its shoulder design and type of connection, which can influence the long-term success of treatment with regard to the maintenance of bone and gingival tissue. With respect to the design, the implant presents a shoulder with bionic microgrooves for enlargement of the implant surface and reduction of stress peaks in crestal bone. The 45-degree internal connection has an anti-rotational hexagon and platform switching (Fig. 16).

In accordance with the clinical case planning, which anticipated a three-month osseointegration period after implantation, the implant connection areas were covered with cover screws (Fig. 17). The primary stability of the implants was measured by resonance frequency analysis (Osstell ISQ, Osstell). The values obtained were more than acceptable: implant stability quotient (ISQ) values of 71 and 68 (Figs. 18 & 19).

In the sequence, fractured tooth 27 was extracted and the surrounding granulation tissue was removed (Fig. 20), followed by our clinical protocol for cystic cavity treatment before immediate post-extraction implantation and/or bone regeneration. This entailed surgical alveolar cleaning with a saline solution and antibiotic (ciprofloxacin; Fig. 21) prior to filling of the cavity with a bovine bone substitute material (BEGO OSS; Fig. 22) hydrated with a saline solution and blood from the area. The graft area was then covered with a resorbable collagen membrane (BEGO Collagen Membrane; Fig. 23). Finally, the operated region was sutured and tooth 24 was restored with a full lithium disilicate ceramic crown (Fig. 24).

**_Conclusion_**

As the presented case has demonstrated, an implant system with a short drilling sequence allows the surgeon to use a simple and ergonomic surgical tray, which facilitates the work of the surgeon and support staff. Using threaded osteotomes, the dentist can place implants in areas with a narrow transverse diameter without bone regeneration. Furthermore, he or she can improve bone quality in the receiving area and reduce the drilling sequence in cases of immediate post-extraction implantation._

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Since 1985, the Bicon Dental Implant System has offered dentists a proven solution for missing dentition. The Bicon implant design comprises plateaus, sloping shoulders and a bacterially-sealed, 1.5° locking taper implant to abutment connection. With the plateau design, cortical like bone forms around and between each plateau. This Haversian bone allows for the routine use of 5.0 mm short implants.

The sloping shoulder provides the necessary room for bone to support interdental papillae that are gingivally aesthetic. Bicon’s 360° of universal abutment positioning provides for the revolutionary cementless and screwless Integrated Abutment Crown™, which consistently provides for a non-metallic aesthetic gingival margin.

Numerous studies suggest a predictable and more rapid osseointegration of implants using surface treatments in a combination of sand-blasting and acid-etching. Osteoblast proliferation and differentiation depends on the micro and nanostructures on the surface of the implant that closely mimic the natural bone matrix. MIS implant surfaces most closely mimics the natural cancellous (spongy) bone configuration and has enhanced surface purity when tested against other major implant brands using SEM technology.

Using surface characterization technology, MIS can guarantee that our implant surfaces uphold the highest standards of surface quality with a 99.8–100% pure Titanium-oxide surface, as well as the validation of full coverage by sand-blasting and acid-etching. These surface treatments help eliminate various surface contaminants while increasing the implant surface area, generating a hydrophilic surface with micro and nanostructures for optimum osseointegration.

Manufacturer News

Bicon Dental Implants


Since 1985, the Bicon Dental Implant System has offered dentists a proven solution for missing dentition.

The partnership between the two companies means that their combined regenerative lines cover all indications and preferences for oral tissue regeneration products—an ideal complement to Straumann’s dental implant and prosthetic systems. The company’s CEO, Marco Gadola commented: “botiss will enable us to offer an unparalleled range of regenerative solutions to support implant and periodontal procedures. Their quality, effectiveness, handling characteristics and clinical track record will have great appeal to our customers— as will the possibility to obtain every component for a complete solution from one company.”

At this year’s EAO congress—taking place 25–27 September in Rome—Straumann will start to exclusively distribute the botiss products in most Central and Western European countries.

MIS

Implant surfaces with enhanced purity

Long-term clinical success of dental implants is dependent on a number of critical factors including implant design, bone quality and quantity, surgical techniques and clinician’s skills. However, above and beyond implant materials and geometry, the topography and chemistry of the implant; surface treatment and surface quality is just as important in achieving high success rates.

It is estimated that as many as one in every two implant treatments requires bone augmentation. As a global leader in implant dentistry, Straumann has teamed up with botiss, a leading manufacturer of high-quality biomaterials for dental hard and soft tissue regeneration, to provide comprehensive solutions that address this need.

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Innovations for dental practices for 90 years

ULTRADENT was founded 90 years ago in Munich. With a host of ideas and its own concepts, the dental manufacturer has set new standards and is considered to be exemplary in the area of dental equipment. Practical design and the use of innovative technologies remain key requirements for product development. The company’s success story began in 1924, when Hans Ostner founded the electro medical equipment manufacturing company and, just a few years later, production of the first treatment units began. Thanks to successful products, visionary owners and committed employees, the family enterprise led by Ludwig Ostner and his son Ludwig-Johann developed into one of the most well-known suppliers of modern treatment units for dental practices in all areas of dentistry in the 21st century.

In addition to compact treatment units for general dentistry, the product programme includes special units for orthodontics, implantology, endodontics, surgery and pediatric dentistry. Ergonomic treatment chairs, operating lamps, integrated small-scale equipment and a modernisation concept for dental practices round off the range of products.

With vision U, the company is presenting a revolutionary multimedia concept, which is a quantum leap in treatment unit equipment.

The wishes and requirements of dentists, orthodontists, surgeons and their patients form the basis of the day-to-day work. User-oriented design, low-maintenance components and strict quality management ensure lasting satisfaction among the company’s customers and partners. The close partnership with specialised dental retailers guarantees comprehensive advice and knowledgeable, reliable service. All of this benefits the customers. The company is even able to fulfil individual and unusual requirements.

Dentaurum Implants

Flexibility meets efficiency

The newly developed instrument set in the tioLogic® ADVANCED surgical tray offers maximum flexibility for the implant site preparation with fewer instruments.

The drilling protocol of the instruments allows an atraumatic preparation individually adapted to the bone quality and an individual regulation of the drilling depth for maximum primary stability. All preparation instruments in the surgical tray can be used for the insertion of tioLogic® and tioLogic® ST implants. For the tioLogic® ST implant, the macro and micro design of the implants has been further developed under biomechanical aspects.

The new modified self-tapping thread geometry combined with the reduced thread pitch allows a fast and atraumatic implant insertion with a constant insertion torque, as well as high primary stability. In addition, the 7.0 mm implant expands the range of indication for reduced vertical bone availability. The implant also follows the well-proven S-M-L concept of the implant system and is, thus, compatible with all existing prosthetic abutment lines of tioLogic® implants. They are perfectly aligned with the accredited product range.

Nobel Biocare

Natural for guided bone and tissue regeneration

It is estimated that half of all dental implant cases require a regenerative procedure. In order to ensure the best possible outcome for the patient, a dental professional therefore needs regenerative materials that can be relied upon. That is where creos xenoprotec, the natural barrier membrane, comes in.

Designed for use in guided bone regeneration (GBR) and guided tissue regeneration (GTR) procedures, the material offers good handling properties and creates a favourable environment for healing.

As any movement can disrupt the formation of new bone, the ability to place a graft accurately and securely is essential for effective healing. For this very reason, the biodegradable collagen membrane offers good strength without compromising its handling properties. With a lesser increase in size when hydrated compared with competitive products, the product takes the guesswork out of trimming the membrane. It can be cut to match the treatment area when dry with less risk that it will not fit the defect site when applied. Easily unfolded and not sticky when moistened, the barrier membrane can be repositioned without removing the graft material. It is designed to behave exactly as is desired, allowing the clinician to focus on ensuring the best possible standard of care for the patient.

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