Straumann presents data and innovations that may change paradigms in implant dentistry

At the 22nd Annual Scientific Meeting of the European Association for Osseointegration in Dublin, Straumann provided an update on several initiatives that may lead to paradigm shifts in implant dentistry.

Roxolid SLActive—setting new standards, reducing invasiveness

The Group has just launched its Roxolid SLActive implants in a full range of sizes to help avoid bone augmentation procedures—saving patients trauma, discomfort, time and money, and thus increasing patient acceptance. Until now, only Straumann’s smallest diameter implants—which are designed for use in narrow spaces or where bone is limited—have been produced in Roxolid. But, based on extensive clinical evidence and with the goals of reducing invasiveness and making treatment possible for patients with insufficient bone, Straumann now offers all its implants in Roxolid together with the SLActive surface for accelerated osseous healing and the new Loxim Transfer piece for improved handling convenience.

Straumann’s new Roxolid 4 mm Tissue Level “Short Implant” was also presented in Dublin. This is the shortest implant Straumann has ever sold and it is designed to avoid extensive augmentation procedures in patients with insufficient vertical bone for conventional implants. It is backed by long-term clinical data, showing excellent performance over five years.

Speaking about Roxolid and SLActive at the Straumann Corporate Forum, Prof. David Cochran, Chairman of the Department of Periodontics at the University of Texas Health Science Center at San Antonio Dental School, noted: “These technologies will increase the clinician’s confidence to use shorter and narrower implants that reduce the invasiveness of implant treatment”.

New ceramic implant—an innovative evidence-based alternative

Clinical results were also published on Straumann’s new ceramic implant, which has now entered a controlled market release.

In terms of aesthetics, ceramic materials offer a significant advantage to metals in dental applications. Furthermore, ceramic provides a good biocompatible alternative for patients who ask for metal-free implants. However, until now, the main drawback has been concern about mechanical predictability.

Straumann has overcome this hurdle through an innovative manufacturing process followed by a “proof-test”, in which every implant is tested mechanically—a level of quality checking that is exceptional in the dental implant industry.

The aesthetic properties are also exceptional: unlike pure white ceramics, Straumann’s implant has a translucent ivory colour like natural tooth roots.
To further ensure reliability, Straumann has used a one-piece design (monotype), which integrates the implant and the abutment. In addition, the company has succeeded in creating a ceramic surface texture that is similar to, and performs like, the SLA surface used on its titanium implants to enhance and shorten the healing process.

The new implant is the result of a 7-year development program that has been driven by Straumann’s unique expertise in implant design and its 60 year heritage of material innovation. Typically, the company has chosen to test the product clinically before introducing it to the market. Initial results from the clinical program were published at the EAO: in a multicenter study with 41 patients, success and survival rates of 98% were reported with zero implant fractures after one year. Clinicians also reported pleasing aesthetic results and excellent gum tissue condition around the implant.

Based on the very positive results to date, a further 500 implants have been issued to clinics in a controlled market release. Providing the reports continue to be favourable, Straumann expects to launch the product on a broader scale in 2014.

Although the requirement for metal-free alternatives is not generally considered to be a major driver of the market, the availability of highly aesthetic ceramic implants with similar performance, flexibility and predictability to their metal predecessors would undoubtedly change implant dentistry. Straumann’s new ceramic implant may be a first step in this direction.

**Scientific update on new fully-synthetic bone regeneration material**

With the goal of developing an enhanced bone augmentation material that converts rapidly into vital bone and preserves volume, Straumann has been conducting research into synthetic bone substitutes focusing on innovative biphasic calcium phosphate ceramics. Good progress has been made in tailoring the composition to achieve optimal regenerative characteristics. Very encouraging pre-clinical results were presented in Dublin and clinical evaluation is underway.

**Collaboration agreement with 3Shape for CAD/CAM abutments with original Straumann connections**

Apart from the EAO news, Straumann announced a collaboration agreement with 3Shape, a leader in 3-D scanners and CAD/CAM software solutions, which makes it possible for users of 3Shape’s Dental System to produce customized restorations for Straumann Bone and Tissue Level implants with an original Straumann connection. To do this, 3Shape has integrated a Straumann library in its software, enabling dental technicians to model two-piece abutments using a pre-manufactured Straumann Variobase and a customized restoration that can be milled in the lab or a local milling centre.

Straumann firmly believes that using original components is in the patient’s best interest and its guarantee becomes invalid if systems are mixed. The Variobase implant kit offers labs a precise, reliable solution for producing their own abutments with an original Straumann connection. The agreement reflects Straumann’s efforts to offer the broadest range of prosthetic possibilities and flexibility with guaranteed precision and reliability.

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