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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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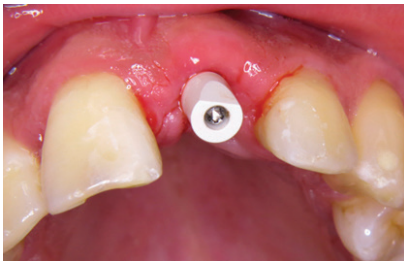

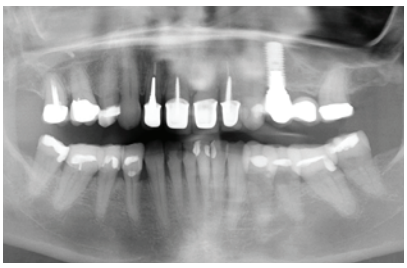

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tory burden and support healthier soft- and hard-tissue integration—all while achieving highly aesthetic, natural-looking results.

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
Dr Fabian Schick

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CONTENT


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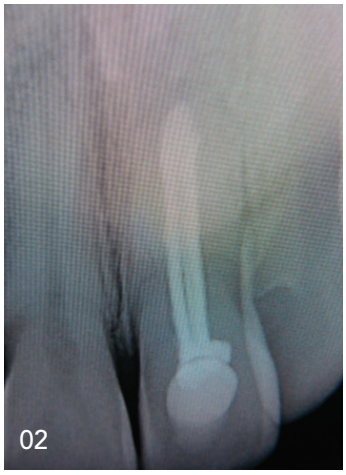
Two-piece ceramic implant in the maxillary anterior region— a case report from the practice

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 teadily 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



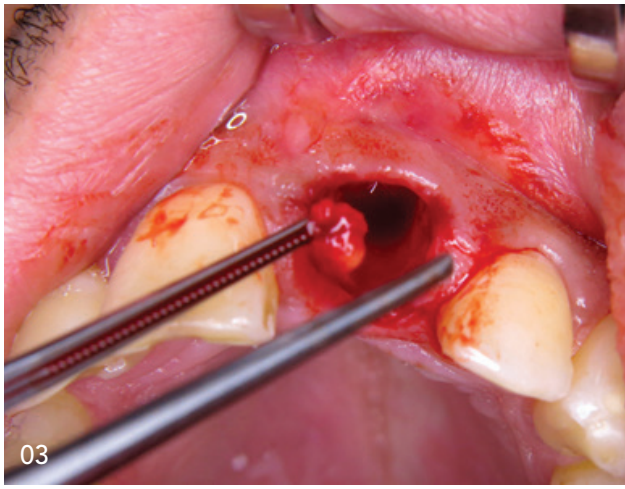
01
Initial situation.

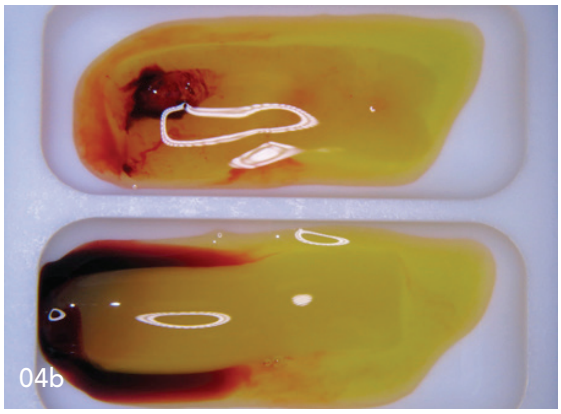
02
X-ray control of the initial situation.

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. 20 ml venous autologous blood and prepared product of the A-PRF matrices + PRF liquid after centrifugation at 2,400 rpm 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]

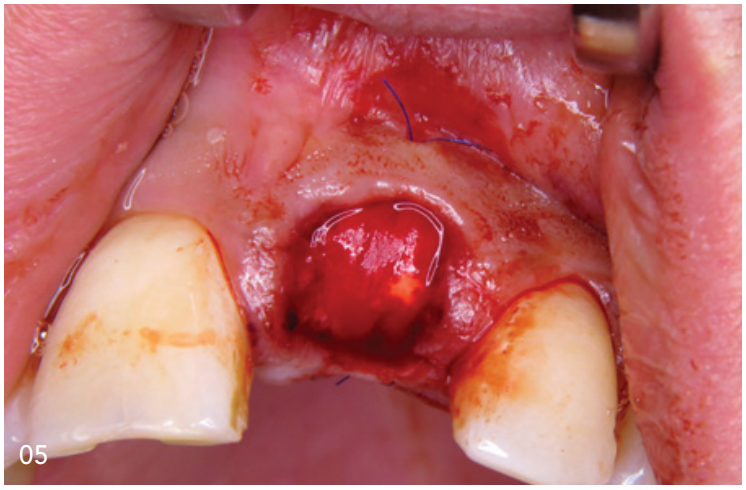
Delayed immediate implant placement or early implant placement after approx. six weeks post-extraction should be considered sensible if the parameters "primary stability with sufficient residual bone" and "stable soft-tissue cover" are given. Only then can additional augmentation measures, whether with 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.

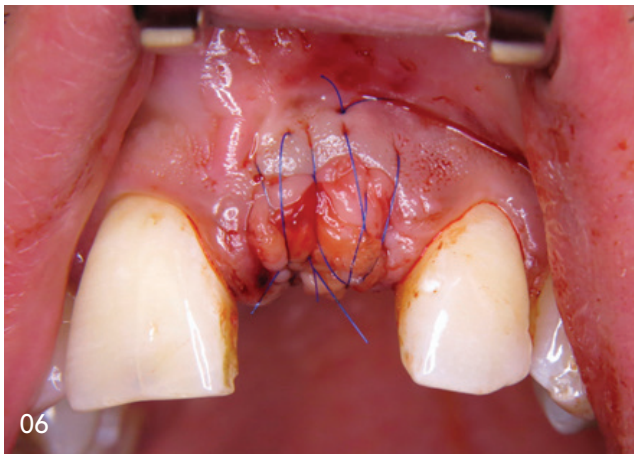
Late implant placement at the earliest three months after tooth extraction has long been regarded as the most reliable prognostic method, if not the "gold standard", in implantology. Due to the early onset of resorp-

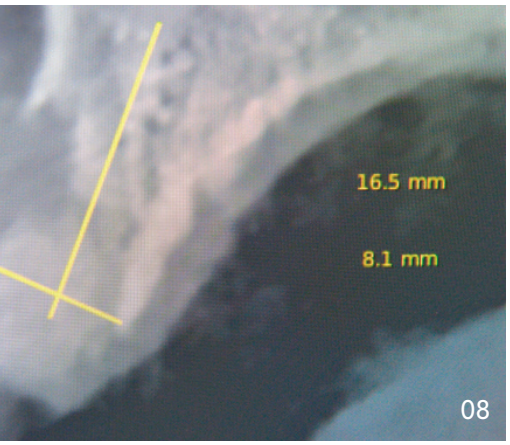
05
Situation after ridge preservation of the extraction socket with allogenic prepared bone replacement material and fixation of a porcine collagen membrane in the sense of a GBR.

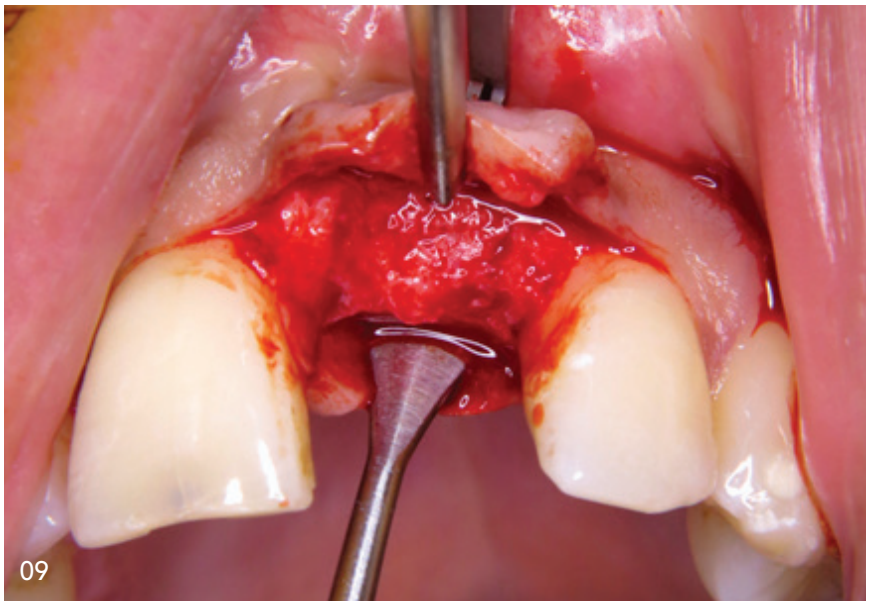
06
Situation after insertion and fixation of the A-PRF matrices over the collagen membrane in the sense of "open-wound healing" (Ghanaati, S. et al.).

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 $m^{½}$) 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]

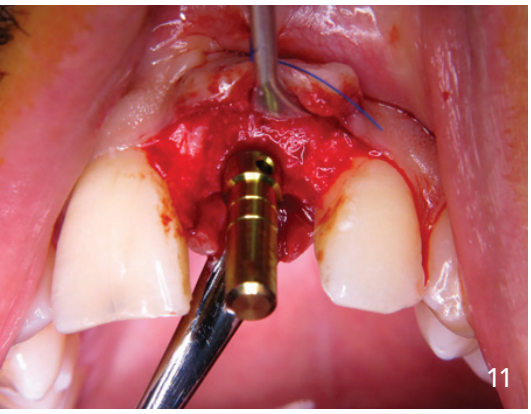
A basic distinction is made between one-piece and two-piece ceramic implants. Although one-piece implants have been on the market for much longer and have been investigated accordingly, two-piece constructions have become increasingly established in recent years due to the available, albeit still limited, 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]

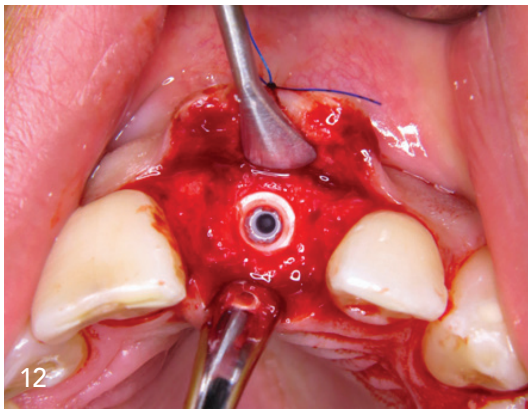
It should be emphasised that the consistently positive material properties of zirconium oxide provide us with a genuine alternative to titanium implants and can be safely used in everyday clinical practice by experienced implantologists.

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

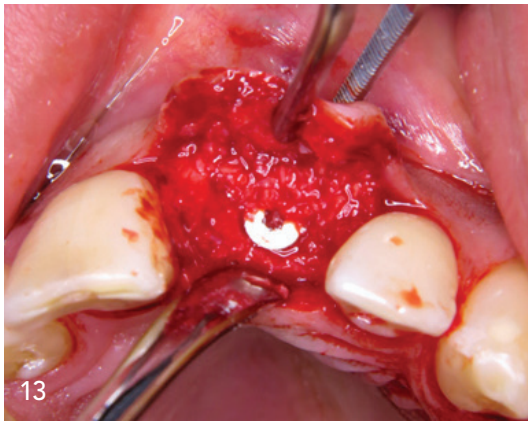




11
Position and depth control using a direction indicator after careful preparation of the implant bed according to the drilling protocol.

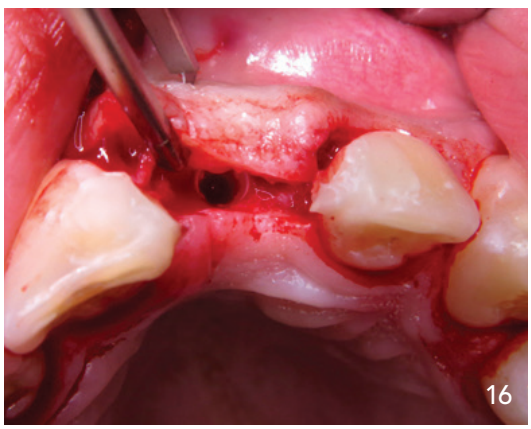
12
Situation after mechanical insertion of the implant with appropriate primary stability and a maximum torque of 45 Ncm.

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.

15
X-ray control after implantation.



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.

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.

Diagnostics and planning

To supplement the clinical diagnosis and photo documentation, a single-tooth radiograph of 11/21 was taken (Fig. 2) and discussed with the patient. The treatment options were then explained to the patient in detail and all advantages and disadvantages were discussed.

Diagnosis

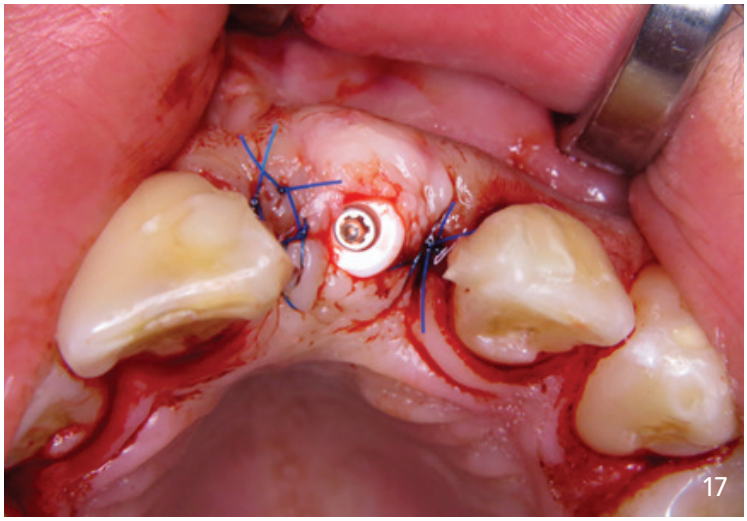
Unpreservable tooth 21 with suspected longitudinal fracture vestibular central in thick biotype with elongated square crown shape. The vestibular bone lamella is thin but largely preserved. Apically, there is osteolysis with chronic inflammation, possibly also cyst formation. The neighbouring teeth are clinically and radiographically unremarkable.

Treatment options

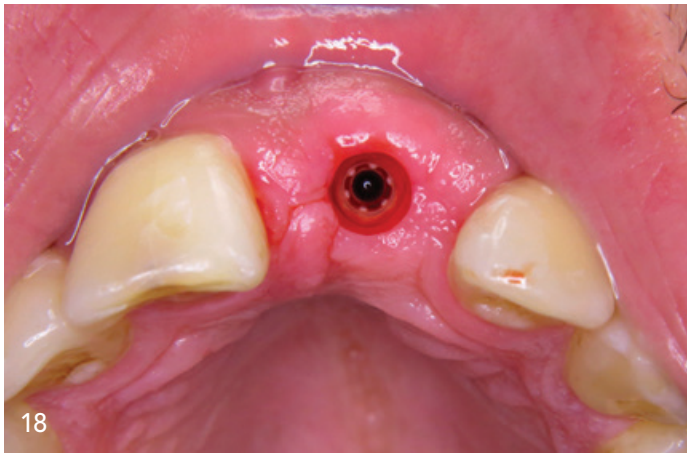
The following treatment options for tooth 21 were explained to the patient in detail:

- Removal of tooth 21 and immediate implantation and immediate restoration
- Removal of tooth 21 and immediate implant placement with temporary restoration and delayed prosthetic restoration of the implant
- Removal of tooth 21 with temporary restoration and delayed restoration with an adhesive prosthesis in the form of a Maryland bridge
- Removal of tooth 21 with temporary restoration and subsequent restoration using a conventional bridge construction over the prepared teeth 12, 11 and 22
- Forced extrusion of tooth 21 (e.g. using magnets or orthodontics) and delayed implant placement
- Delayed immediate implant placement or late implant placement after socket/ridge preservation with delayed prosthetic restoration of the implant
- Omission of treatment

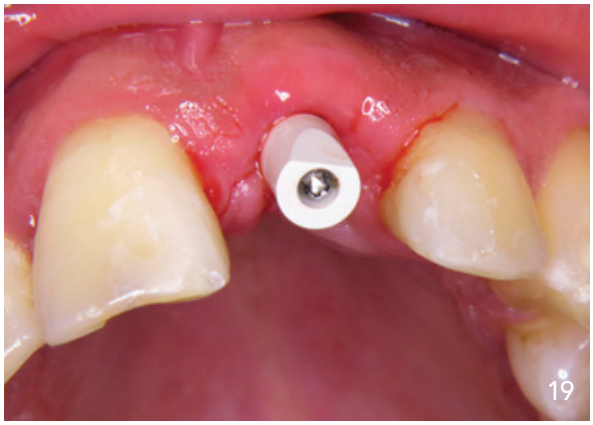
After careful consideration, the patient wanted to rehabilitate the situation without grinding the neighbouring teeth and against the option of immediate implant placement. According to the initial diagnosis, the buccal bone lamella appeared to



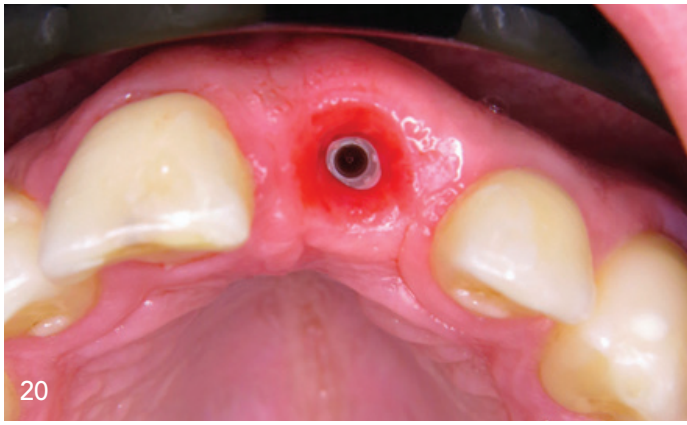
17
Situation after insertion of the appropriate gingiva former and tension-free multi-layer suture.



18
Situation 14 days after implant exposure and suture removal.



19
Insertion of the system-specific scan body to record the implant position by intra-oral scanning and forwarding to the dental laboratory.



20
Clinical image of the emergence profile after the six-week provisional phase.

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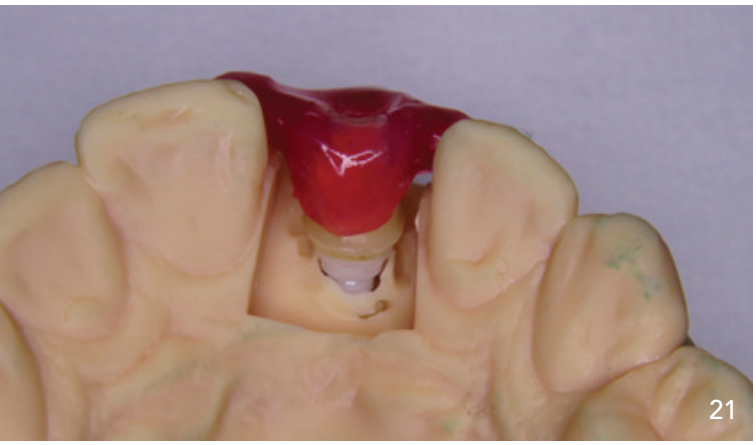


21
Definitive customised abutment on the printed master model with insertion aid.

22
Condition after insertion and torque-controlled screwing of the customised abutment and closure of the screw channel with Teflon tape.

be at least partially intact, so that a safe alveolar defect was to be expected. The treatment decision was therefore in favour of ridge preservation after gentle tooth removal and late implant placement after an expected healing phase of three months.

Discussion

The dental rehabilitation of patients with implants has proven to be successful over the decades of use and the abundance of very good data available. Titanium is still regarded as the "gold standard" material of choice. With the advent and continuous innovative development as well as the increasing number of promising data, implants based on zirconium oxide must currently be clearly mentioned as a therapeutic alternative to titanium.[8]

Zirconium oxide is at least on a par with, if not better than, titanium in the following respects:
- Very good material properties, such as extremely high flexural strength and fracture toughness.
- Very good osseointegrative properties.
- Low plaque accumulation on contact with peri-implant soft tissue.
- Low risk of peri-implantitis development.

Comparison of material properties

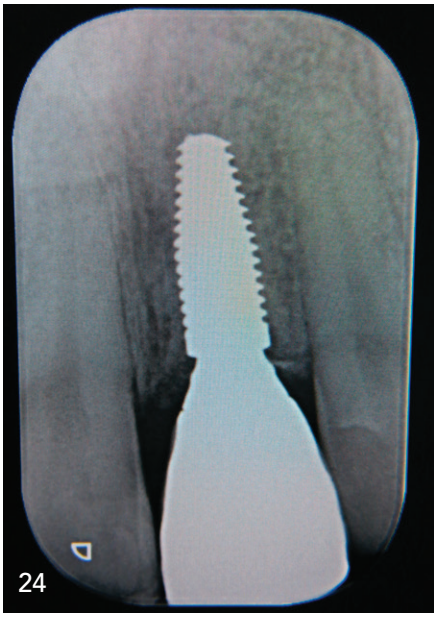
In principle, the material properties of the two materials used, titanium and zirconium dioxide, should first be summarised. On the one hand, the biocompatibility and osseointegration of titanium (pure titanium or cpTi), which has been used for decades, can be explained by the stable passivation layer formed on its surface (titanium dioxide) immediately after exposure to oxygen. Zirconium as a base material, on the other hand, is oxidised through by pressing and heat supply and processed into zirconium dioxide solely due to its manufacturing process. Oxygen as such is therefore already an integral part of the material and its chemical affiliation to the non-metals is clearly established.

Furthermore, zirconium oxide is characterised by a very high flexural strength compared to titanium, which according to the current state of the art and depending on the manufacturer is up to 2,000 MPa with the addition of 20 per cent aluminium oxide ("aluminium-toughened zirconium oxide" ATZ). Titanium, on the other hand, has a flexural strength of around 400 MPa. Long-term material analyses of zirconium implants between 2004 and 2020 showed a significant reduction in fracture susceptibility from 3.4 to 0.2 per cent due to the further development of materials technology.[4, 9, 10]

In conclusion, it should be noted that zirconium dioxide can be used safely and predictably as a base material for implants due to its very good material properties and can replace titanium as such. However, due to the higher variance in the manufacturing processes of the respective implant suppliers and the lack of sufficient long-term data in material stability beyond five years, there is still no clear consensus.

Regarding the implant design in connection with implant survival, there is currently sufficient long-term data for one-piece ceramic systems. Investigation periods of meaningful clinical studies within three to seven years have shown uniformly high implant survival rates of between 97 and 100 per cent, completely independent of the prosthetic restoration using single crowns or bridge constructions.[11–16]

On the other hand, the data situation for two-piece ceramic implant constructions can currently be described as poor due to the limited long-term data available. Nevertheless, the increased flexibility due to the continuous further development, particularly in the area of implant-abutment connection of two-piece zirconium implants, should not be underestimated, especially in the case of challenging bony or soft-tissue defects. Above all, the advantage of the possibility of load-free and covered healing after sometimes complex



23
Clinical situation after final insertion of the crown in habitual occlusion and in the open position.

24
Radiological check after insertion of abutment and crown.

hard and/or soft-tissue augmentations opens completely new dimensions for the metal-free restoration of patients compared to one-piece ceramic implant restorations. No significant difference in implant survival between one-piece and two-piece implant constructions was shown in reviews.

Nevertheless, the use of two-piece ceramic implant systems is only recommended as an alternative to titanium if the practitioner has provided the patient with detailed information.[8, 10, 17]

Osseointegration in comparison

Osseointegration, i.e. the functional ingrowth of an implant in bony tissue, is a process consisting of two different phases of structural remodelling of the surrounding hard-tissue anatomy. Phase 1 is referred to as "primary stability" and phase 2 as "secondary stability", which can subsequently also be referred to as "functional ankylosis". Stable healing times with sufficient new bone formation after implant placement, whether with titanium or zirconium dioxide, are stated as two to three months according to the data available. There was no difference in the time required for new bone formation, bone apposition or vascularisation between the materials used. Furthermore, only minor evidence-based differences in osseointegration and soft-tissue deposition were demonstrated in clinical studies after processing and conditioning of the implant surface on both materials.[4, 9, 18–24]

Comparison of plaque accumulation and peri-implantitis risk

The risk of developing a peri-implant event, depends on various factors. One cause is the inflammatory change in the peri-implant mucosa due to the accumulation of biofilm caused by plaque deposits and its composition. Oral hygiene, changing living and health conditions, the influence of medication, lifestyle habits (such as smoking or alcohol) and suboptimal prosthetic restorations are just a few examples that can favour plaque accumulation on implant surfaces.

Actually, there is currently very little evidence-based data available. The few clinical studies available and referring to small patient populations have shown significantly lower biofilm and plaque accumulation on ceramic implant surfaces compared to titanium. Peri-implant inflammatory reactions in the area[22] of the surrounding soft tissue were among the most pronounced with titanium surfaces. The advantages of ceramic surfaces appear to predominate here. Further and above all long-term clinical follow-up examinations remain to be seen.[21, 24–30]

Literature

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The link between oral health and systemic illness

A case study on the replacement of root canal-treated teeth and titanium implants with ceramic implants

Andrej Früh, Switzerland


01


02

Case description

A female patient presented at our practice for holistic treatment after learning from our website about the possible connections between chronic and acute illnesses and dental health. She complained of digestive issues such as bloating and diarrhoea. Additionally, her sleep was not restful; it was superficial and restless. She also had complaints related to her liver, circulation, nerves, and hearing (tinnitus).

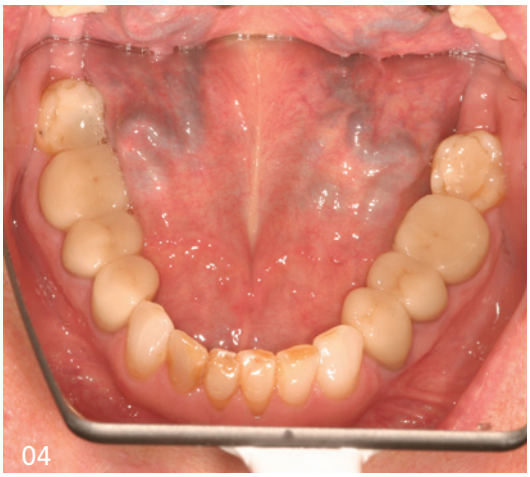
After a thorough clinical, radiological, and additional bioresonance examination (Figs. 1–5), a treatment plan was developed with the patient. This plan included the removal of all root canal-treated teeth, metals, titanium implants, and FDOJs (fatty degenerative osteolysis of the jawbone).

Surgical procedure

The tooth extractions were performed as atraumatically as possible to preserve the surrounding bone and prevent fractures of the root canal-treated teeth, which frequently occurs due to ankylosis or lack of elasticity. We used ultrasonic surgery techniques for this treatment (ACTEON). Ultrasonic surgery was also used to remove the titanium implants.

For the implant removal, the cortical bone around the cervical portion of the titanium implant was minimally invasively relieved. The titanium implant was then atraumatically removed using an extraction system (NeoBiotech Remover Fixture Kit). First, the abutment crown and the distal extension were removed by loosening the abutment screw. This revealed the full extent of a chronic gingivitis, in-


03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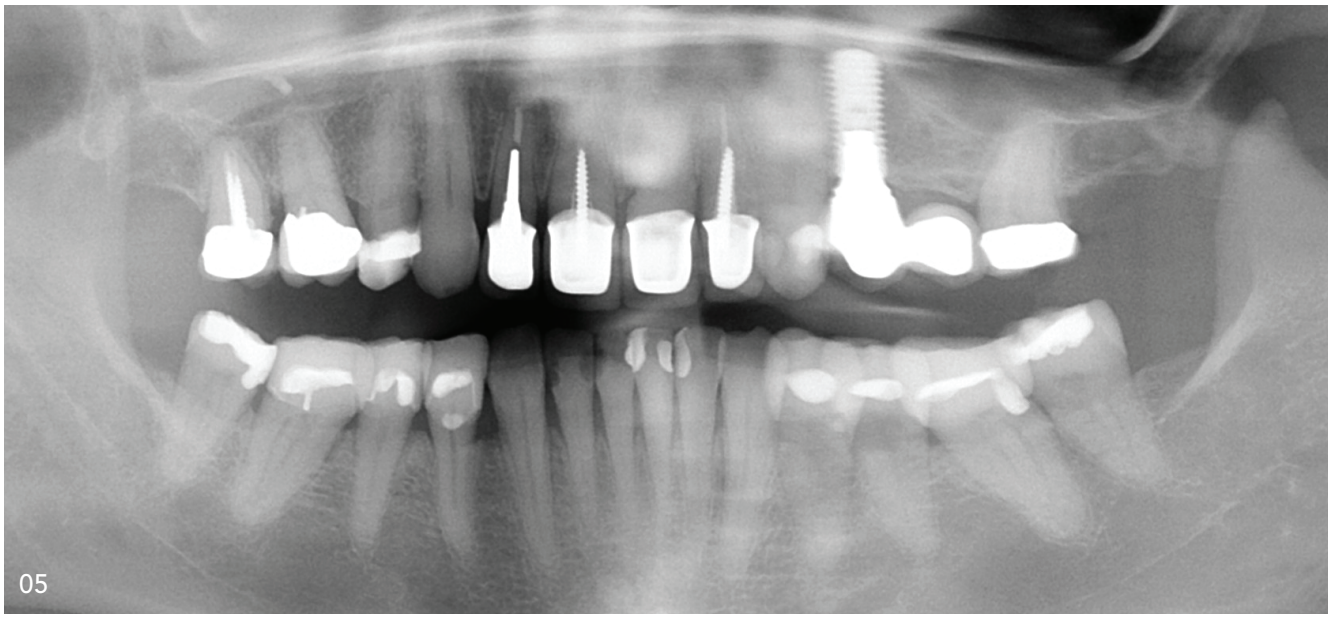
05

cluding bleeding around the abutment crown (Fig. 10). Unfortunately, the same clinical picture is observed without exception in all other cases of titanium implant removal.

In one session, the entire upper jaw was restored with ceramic implants following this procedure:
- Extraction of root canal-treated tooth 17—two-part immediate implant.
- Extraction of root canal-treated teeth 12, 11, 22—one-part immediate implants.
- Extraction of titanium implant 24—two-part immediate implant.
- Late implant 25 with a two-part immediate implant and intralift with PRF.
- FDOJ 18.

After removing all the root canal-treated teeth and the titanium implant, all the resulting alveolar sockets were immediately treated with zirconia implants (AWI, Witar). The late implant at position 25 was inserted transgingivally due to a sufficient amount of keratinised gingiva (Fig. 6).

The FDOJ at regio 18[5] could be cleaned much more easily after the removal of root canal-treated tooth 17. The fatty bone tissue

“The advantage (of using a splint provisional) is that this technique safely eliminates excessive stress on the immediate implants […].”

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ISMI and ICBI—Dual partnership

The ISMI has maintained a dual membership with the ICBI—International Circle for Biological Implantology—since 2025. This allows members to benefit from a strong international network, high-quality continuing education opportunities, and access to leading scientific expertise in the field of biological implantology.

The ICBI is a scientifically oriented, globally active organisation dedicated to the further development, promotion, and international dissemination of biological implantology. With a clear focus on biocompatible ceramic implants, the ICBI combines scientific depth with clinical relevance—pursuing a holistic, patient-centered approach.

The ICBI sees itself not only as an academic platform, but as a network that rethinks dentistry—interdisciplinary, innovative, and international.

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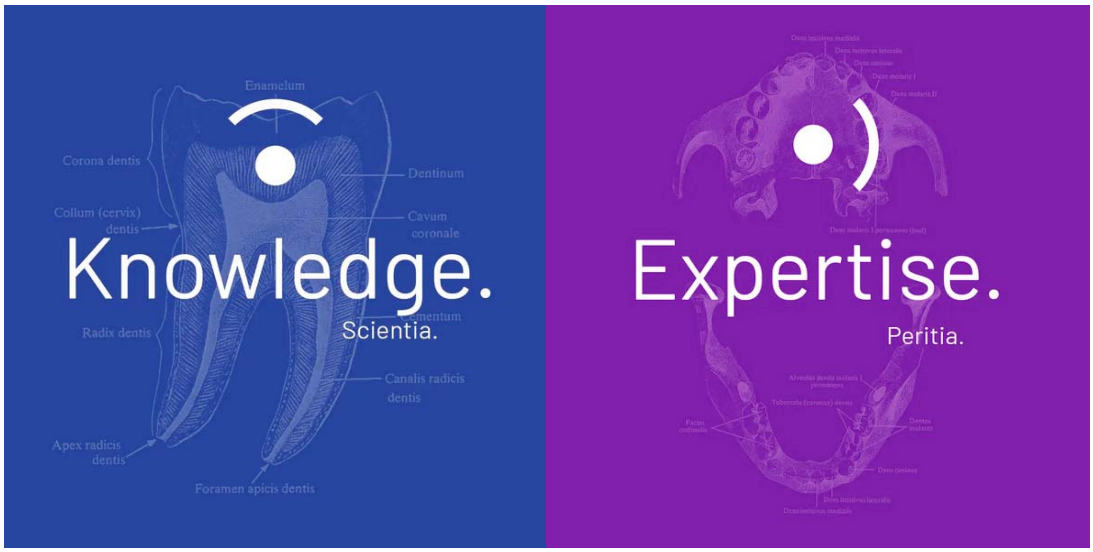

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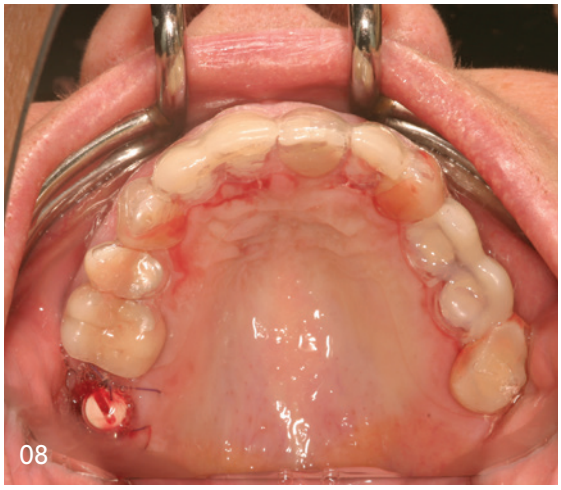
“[…] The toxicity of root canal-treated teeth is presented in several studies […]”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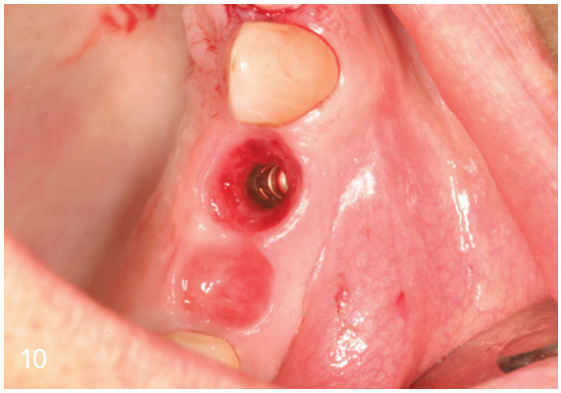
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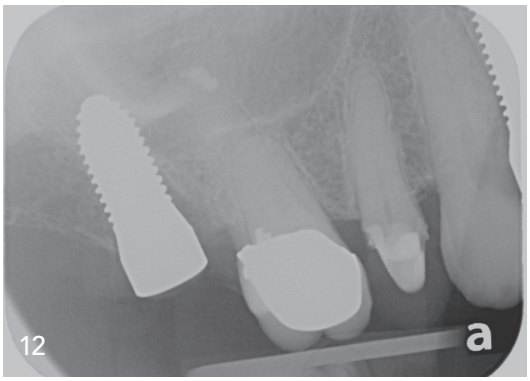
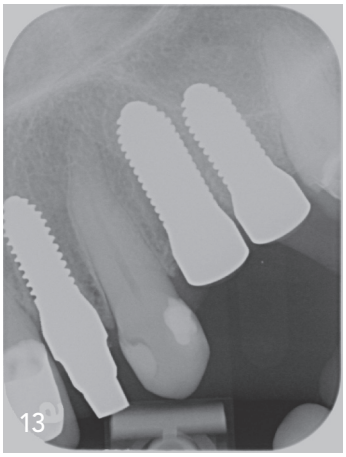
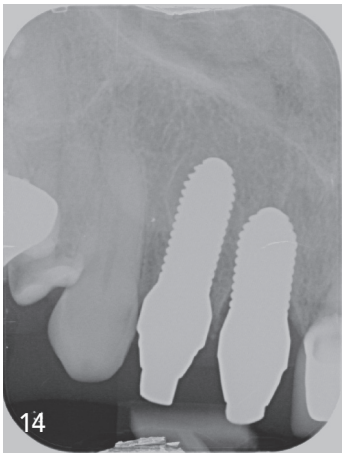
was removed as much as possible with ultrasonic surgery, and the resulting socket was then treated with ozone and PRF and sutured to be saliva-tight. The removed tissue was sent to IMD Berlin for RANTES determination. The measured RANTES value was 8.67 ng/g (Fig. 17). The reference value is 149.9 pg/ml. The conversion factor from the volume of fatty tissue in pg/ml to the weight of bone tissue in ng/g is 125. Therefore, the lab results from IMD Berlin in ng/g must be multiplied by 125 to get the RANTES expression in the FDOJ tissue sample in the correct ratio to our healthy reference value of 149.9 pg/ml – 8.67 x 125 = 1,083.75 pg/ml. We can see that the calculated value is increased by a factor of 7.23.

For the healing phase, the patient chose a splint provisional (Figs. 8+9). The advantage is that this technique safely eliminates excessive stress on the immediate implants during the healing phase. Another benefit of the splint provisional is a significantly better food comminution. Overall, the provisional restoration of ceramic immediate implants presents a challenge because patients cannot consciously control the load. The practitioner should thoroughly educate the patient on how to protect, care for, and clean the implants to ensure patient compliance. As postoperative medication, the patient only received Ibuprofen 600 mg and mouthwash (Regeno Plasma Liquid®). It should be noted that when using ozone and PRF, traditional antibiotic coverage for three to seven days is not necessary.

Figure 11 shows the extracted root canal-treated teeth and the titanium implant. We can see the distinct brown discoloration of the teeth, which does not only come from the metal in the crowns or posts. The fetid odor of these teeth was also clearly noticeable in the operating room. The toxicity of root canal-treated teeth is presented in several studies by Dr Hans Lechner[1–3]. Another study critically examines titanium implants and links them to silent inflammation in the jaw[4] (Lechner, Noumbissi, von Baehr).







One week after the surgery, the patient came in for a follow-up appointment (Figs. 15+16). The situation was inflammation-free and very well-healed. Furthermore, the patient reported having hardly any pain and only had to take two painkillers. One day post-surgery, the patient was completely pain-free. She managed very well with the provisional and was able to eat without difficulty.


IMD Labor Berlin

Ärztlicher Befundbericht

POST

Zahnheilkunde
Andrej Früh
Zahnarzt

END-BEFUND

Material: Sonstiges

Untersuchung	Ergebnis	Einheit	Referenzbereich*
Klinische Immunologie			
RANTES 1.Gewebeproben** (ELISA)			
Gewebemenge	23	mg	
Konzentration/Gewebe	8.67	ng/g	

Dieser Befund wurde freigegeben von Dr. Anastasia Karnot

Berlin,den 18.12.24 14:27

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The definitive restoration of the upper jaw took place six months post-surgery. Clearly visible is a perfectly healed clinical situation in the upper jaw (Fig. 19). The osseointegration of the implants was checked radiologically (Fig. 24) and clinically with a screw-in test. In this test, the implant is loaded up to 25 Ncm. The patient should not experience any discomfort or pain.

In the next step, the two-part implants received either a ceramic or a fiberglass abutment. For the current case, I decided to go with ceramic abutments for implants 17 and 24, and a fiberglass abutment for implant 25. The ceramic abutments were cemented with GPZ, and the fiberglass abutments were placed with composite flow. The implants were then prepared just like natural teeth (Figs. 18+19). Only red-ring diamond burs are recommended for this.

Restoration

In the upper jaw, all teeth and implants were restored with pressed ceramic crowns and veneers. Implants 12+11 and 24+25 were splinted in the final restoration to increase the load-bearing capacity of the implants. Teeth 13 and 23 received a palatal veneer to create canine guidance and thereby safely eliminate parafunctional overload on the implants and the patient's own teeth. All other teeth received a single crown (Figs. 20–22). In this case, we had a mix of implants and natural teeth in the posterior segments of both quadrants in the upper jaw. It is essential to ensure the correct occlusal load when adjusting the occlusion. Natural teeth have the property of slightly intruding under heavy load, while implants do not. This can cause a height difference, especially during clenching and grinding at night. This must be considered during prosthetic restoration to avoid failures. Finally, the patient received a Michigan splint (functional therapeutic device according to Dr Reusch) to safely prevent nocturnal overload from grinding and clenching, and at the same time, to relax the muscles and protect the temporomandibular joints.

"Natural teeth have the property of slightly intruding under heavy load, while implants do not."


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“For me, ceramic implants are not just an alternative to titanium but are the healthiest way to replace a missing tooth.”


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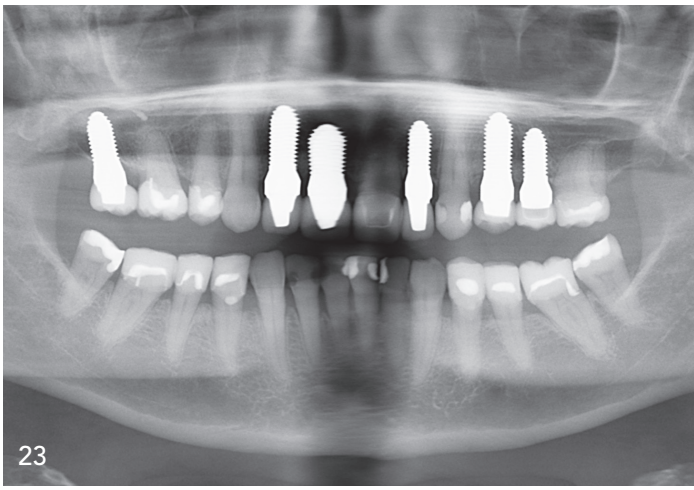
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Summary

I have been successfully implementing the holistic treatment concept in my practice for ten years and ceramic implants have proven to maintain a main pillar of fixed dental prosthetics. This case clearly demonstrates the central role of dentistry in a patient’s overall health. Zirconia implants work best as immediate implants because the existing natural alveolar socket is used very efficiently, and the patient is spared a second surgery. For me, ceramic implants are not just an alternative to titanium but are the healthiest way to replace a missing tooth.

Literature

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Immediate zirconia implant placement

Connective tissue grafting in the aesthetic zone: A case-based narrative review

Dr Fabian Schick, Germany

Introduction

The replacement of compromised anterior teeth in young patients with a high smile line presents a unique combination of functional, biological and aesthetic challenges. Thin gingival biotypes, a history of chronic infection and high aesthetic demands often complicate treatment planning and require protocols that minimise tissue trauma while maximising long-term peri-implant stability. Immediate implant placement and provisionalisation have become increasingly accepted for managing tooth loss, offering benefits such as reduced treatment time, fewer surgeries and early restoration of aesthetics.[1–3] Zirconia implants, in particular monolithic one-piece designs, have gained attention for their favourable soft-tissue response, low plaque affinity and potential osteoimmunological advantages.[4–8]

01

“Thin gingival biotypes, a history of chronic infection and high aesthetic demands often complicate treatment planning [...]”

This article presents the treatment of a young female patient with a high smile line and a chronically infected, heavily discoloured, previously root-treated and resected tooth 22 exhibiting pain and mobility (Figs. 1+2). The case illustrates how a single-session workflow—comprising atraumatic extraction, immediate zirconia implant placement, simultaneous connective tissue grafting and same-day provisionalisation—can provide biological stabil-

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ity, aesthetic soft-tissue augmentation and immediate patient satisfaction. A narrative review contextualises the biological rationale behind zirconia implantology, osteoimmunology, monoblock designs and the role of soft-tissue augmentation.

Clinical background

The patient, in her mid-20s, presented with significant aesthetic concerns and chronic discomfort related to tooth 22. The tooth showed advanced discoloration, repeated endodontic interventions and persistent periapical pathology. Given the patient's high smile line, soft-tissue translucency and the risk of recession, traditional delayed implant approaches were considered less favourable. The patient expressed strong preference for a single-session solution to avoid aesthetic compromise and psychological stress associated with a visible gap or removable temporaries in the anterior maxilla.

Immediate zirconia implantation with connective tissue grafting was selected as the most predictable approach to achieve simultaneous infection control, socket preservation, soft-tissue thickening, and rapid aesthetic restoration.

Soft-tissue augmentation and aesthetic integration

Patients with a thin biotype and a high smile line are at increased risk for midfacial recession, mucosal translucency and peri-implant disharmony. A connective tissue graft (CTG) harvested from the palate in single-incision technique was transplanted to the buccal side of the implant to thicken the soft tissue and reinforce the peri-implant mucosal seal. This approach enhances long-term aesthetic predictability, improves colour masking and reduces the risk of peri-implant mucosal recession, particularly around zirconia implants where soft-tissue integration is strong, but volume stability still depends on biological thickness.[9–11]

The graft was positioned to maximise its effect in the visible aesthetic zone, allowing a more natural emergence profile (Figs. 4+5). The primary objective was the formation of a robust keratinised mucosa capable of providing what has been described as a natural barrier against microbial penetration and inflammation.[12–14]

Immediate extraction and implant placement

Atraumatic extraction was performed using periotomes and conscientious preservation of the buccal bone (Fig. 3). The socket was debrided and the apical region prepared to accommodate a one-piece zirconia implant (Figs. 6+7). Achieving primary stability is critical in immediate placement protocols, especially when immediate provisionalisation is planned. Modern ceramic implant designs with aggressive thread geometries facilitate torque stability in extraction sockets and create "healing chambers" between thread peaks—microenvironments that promote rapid bone formation and sufficient osseointegration.

Zirconia offers osteoimmunological advantages and stability comparable to titanium while eliminating galvanic and tribocorrosive processes associated with metal implants.[8,15–17] The absence of microgaps, screws or internal interfaces in monoblock designs reduces bacterial colonisation risk and prevents microleakage at the bone crest—

“The absence of microgaps, screws or internal interfaces in monoblock designs reduces bacterial colonisation risk and prevents microleakage at the bone crest […]”

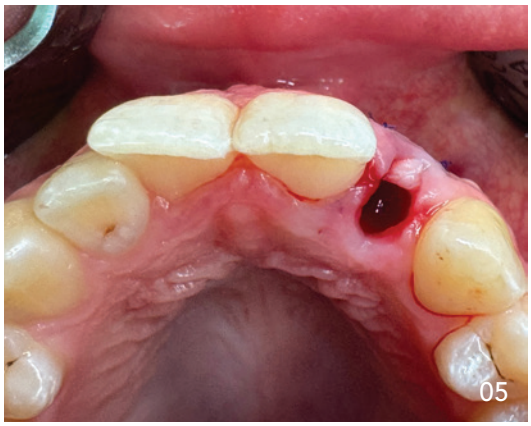
an important factor for long-term bone stability and osteoimmune and microbiome homeostasis.[15–17]

Immediate provisionalisation, patient acceptance, and definitive prosthetic rehabilitation

A chairside provisional crown was fabricated and cemented with strict non-occlusal loading. Immediate provisionalisation avoids the aesthetic and psychological burden of a missing anterior tooth, particularly valuable in young patients. Studies consistently demonstrate higher patient satisfaction and improved quality of life with immediate provisionalisation protocols.[18,19] Interestingly, even the provisional crown already provided an aesthetic improvement compared to the preoperative situation, ending a long history of salvage attempts that repeatedly resulted in pain and disappointment (Fig. 8). After three months, once complete osseointegration, a positive resonance frequency analysis, and full soft-tissue integration had been confirmed, the implant was restored with a custom-made, full-ceramic definitive crown (Figs. 9a+b). The patient was highly satisfied with both the aesthetic outcome and the overall treatment experience (Figs. 10–12).

Osteoimmunological considerations

Osteoimmunology emphasises that bone healing around implants is not purely mechanical but profoundly influ-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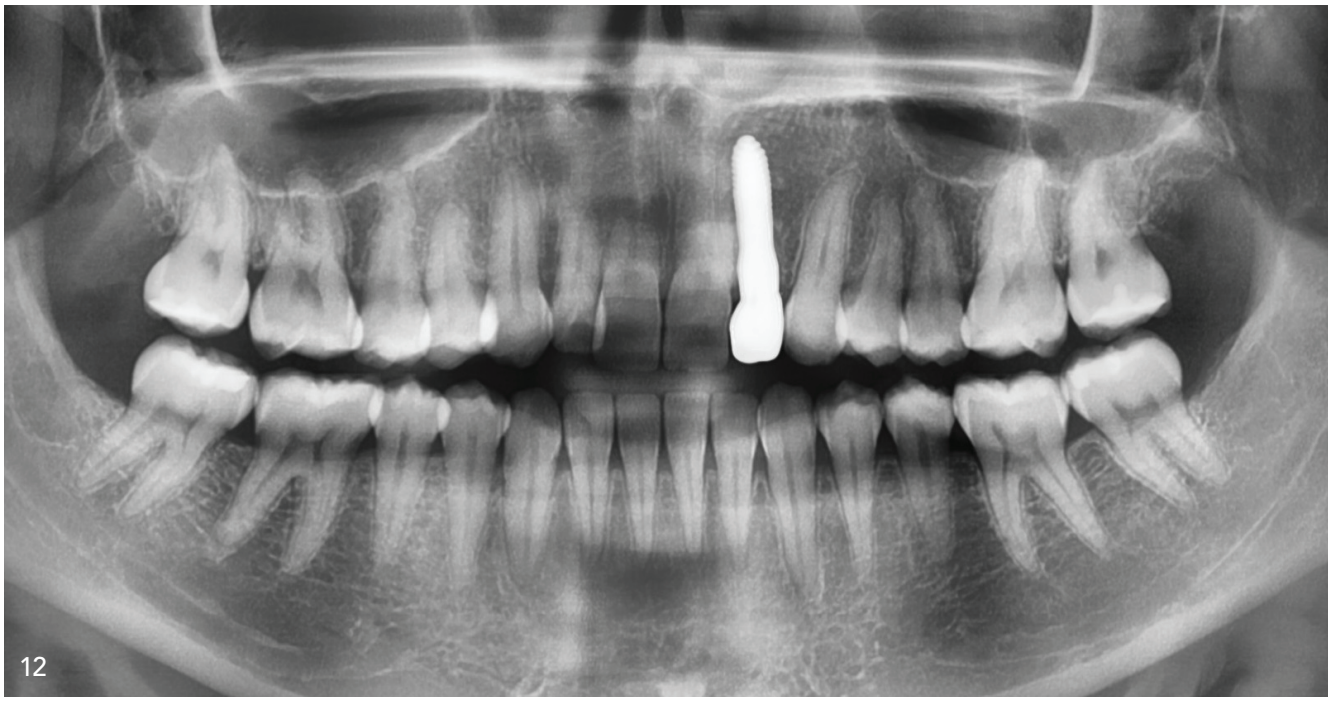
enced by immune-modulatory interactions. Zirconia may show reduced inflammatory cytokine expression, lower macrophage activation and decreased release of pro-inflammatory mediators such as TNF-α and IL-1β compared with titanium when metallic wear particles or tribocorrosion occur.[8,15,20–22]

Recent work has shown that ceramic implant materials may be associated with more stable soft-tissue interfaces and reduced risk of peri-implant inflammation, particularly when combined with thick keratinised mucosa.[12–14] The monoblock nature of one-piece and tissue level zirconia implants eliminates internal voids that could serve as reservoirs for bacterial leakage[23,24] and endotoxins, thereby supporting a stable and sustainable peri-implant immune environment.

Beyond material-specific immune responses, the osteo-immunological assessment of peri-implant bone quality and density is gaining importance—particularly through transalveolar ultrasound diagnostics, which allow non-invasive evaluation of bone integrity.[25,26] This is clinically relevant in areas of incomplete bone regeneration[27], including former surgical sites, extraction sockets, peri-implant bone regions, as well as zones affected by post-endodontic inflammatory stress. Chronic immunological activation in these zones can alter osteoblastic and osteoclastic dynamics, potentially leading to fatty-degenerative osteolytic changes (FDOJ/Cavitations). These low-grade osteolyses are characterised by persistent overexpression of inflammatory cytokines—notably RANTES/CCL5 and other chemokines—contributing to a state of silent inflammation with possible systemic implications.[28–30] Incorporating ultrasound-based bone density profiling into implant planning may therefore enhance early detec-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tion of immunologically stressed or compromised bone compartments, supporting more predictable regenerative and implantologic outcomes.

Discussion

This case highlights several advantages of an immediate zirconia implant approach in the aesthetic zone. Reducing the number of surgical sessions decreases total morbidity and enhances patient comfort. Avoiding temporisation gaps is especially important in patients with high smile lines, where aesthetics are continuously exposed during social interaction.

Soft-tissue augmentation at the time of implant placement is essential in thin biotypes. It supports long-term stability and significantly reduces recession risk—one of the most common complications in immediate implant dentistry. Zirconia's immunologically favourable profile, strong soft-tissue adhesion and resistance to biofilm accumulation further contribute to long-term success.

Conclusion

Immediate zirconia implant placement with connective tissue grafting and same-day provisionalisation represents a powerful treatment modality especially for young, aesthetically demanding patients. The biological and osteoimmunological advantages of zirconia, combined with precise soft-tissue management and monoblock implant design, support predictable outcomes with high patient satisfaction and sustainability of both hard and soft tissues.

"[…] the osteoimmunological assessment of peri-implant bone quality and density is gaining importance […]"

Literature

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Biological screening before implant placement

Evaluating immunity and inflammation for predictable outcome

Dr Saurabh Gupta BDS MDS, India

Introduction

Implant dentistry has evolved from a primarily mechanical endeavour into a biologically nuanced intervention that demands careful consideration of systemic health. Increasingly, evidence reveals that immunological readiness and subclinical inflammation are key predictors of successful osseointegration and long-term implant stability.[1,2,5,7]

Despite impeccable surgical techniques or prosthetic planning, systemic imbalances—such as low-grade inflammation or metabolic dysfunction—can compromise healing, contribute to early implant failure, and lead to long-term complications like peri-implantitis.[4,8,9] This understanding has ushered in a new paradigm: biologically guided implantology.

This article outlines a practical biological screening protocol for implant placement and introduces emerging systemic biomarkers like the Systemic Immune-Inflammation Index (SII) and the Systemic Inflammation Response Index (SIRI) as powerful predictors of surgical outcomes.[4,10,12]

Why assess immunity before implant surgery?

Dental implant therapy is not just about replacing a missing tooth, it initiates a cascade of biological events: soft-tissue healing, bone remodeling, vascular ingrowth, and immune cell recruitment. This biologic orchestration determines the success of implant integration.

Even in seemingly healthy individuals, hidden systemic inflammation can:
- Delay soft tissue and bone healing
- Increase marginal bone loss
- Impair osseointegration
- Heighten susceptibility to peri-implantitis
- Result in implant failure[4,9]

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Calculation of SII and SIRI from routine CBC parameters.

Systemic immune-inflammation and immune response indexes

$$S.I.I. = \frac{[Neutrophils \times Platelets]}{Lymphocytes}$$

- Neutrophils-markers of acute inflammation
- In both inflammation and tissue repair
- Lymphocytes-represent adaptive immune response

-> **Higher S.I.I. values suggest higher inflammation and lower immune competence, which may predict poor surgical outcomes** (like delayed healing or higher infecion).

Systemic immune response indexes

$$S.I.R.I. = \frac{[Neutrophils \times Monocytes]}{Lymphocytes}$$

- Monocytes are precursors to macrophages, key in chronic inflammation and tissue remodeling
- This index focuses more on chronic immune activation

-> **A higher S.I.R.I. can indicate a prolonged inflammatory state and lower immune control**, again predicting poorer postoperative outcomes.

Therefore, screening for inflammatory and immune markers prior to surgery is a proactive step to minimise complications and tailor interventions.

Core biological markers to evaluate

A basic blood panel can offer a wealth of information about the patient's systemic status. Recommended markers include (ranges based on widely used international standards; local laboratory may differ):

- **hs-CRP (< 1.0 mg/L):** Detects chronic, low-grade inflammation
- **Vitamin D (25-OH) (40–60 ng/mL):** Modulates immune and bone response
- **HbA1c (< 5.6 %):** Reflects glycemic control, critical for wound healing
- **Ferritin (30–150 ng/mL):** Elevated in inflammation; low may reflect poor immunity
- **Homocysteine (< 10 µmol/L):** Indicator of vascular and methylation status

Advanced immune and inflammatory testing (optional)

In complex or high-risk patients—such as those with autoimmune diseases, history of implant failure, or systemic illnesses—consider:

- **Lymphocyte Subsets:** CD4/CD8 ratio, NK cell activity
- **Immunoglobulin Levels:** IgA, IgG, IgM for immune integrity
- **Pro-inflammatory Cytokines:** IL-1β, IL-6, TNF-α
- **Genetic SNPs (e.g., IL-1 Polymorphisms):** Correlates with peri-implant bone loss[6]
- **Salivary Microbiome Testing:** Useful in high-risk periodontal patients

The role of SII and SIRI in implant dentistry

The Systemic Immune-Inflammation Index (SII) and Systemic Inflammation Response Index (SIRI) offer a novel, accessible way to quantify the balance between immune surveillance and systemic inflammation using only routine complete blood count (CBC) values.

Formulas

SII = (Neutrophils × Platelets) ÷ Lymphocytes
SIRI = (Neutrophils × Monocytes) ÷ Lymphocytes

These indexes were first proposed in oncology and cardiovascular medicine but are now being evaluated in surgical specialties, including dental implantology[4,10,12,13], where immune and inflammatory balance critically influence healing.

Suggested thresholds

- **SII:** < 600 favourable, 600–1,200 borderline, > 1,200 unfavourable
- **SIRI:** < 1.5 favourable, 1.5–3 borderline, > 3 unfavourable

High values suggest systemic inflammation, which may impair osseointegration.

Note: Normal values vary by population and lab methods; clinicians should interpret within local reference ranges.

"A successful dental implant does not start in the operatory—it starts in the blood panel."

Clinical example

In my practice, patients with optimised Vitamin D, hs-CRP < 1 mg/L, and SII < 600 have shown faster soft-tissue healing and reduced early complications. Two cases with high SII (> 1,200) but no acute infection history exhibited delayed healing and early crestal bone changes, supporting the role of these markers as risk indicators.

CBC report for patient X

- **Neutrophils:** 4.8 × 10^9/L
- **Lymphocytes:** 2.0 × 10^9/L
- **Platelets:** 250 × 10^9/L
- **Monocytes:** 0.6 × 10^9/L

SII = (4.8 × 250) ÷ 2.0 = 600
SIRI = (4.8 × 0.6) ÷ 2.0 = 1.44

Note that "normal" laboratory ranges vary across countries due to assay differences and population baselines. Clinicians should verify values with their local labs and adjust thresholds accordingly.

Interpretation

- **SII:** < 600 is typically considered favourable for healing.
- **SIRI:** < 1.5 indicates good immune-inflammatory balance.

Values above these thresholds may suggest hidden inflammation, which could compromise healing and increase the risk of complications post-implant surgery.

Application to implant protocol

Incorporate the following stepwise screening process before implant surgery:

1. **Basic Panel (for all patients):** hs-CRP, Vitamin D (25-OH), HbA1c, Ferritin, Homocysteine
2. **SII and SIRI Calculation from CBC:** Helps quantify systemic inflammation and immune readiness
3. **Actionable Interventions:** Correct deficiencies and delay surgery if needed
4. **Monitor Progress:** Repeat tests after four to six weeks if initial values are suboptimal

Biological philosophy in practice

This biological terrain optimisation approach, popularised by thought leaders like Dr Joseph Choukroun, emphasises the importance of preparing the host rather than focusing solely on materials or surgical precision.

His concept of Low-Level Inflammation (LLI) has triggered a global shift toward immune-guided dental surgery. Rather than reactive treatment of complications, biological dentistry promotes proactive correction of hidden dysfunctions.

Conclusion

A successful dental implant does not start in the operatory—it starts in the blood panel. Understanding and optimising a patient's biological terrain enhances surgical outcomes, minimises failure rates, and personalises care.

Key takeaways

- Implement a baseline immune-metabolic screen for all implant patients
- Use SII and SIRI as inexpensive, powerful inflammation markers
- Consider delaying surgery in the presence of elevated risk markers
- Collaborate with medical professionals when needed
- Transition from a mechanical to a biologically centered implant protocol

In the evolving field of precision dentistry, biologically informed protocols will no longer be optional—they will become the gold standard.

Literature

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60 years of implantology: A retrospective focus on ceramic implants

Under the theme "Facts of Ceramic Implants Part III," the European Society for Ceramic Implantology (ESCI) hosted the European Congress for Ceramic Implantology for the third time, held from 25 to 27 September 2025, in Horgen/Zurich, Switzerland.

Dr Alina Ion

Over three days, the congress offered exciting insights into current research, clinical innovations, and interdisciplinary perspectives. Dentists, implantologists, and scientists from across Europe and beyond met to discuss the latest findings, exchange experiences, and network regarding future developments.

The 3rd European Congress for Ceramic Implantology kicked off on Thursday with practiceoriented workshops, where participants could dive directly into implant systems and surgical techniques under the guidance of experienced experts. These "hands-on" phases not only provided theoretical knowledge but also enabled immediate application under realistic conditions. The workshops were particularly appreciated for bridging the gap between research and clinical practice.

Dr Jens Tartsch, President of the ESCI, succeeded in covering a balanced spectrum in the lecture programme, ranging from fundamental principles to biological aspects and clinical application. 28 speakers followed Dr Tartsch' invitation and contributed their expertise in three thematic chapters: Material Aspects, Biological Aspects, and Clinical Application.

In the sessions on Material Aspects, topics such as the material stability of zirconia, surface technology, and

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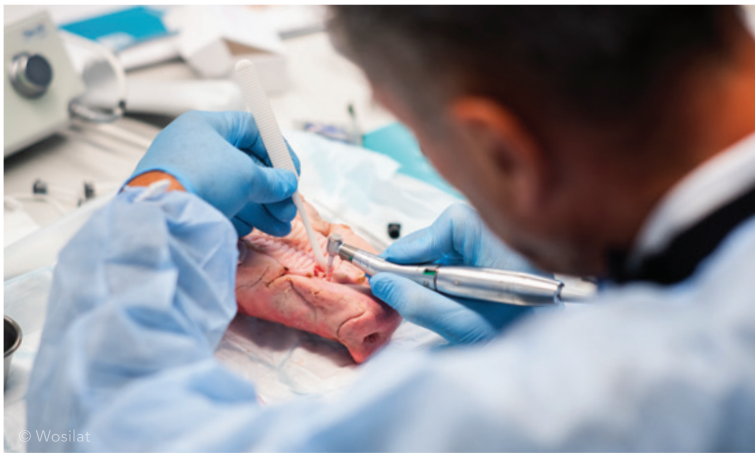

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long-term behaviour under stress were highlighted. The speakers demonstrated how modern ceramic materials are becoming increasingly competitive with established titanium solutions, especially regarding biocompatibility and aesthetic requirements.

Prof. Jérôme Chevalier from France opened Friday with his presentation "Ceramics for Dental Implant Use: State of the Art, Current Developments, Perspectives," summarising the latest developments in ceramic implants and giving an outlook on future applications. Following this, Prof. Andraž Kocjan from Slovenia illuminated the manufacturing techniques and surface modifications of zirconia implants. Dr Nadja Rohr from Switzerland questioned the role of implant surfaces in clinical marketing and their influence on the perception of patients and dentists.

Prof. Ralf Kohal from Germany explained the mechanical stability of ceramic implants and debunked common myths in his lecture "Everything you always wanted to know about the stability of ceramic implants but were afraid to ask." Dr Marc Balmer from Switzerland presented results from clinical studies. Dr Frank Spitznagel from Germany examined the prosthetic options for ceramic implants and their evidence base. Prof. Sebastian Kühl from Switzerland shared his experiences from a multicenter study.

The clinical lectures focused on case studies from everyday implantology: from immediate loading and augmentation procedures to managing difficult anatomical situations. Several speakers presented long-term data on ceramic implants, underscoring confidence in the long-term stability of these systems.

A particularly impressive lecture was given by Prof. Eik Schiegnitz from Germany, who discussed the interfaces between clinical practice and evidence-based guidelines. Prof. Michael Payer from Austria reported on his clinical experiences with ceramic implants, while Dr Paul Weigl from Germany illuminated biological aspects and corrosion resistance.

Another focus was on Biological Aspects: Here, inflammatory processes, tissue reaction, soft-tissue management, and the role of microbial factors were discussed. It was particularly noteworthy how some speakers used the latest studies to demonstrate that peri-implantitis rates in ceramic systems can be comparably low when the surrounding conditions are optimal.

A highlight was the keynote by Prof. Dr Tomas Albrektsson: In his lecture, he paid tribute to both the historical development of implantology and the current advances in the ceramic field. Almost exactly 60 years ago, Per-Ingvar Brånemark placed the first implant, opening up an

entirely new world for patient treatment. Prof. Albrektsson is a companion on the path of implantology, thus ideally connecting his perspective with a look back and a look forward.

The contributions were supplemented by Dr Volker von Baehr ("Immunology of Titanium") and Prof. Ralf Smeets ("Titanium and Corrosion"), both from Germany, and Dr Alessandro Alan Porporati from Italy ("Metal as an Independent Risk Factor for Infections: Evidence from Hip Arthroplasty"), who critically examined the role of titanium and metals in implantology.

The exchange section culminated in discussion rounds, where the audience critically debated the limits and open questions with the presenters. Particularly lively debates arose regarding the clinical situations in which ceramic implants should be preferred over titanium, and how to optimise treatment decisions based on individual patient factors.

On Saturday, the lectures focused on the biological, prosthetic, and digital aspects of ceramic implantology.

Dr Sebastijan Perko from Slovenia investigated the role of biomarkers in osseointegration. Prof. Michael Stiller from Germany reported on clinical experiences with different ceramic implant systems. Dr Joan Pi Anfruns from the USA presented full-arch rehabilitation and also addressed supply difficulties for ceramic implants in the USA. In a double presentation, Dr Stefan Röhling and Dr Michael Gahlert from Germany introduced the new approach for ceramic implants: current and future two-piece ceramic implant systems. Prof. André Chen and Dr João Borges from Portugal demonstrated the integration of digital workflows into prosthetic care. Prof. Bilal Al-Nawas from Germany illuminated the osteoimmunological fundamentals for daily practice, while Prof. Reinhardt Gruber from Austria presented the scientific background on blood concentrates.

Drs Elisa and Joseph Choukroun from France explained the significance of platelet-rich fibrin preparations for regenerative therapy. Drs Markus and Matthias Sperlich from Germany showed how the patient's biology can be optimally preserved through digital immediate loading. The congress concluded with Dr Frank Maier from Germany and his presentation "Biology and Implant Geometry."

Beyond the scientific programme, networking opportunities facilitated informal encounters and lasting contacts. The social highlight was the Swiss Gala Dinner "60 Years of Implantology," which took place in the stunning setting of the Landgut Bocken on Lake Zurich, allowing participants to experience the famous "Switzerness."

The ESCI Congress sent a strong signal: Ceramic implantology is no longer a marginal topic but is increasingly moving into the focus of well-founded scientific investigation and clinical application. The contributions presented showed that research and practice are in constant dialogue and that ceramic implants can be not only competitive but often prospectively advantageous in many scenarios.

Congress website

A global experience that marked a turning point in biological implantology

Ceramic Implant Summit 2025— Buenos Aires

On 24 and 25 October 2025, Buenos Aires became the world capital of ceramic implantology with the Ceramic Implant Summit—Z7 & ZiNova Global Experience, an international gathering that brought together more than 20 renowned experts and hundreds of professionals who attended both in person and via live stream from around the world.

ZiNova | Z7 Implants | MABB BioMaterials

During two intense and inspiring days, dentists, implantologists, bioengineers, researchers, and leading figures in oral health participated in a transformative experience where science, innovation, and biocompatibility took center stage. The objective was clear and compelling: to open a new chapter in modern dentistry, promoting the knowledge and practice of ceramic implants as a safer, more biological, and more sustainable alternative to traditional metal implants.

An international community united by a common purpose

The Summit featured participants from Argentina, Brazil, the United States, Mexico, Spain, Italy, Germany, Switzerland, Colombia, Chile, Uruguay, and many more locations around the world. The hybrid format allowed professionals from every continent to participate without restrictions, thanks to live streaming with simultaneous translation in English, Spanish, and Portuguese.

The online community had a record-breaking presence, solidifying the Summit as a truly global event. The digital platform provided access to live conferences, real-time interaction, international networking, and, subsequently, full recordings that remained available for continued learning.

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The main protagonists: Conferences, science, and biological awareness

The scientific programme was diverse, in-depth, and aligned with the main challenges of modern implantology: The biotribocorrosion of titanium implants, presented by leading experts such as Dr Daniel Olmedo, provided a translational perspective on the systemic and silent impacts of corrosion.

Advances in ceramic implantology, implant design, and surgical protocols were analysed by international experts such as Rodrigo Beltrao (Brazil), Saurabh Gupta (India), Olivier Cheron (France), Enrique Reinprecht (Argentina), Joan Pi Anfruns (USA), Dan Hagi (Canada), Martiniano Francischetti (Argentina), and Regeane De Pol Kaniak (Brazil), among many others.

Specialised panels addressed scientific trends, new biomaterials, digitalisation, and regulatory challenges in different countries.

Each presentation contributed evidence, clinical cases, interdisciplinary research and a vision for the future, positioning the Summit as a scientific beacon at a global level.

Workshops and hands-on experiences: The Z7 differentiator

Participants in the Premium package enjoyed a unique hands-on workshop experience, working directly with Z7 ceramic kits, including 3D models, specialised instruments, and a complete set of implants.

These activities, highly valued by implantologists, provided a practical understanding of the handling, surgical precision, and distinctive characteristics of zirconia implants.

Networking, culture, and memorable encounters

In addition to the academic programme, the Summit offered carefully curated social spaces to connect the international community such as professional networking sessions, and cultural activities. The atmosphere was collaborative, open, and deeply inspiring. Strategic alliances were forged, new research projects were launched, and lasting connections were established.

A movement that's just beginning

The Ceramic Implant Summit was more than just a scientific event; it was the birth of a global movement toward more biological, conscious, and metal-free dentistry. The massive participation—both in person and online—demonstrates that the community is ready to move toward safer, more sustainable technologies aligned with systemic health.

With this landmark edition, Z7, ZiNova, and MABB solidified a shared vision: to transform oral health with innovation, science, and a triple-impact purpose.

The 2025 Summit is already part of history. But above all, it's the start of a future that will continue to expand around the world.

ZiNova
www.zinovaimplants.com

ZiNova website

EACim strengthens global presence of zirconia implantology at EAO and ADF congresses

The European Academy of Ceramic Implantology (EACim) successfully asserted its position as a leader in the field during the prestigious annual congress of the EAO (European Association of Osseointegration). As one of the premier events in global dental implantology, the congress provided the ideal platform for the academy to engage with an international audience of specialists.

EACim/Timo Krause

A united leadership

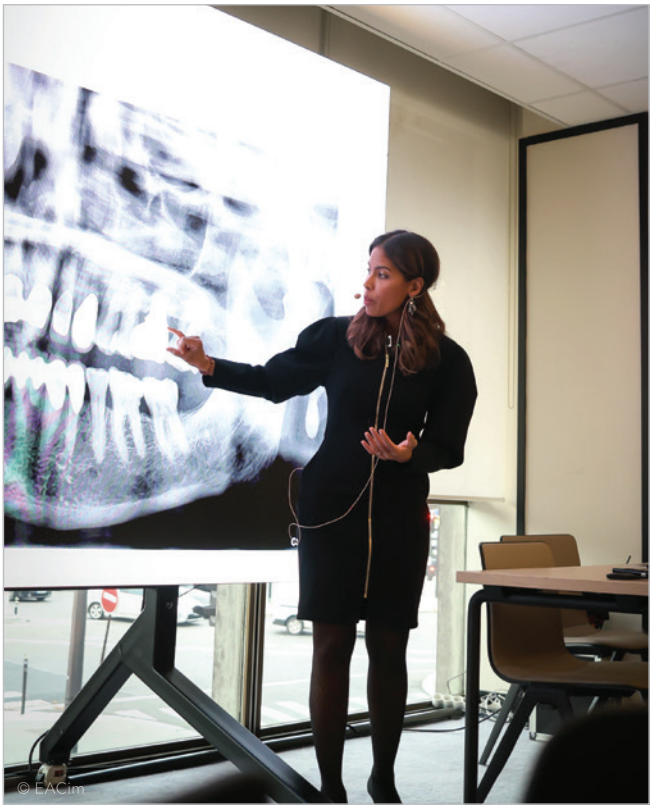
In a strong show of commitment to the academy's mission, the entire EACim Board of Directors was present at the event. This collective attendance by the organisation's leadership highlights their unified dedication to promoting the scientific and clinical excellence of ceramic implantology.

Through a dedicated exhibition booth and the presence of these key figures, the academy proudly represented the values and expertise of zirconia implantology, reaffirming its commitment to upholding high scientific, ethical, and clinical standards.

Building on this momentum, EACim was pleased to hold a Scientific Day devoted entirely to ceramic implantology at the Hyatt Regency Paris Étoile, in close collaboration with the French Syndicat National des Parodontistes et Implantologistes (SNPI), on 26 November, and during the ADF 2025 meeting week.

The programme combined four lectures with moderated discussion. Dr Olivier Chéron opened the session with "Evolution through ceramic implantology", framing zirconia implants as part of a broader shift towards biologically driven and minimally invasive implant therapy. Dr Amandine Para then addressed "Zirconia implants: beyond the choice, the learning journey", focusing on indications, case selection and the practical learning curve associated with zirconia in daily practice.

After a break, Dr Fabrice Baudot presented "Zirconia implants: new perspectives in implantology", re-



viewing current clinical evidence, emerging designs and surface technologies. Finally, Dr Catherine Rossi discussed "Phytotherapy applied to implant surgery", outlining perioperative phytotherapeutic strategies that may support soft-tissue healing, patient comfort and systemic balance in ceramic implant cases. The day, moderated by Dr Giancarlo Bianca and Dr Simon Tordjman, underlined ceramic implantology as a coherent, evidence-oriented therapeutic concept integrating material science, biology and integrative perioperative care.

About the EACim

The European Academy of Ceramic Implantology is an international scientific and educational organisation dedicated to the promotion and dissemination of knowledge regarding ceramic implantology. Its mission is to support practitioners in adopting innovative, biocompatible, and aesthetic solutions for a modern and sustainable approach to implantology.

EACim—European Academy of Ceramic Implantology
65, Avenue du Prado
13006 Marseille
France
www.eacim-ceramic-implantology.com

EACim website

Advancing the standards of ceramic implantology

A review of the 5th JCCI

Kreuzlingen, October 2025—The 5th Annual Joint Congress for Ceramic Implantology (JCCI) convened in Kreuzlingen this past October, reaffirming its status as a premier global forum for biological dentistry. Set against the autumnal beauty of Lake Constance, the event successfully merged high-level scientific discourse with the professional expertise that has become the hallmark of this annual gathering.

Timo Krause

Under the theme "Excellence in Action," the congress offered a scientific programme designed to challenge and expand the frontiers of modern implantology. The 2025 edition distinguished itself through a focused exploration of immunological aspects of dentistry and the increasing viability of zirconia implants in complex rehabilitation cases.

The podium featured a diverse roster of SDS Ambassadors and international experts who delivered evidence-based presentations and scrutinised clinical case studies. Unlike other dental conventions, the JCCI maintained a specialised focus, allowing for a deep dive into surgical protocols, soft-tissue management, and the long-term stability of metal-free solutions. The quality of the lectures reflected a maturing industry where ceramic implants are no longer an alternative, but a gold standard for biocompatibility.

While the scientific agenda remained the primary draw, the congress's structure also fostered invaluable networking. The environment encouraged open exchange, with minimal barriers between speakers and delegates. This collegial atmosphere—long noted as a defining feature of the JCCI—proved instrumental in cultivating mentorships that extend well beyond the lecture halls.

For many attendees, the highlight was the legendary White Night. On Friday evening, scientific rigor gave way to a celebration of life, connection, and community. Dancing and conversing under the stars reinforced the sense of belonging that characterises this movement, transforming professional colleagues into lifelong friends. The energy was unmistakably infectious—a testament to the spirit driving the advancement of metal-free dentistry.

The 5th JCCI not only showcased the latest technologies but highlighted the clinical reality of ceramic implantology today. Participants left Kreuzlingen with actionable clinical insights and a renewed commitment to patient health and biological principles. The event once again set a benchmark for how specialised medical congresses can balance academic rigor with genuine community building.

The organisers have announced that the congress will return to Kreuzlingen next year, expanding to a three-day format: 6th JCCI: 9–11 October 2026.

JCCI
www.joint-congress.com

JCCI website

High primary stability and aesthetic appearance

The whiteSKY implant system from bredent is among the best-documented zirconia implant systems worldwide. It has not only demonstrated excellent osseointegration and longevity in numerous studies but has also proven its efficacy in practice. In fact, the longevity of whiteSKY implants is comparable to that of titanium implants. The whiteSKY implant system offers two different implant types: the whiteSKY Tissue Line and the whiteSKY Alveo Line. The narrow whiteSKY Tissue Line implant provides sufficient space for both the hard and soft tissue and ensures an aesthetically pleasing appearance with its slightly tapered shape in the sulcus area, transitioning from the gingiva to the implant crown. The whiteSKY Alveo Line, on the other hand, is ideal for immediate loading as it fills the extraction socket. At the same time, it provides the treating doctor with the possibility to individualise the implant according to the specific requirements of the clinical case.

Optimal conditions for soft-tissue attachment and high mechanical stability

Both the Alveo and Tissue Line implants of the whiteSKY system offer optimal conditions for soft-tissue attachment due to their specially designed sulcus surface. The whiteSKY implants are made of hardened zirconia and are one-piece, which gives them particularly high mechanical stability. Thanks to the improved thread design and bone-quality-oriented surgical protocol, the whiteSKY implants achieve high primary stability, making them ideal for immediate loading. Studies have shown that immediate implant placement can improve the bone–implant contact by more than 50 per cent.

bredent medical GmbH & Co. KG, Germany
info@bredent.com
www.bredent-implants.com

Ideal solution for all indications

AWI ceramic implants from WITAR offer superior aesthetics, stability, accuracy and healthy osseointegration. A sophisticated design combined with modern materials make for an ideal solution for all bone classes and indications. Made of zirconium dioxide, AWI dental implants are metal-free and thus fully biocompatible. The cemented zirconia abutment allows an individual design. The transgingival shoulder has an ideal surface for interacting with soft tissue for any type of indication. The conical micro-thread allows great primary stability and axial loading. Studies have shown that the thread roughness of 1.7 µm leads to optimal osseointegration. Also, the surface is coated with a bioactive BIOVERIT I nano-coating. This surface-thread combination enables superior osseointegration for all bone classes. The self-tapping implant tip provides space for bone chips and low-compression insertion. AWI ceramic implants are now available in gingiva colour too, which leads to even better aesthetics and optimised risk areas.

WITAR Consulting GmbH, Germany
www.witar.de

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STEINSOHN MERIDIAN implant—advancing metal-free implantology

The MERIDIAN system was developed by a core team of clinicians who shared one mission: to create a ceramic implant that finally interacts and forms a biological bond with bone accelerating in the healing process. Led by one of STEINSOHN's founders bringing more than 30 years of prosthetic expertise, the project evolved to solve real clinical challenges dentists face every day.

At its center is BIO-X® material, an advanced evolution of the renowned Bioverit® glass-ceramic, refined in collaboration with the Fraunhofer Institute. BIO-X® delivers a performance that goes far beyond the classical idea of osseointegration. Instead of simply allowing bone to grow onto a surface (mechanically), BIO-X® supports a deeper, more functional connection. The material works with the bone rather than next to it, encouraging a healing response.

This true BoneFusion supports secondary stability and bone conditions. For the dentist, this means greater predictability, reduced risk of complications, and the confidence to work with a system that supports the body's own regenerative capacity.

Patients benefit from a metal-free, biologically harmonious material, clinicians benefit from reliability.

To support this approach, the STEINSOHN EDUCATION programme, led among others by Dr Rebekka Hueber, provides a structured pathway into modern implantology. The training connects surgical technique with functional principles, giving clinicians a clear framework for predictable outcomes and long-term success.

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