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Dr Fabian Schick



Where oral health meets systemic healing and longevity

The connection between oral and systemic health is no longer theoretical—it is undeniable. The loss of the oral periodontal and peri-implant barrier has been linked to endothelial dysfunction, cardiovascular disease, altered glucose regulation, immune sensitisation, and even neuroinflammatory mechanisms associated with Alzheimer’s disease. As our understanding deepens, the mouth can no longer be viewed as an isolated system. It is a central immunological gateway with profound effects on whole-body health.

In implantology, osteoimmunology has become increasingly important. Implants interact not only with bone but with the immune system itself, influencing inflammation, healing quality, and longterm tissue stability. This broader perspective urges us to look beyond mechanical stability alone and to consider biocompatibility and true bioinertness when selecting implant materials. Metal-free zirconia ceramic implant systems demonstrate how immunologically favourable choices can reduce inflamma-

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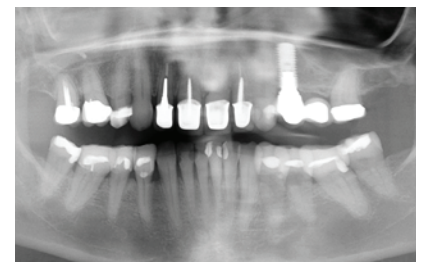
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tory burden and support healthier soft- and hard-tissue integration—all while achieving highly aesthetic, natural-looking results.

At the same time, perioperative biological optimisation has become a meaningful part of modern surgical dentistry. Supplementation protocols to support bone and connective-tissue metabolism, light and magnetic-field therapies, autologous blood concentrates, micronutrient strategies and nutrition-guided healing are no longer fringe concepts—they are evidence-supported tools to improve healing outcomes. These approaches reflect a broader movement toward health optimisation, immunological relief and longevity medicine. By reducing chronic immune stress in the oral cavity, we help reduce “inflammaging”—the persistent low-grade inflammation that accelerates biological aging and increases the risk of chronic disease.

Dentistry today is far more than mechanics, function and aesthetics. It is immunology. It is systemic health. And it holds the potential not only to restore the mouth but to meaningfully influence overall systemic health. Embracing this responsibility, both now and in the future, represents a most impactful step for our profession.

Yours sincerely
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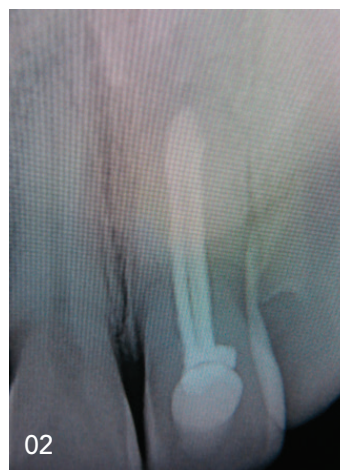


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Two-piece ceramic implant in the maxillary anterior region—a case report from the practice

The rehabilitation of patients with the aid of implants is becoming increasingly popular in dental practice. In the situations of gaps in the anterior region, implants are preferable to conventional bridge therapy, especially from an aesthetic point of view. Titanium implants have established as a standard due to good data and many years of successful use. Nevertheless, the use of ceramic implants in dental practice is steadily increasing. The following case report intends to demonstrate the advantages of this material and its manageability in two-part architecture following a clear indication.

Dr Florian Schnaith, Germany



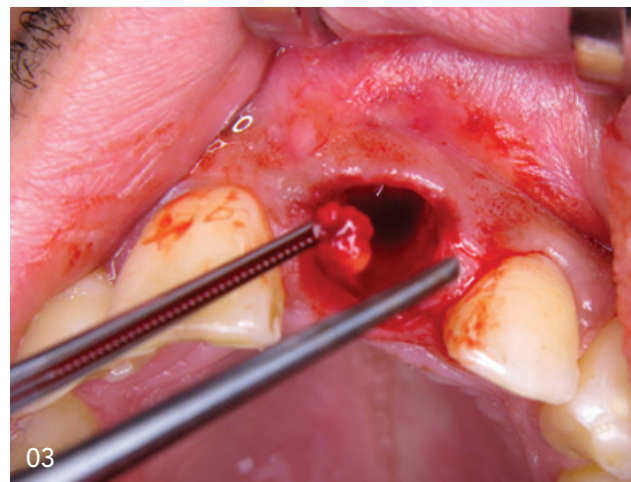
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Initial situation.

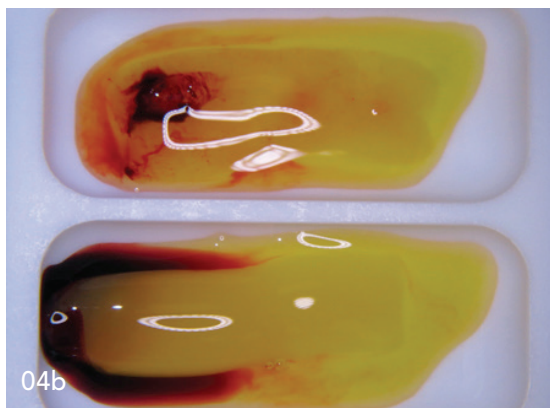
02
X-ray control of the initial situation.

03
Situation directly after gentle extraction of 21 with part of the apical cyst bellows.

The restoration of interdental gaps in the anterior region, whether after trauma or a long-term attempt to preserve one or more teeth with questionable substance condition or infection, repeatedly presents us with challenges in daily practice. Particularly in young patients, the aim is to achieve an aesthetic and, above all, predictably long-term stable rehabilitation. Prosthetic treatment using a conventional bridge construction should be considered of secondary importance compared to implant-prosthetic treatment once the appropriate indications have been established. Providing the patient with comprehensive information after weighing up the advantages and disadvantages plays a central role in the joint decision-making process for treatment.

The decision in favour of an implantological solution also determines the indication for immediate or delayed implantation, the loading time of implants, possible augmentation measures and the material to be used. Finally,





04a+b
Blood collection of approx. 20ml venous autologous blood and prepared product of the A-PRF matrices + PRF liquid after centrifugation at 2,400rpm in eight min.

the patient's wishes should also be clearly considered. Zirconium dioxide as an alternative material to titanium implants is being mentioned more and more frequently in this context and is therefore subject to the dentist's duty to provide information.

Tooth extraction without immediate or prompt volume-preserving treatment of the socket is always accompanied by resorptive hard- and soft-tissue processes. It is therefore more important to counteract this loss of volume at an early stage, especially in the anterior region.

Immediate implant placement after tooth extraction has been a proven, well-studied, albeit highly indication-driven treatment concept for several years.

In particular, the use of an immediate restoration with or without immediate loading via the corresponding

prosthetics should be strictly weighed up depending on the hard-tissue defect, the surrounding soft tissue and the patient's anamnestic information.¹

Delayed immediate implant placement or early implant placement after approx. six weeks post-extraction should be considered sensible if the parameters "primary stability with sufficient residual bone" and "stable soft-tissue cover" are given. Only then can additional augmentation measures, whether with hard or soft tissue, be dispensed with. The role of the implant material to be used also plays an important, if not decisive, role here.

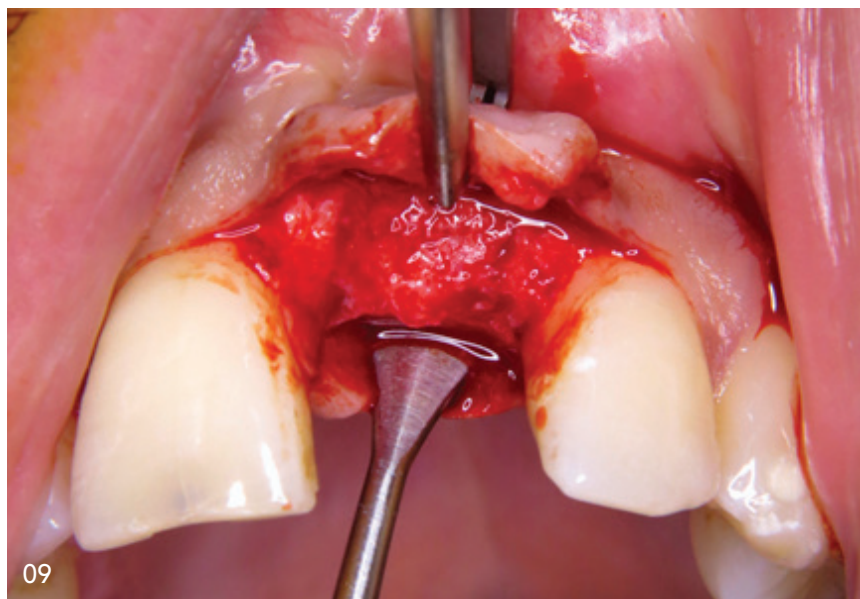
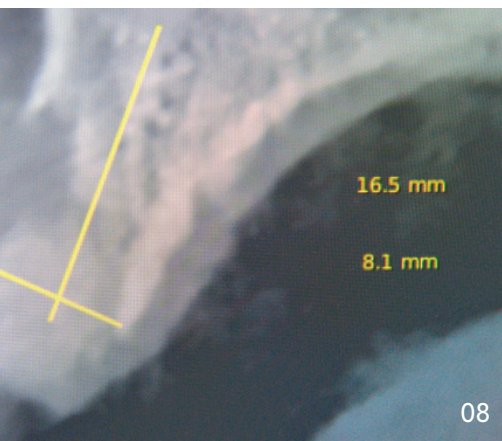
Late implant placement at the earliest three months after tooth extraction has long been regarded as the most reliable prognostic method, if not the "gold standard", in implantology. Due to the early onset of resorp-

05
Situation after ridge preservation of the extraction socket with allogenic prepared bone replacement material and fixation of a porcine collagen membrane in the sense of a GBR.

06
Situation after insertion and fixation of the A-PRF matrices over the collagen membrane in the sense of "open-wound healing" (Ghanaati, S. et al.).

07
Condition after six weeks post-op.





08
Diagnostics and planning using CBCT after three months follow-up.

09
Bony situation at re-entry before the planned implantation.

10
Drilling sequence for the planned ceramic implant (Neodent Zi).

tive processes in the hard and soft tissues, volume preservation during the healing process must always be the top priority for delayed implant placement, especially in the anterior region. The concept of socket or ridge preservation to maintain the basic alveolar structure through immediate augmentative measures after tooth removal as gently as possible has proven itself over the years. On the one hand, it offers the practitioner a predictably high level of surgical safety regarding the bony quality of the implant site, implant positioning, primary stability, prosthetic planning and, finally, the choice of implant material after the corresponding healing time. On the other hand, the patient also has a prognostically reliable statement about the long-term survival of the implants and their prosthetic restoration.^{2,3}

Material properties

Nowadays, only the high-performance material zirconium oxide is used for modern ceramic implants. Due to its very good biocompatibility and excellent material properties such as flexural strength (1,200 to 2,000 MPa), fracture toughness (7–10 MPa m^{1/2}) and its white colour, it is very well suited as an aesthetic implant material. Above all, however, the high osseointegrative properties and the very good compatibility in direct contact with soft tissue due to the surface texture give zirconium oxide at least an equal status to titanium, which is considered the “gold standard”.⁴

A basic distinction is made between one-piece and two-piece ceramic implants. Although one-piece implants have been on the market for much longer and have been investi-

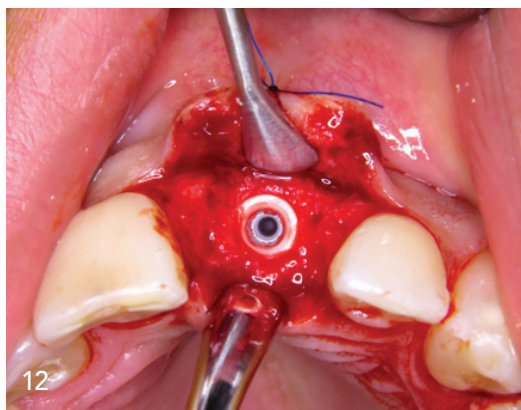
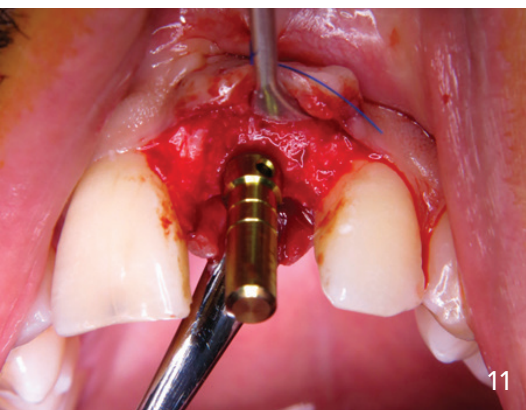
gated accordingly, two-piece constructions have become increasingly established in recent years due to the available, albeit still limited, data. Finally, one-piece implant systems are much more limited in their prosthetic restorability, especially in aesthetically demanding areas, and are far less flexible in their use. To address this situation, the industry has developed various two-piece solutions, whereby, like the two-piece titanium implant systems, the screw-retained ceramic implant-abutment architecture has emerged as a design that is safe to use. The internal connection with the corresponding abutment screw appears to play the decisive role here, whereby the long-term results already available, albeit very limited, appear to be promising.^{5–7}

It should be emphasised that the consistently positive material properties of zirconium oxide provide us with a genuine alternative to titanium implants and can be safely used in everyday clinical practice by experienced implantologists.

Case description

The male 23-year-old patient first presented to our practice for consultation in October 2022. No anamnestic abnormalities were noted or reported by the patient.

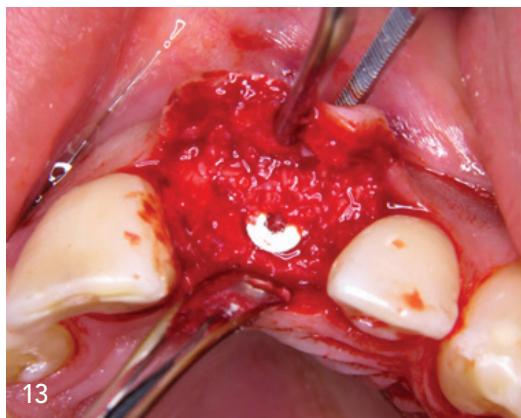
The initial intra-oral examination revealed a primarily healthy, caries-free and functionally unremarkable complete dentition. The patient stated that tooth 21 had suffered anterior trauma in childhood and that he had been undergoing regular dental treatment for at least three years. Nevertheless, according to his own statements, the pain symptoms did not



11 Position and depth control using a direction indicator after careful preparation of the implant bed according to the drilling protocol.

12 Situation after mechanical insertion of the implant with appropriate primary stability and a maximum torque of 45 Ncm.

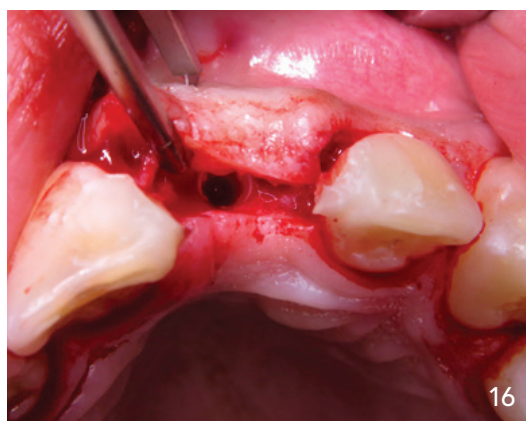
13 Situation after insertion of the cover screw and augmentation with resorption-stable xenogenic bone replacement material vestibular and crestal.



14 Tension-free, saliva-proof suture closure for covered healing.

16 Exposure of the implant after a three-month healing phase by means of relief-free skin flap plasty without relief incisions. Situation after removal of the cover screw.

15 X-ray control after implantation.



seem to have improved. He was also dissatisfied with the steadily darkening discolouration of the crown of tooth 21 (Fig. 1).

Findings

After a detailed intra- and extra-retinal examination, it was found that the patient had already had multiple apicoectomies performed on tooth 21 in various dental practices following unsuccessful endodontic treatment. Currently, a non-fluctuating, firm, pressure-dolent swelling localised apically in region 21 was found vestibularly. A fistula or secretion discharge via the sulcus could not be detected intra-orally, even on provocation. Palatally, there were no abnormalities on the mucosa. A circular check with a PA probe revealed probing depths of between 2 and 3 mm mesially, distally and palatally without bleeding on probing (BOP). A single vestibular ST of 5 to 6 mm was detected. A longitudinal fracture of tooth 21 was therefore suspected. Furthermore, tooth 21 showed an increased degree of loosening (II–III) and a strong discolouration of the crown in comparison with 12, 11 and 22.