referred to as “guided open wound healing”, are the avoidance of covering small defects, the minimisation of the wound margins, the avoidance of periosteal incision and the protection of the mucogingival line.

The panel discussion with the speakers concluded a very interesting and insightful morning session.

Session 2: Prosthetic concepts between basic and high-end

The second session focused on the tension between “high-tech or rather simple” and included three presentations with very different approaches, which nevertheless complemented each other perfectly.

Dr Peter Gehrke made a plea for simple prosthetic restoration concepts and spoke about “Maximum safety with minimum effort: How much implant prosthetics is really necessary?”. He made it clear: “Minimal effort does not automatically mean using old techniques—quite the opposite: the new digital options support us in our goal to a significant extent.” The aim must be to establish simple standard concepts in terms of material, effort, and insertion techniques.

Dental technician Oliver Beckmann and dentist Stefan Friedrich showed a completely different perspective describing the “implant-prosthetic high-end” and talking about template-guided bone ridge reduction and simul-





taneous template-guided insertion of implants in the edentulous mandible. A beneficial lecture delivered by practitioners for practitioners: dental technicians and dentists demonstrated the high level of cooperation that is possible in the dental practice—even for highly complex applications.

The speaker duo has considerable experience in the fabrication and application of templates for bone ridge reduction and subsequent implant placement. The fundamental prerequisite is that both partners are thoroughly familiarised with the complex planning material and that there is close coordination before and during the application as well as a subsequent re-evaluation. “Communication is the key!” underlined dental technician Oliver Beckmann.

The prosthetics session concluded with a presentation by Dr Peter Randelzhofer, speaking about his expertise in immediate implant placement in the aesthetic zone. Very few speakers have gained as much experience in this demanding field as the Bavarian implantologist. Thus, Randelzhofer was able to open his almost infinite treasure chest of experience and present fascinating case studies. Even cases in which the initial conditions were far from ideal were solved by immediate implant placement. However, according to Randelzhofer, “the absolute consideration of biological concepts is essential, everything else leads to failure!”

Session 3: All about ceramic implants and toxicological aspects

The congress ended with one more true highlight: three renowned speakers highlighted the topic of ceramic implants and toxicology in all its aspects and demonstrated the extraordinary level of development that has now been achieved in this area.

Prof. Dr Dr Michael Gahlert is the author of numerous studies on ceramic implants. Dr Dr Stefan Röhling excerpted the most important findings from this broad knowledge and was able to provide lasting proof of the effectiveness of this category of materials. A recently published meta-analysis was also presented and explained by the renowned Munich implantologist: its results show that the bone and soft-tissue behaviour of ceramic implants is not only equal to that of titanium, but even superior in some points.

With his “Update soft tissue around implants”, Dr Alexander Müller-Busch complemented Gahlert’s presentation with further scientific facts and long-term experience. At the same time, he agreed with the previous speaker in his assessment that ceramic implants are on a par with titanium implants in terms of reliability and safety and that they also have considerable advantages in terms of peri-implant soft tissue.

Dr Elisabeth Jacobi-Gresser has been active in the field of immune-related research on implants for many years. The pathoimmunological effects of titanium and zirconium oxide implants were an important part of her fascinating presentation. It is thanks to Jacobi-Gresser’s work that numerous scientific studies have shown that zirconium oxide implants are clearly superior to titanium implants in a certain number of cases.

The 52nd International Annual Congress of the DGZI—a brief conclusion

At this year’s DGZI congress in Hamburg, participants were once again able to experience a unique and innovative training event. However, there was more: due to the different perspectives of science, practice, politics and industry, an exciting level of interaction was achieved.

The DGZI once again entered new territory with its attempt to explore the urgent matter of what implantology will look like in five or perhaps ten years’ time and what the political and economic framework conditions will be like by then.

“Hamburg was a great venue for the DGZI, many thanks to the Hanseatic city,” DGZI President Dr Georg Bach summed up.



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