Advanced Surface and Material Enable Straumann’s Bone Level Implants to Overcome Placement Challenges

Since entering practice in 1984, periodontist Robert A. Levine, DDS, has seen his implant practice grow to the extent that it now accounts for over 80% of the procedures performed in his Philadelphia, PA, office, Pennsylvania Center for Dental Implants and Periodontics.

Levine, who is Clinical Professor in Periodontology and Implantology at the Kornberg School of Dentistry at Temple University in Philadelphia, as well as Clinical Assistant Professor in Periodontology and Implantology, University of North Carolina School of Dentistry Chapel Hill in Chapel Hill, NC, has been using Straumann implant products predominantly since 1991. “My initial history was with Straumann® Soft Tissue Level Implants, which are designed for optimal preservation of the crestal bone and soft tissue stability. Our multicenter single-tooth Straumann studies in 1997 and 1999 on the regular neck and in 2003 on the wide neck implant showed it’s an excellent choice for single implant application or multiple implants in the same quadrant, allowing for optimal patient plaque control. Their ability to maintain the health of the soft tissue make both prosthetic therapy and maintenance easier for dentist, patient, and hygienist, as the tissue-level portion is very close to the bottom of the sulcus with a healthy biologic width, as seen around natural teeth,” says Levine.

As for Straumann’s bone level implants, he says they have enabled clinicians to place implants in situations that may have been too challenging previously—especially in the esthetic zone. In 2007, Levine was among the first clinicians to begin using Straumann’s bone-level implants, which are available in a prosthetic platform of either 3.3 mm or 4.1 mm and feature Straumann’s proprietary Roxolid® material and hydrophilic SLActive® surface. The SLActive implant surface, he says, has been shown to offer a number of advantages with regard to bone-implant contact and speed of osseointegration, while the strength of the Roxolid material compensates for size, enabling placement of smaller-diameter implants when there is inadequate space for a traditional implant. “This Roxolid material, the first titanium-zirconium alloy material designed specifically for dental implants, is stronger than pure titanium and has excellent osseointegration properties. It enables me to use smaller-diameter implants with confidence, because they offer the same clinical performance as regular-diameter titanium implants,” he says, adding, “This offers the ability to use a reduced-diameter implant if necessary in certain situations—such as non-molar reduced mesial-distal spaces or reduced buccal-lingual ridges. Also, extensive bone grafting may not be necessary, making the procedure shorter and less invasive for the patient.”

Levine notes, too, how the recent bone-level tapered implant facilitates the ability to treatment plan a partially or fully edentulous arch of teeth using four or more implants and angulating the distal implants, which provides the patient more teeth with fewer implants and less surgery. “The bone-level tapered implant with the tapered apical portion enables me to get a higher insertion torque than was possible previously, and also makes it easier to navigate around the patient’s anatomy. Our data will be published as part of a non-non-interventional multicenter clinical study.”

Also made with the Roxolid® material and SLActive® surface, Straumann’s Bone Level Tapered Implant has a tapered apex with three cutting notches, which makes this implant particularly suitable for situations involving soft bone or fresh extraction sockets, where primary stability is key. The tapered form enables placement in the underprepared osteotomy. It also gives the surgeon the flexibility to make the most of the patient’s limited anatomy such as buccal undercuts, converging root tips, concave jaw structure, or narrow atrophied ridges. “Because of the taper, I can place an implant in areas where in the past they might have created a buccal fenestration—especially in the esthetic zone. There is less concern of placing them around the mandibular nerve and mental foramen as well as when pushing sinus floors in an osteotomy procedure, as it is more of a site-specific push when we’re using this tapered implant.”