

Clinical CASE Straumann® BLT Implant Ø2.9 mm



WIEBE D.C. DERKSEN, DSD, MSC

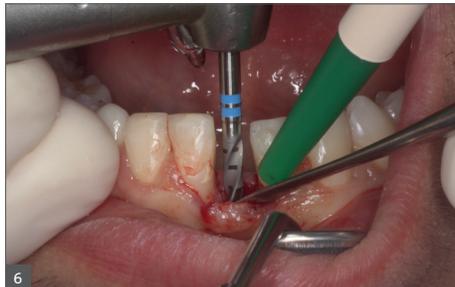
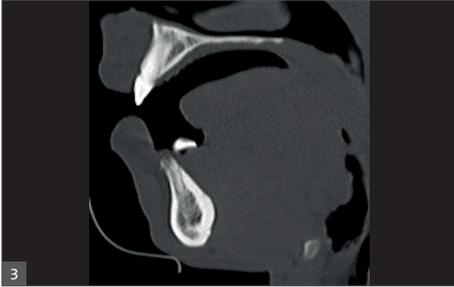
Wiebe D.C. Derksen graduated Cum Laude in dentistry from the University of Groningen in 2010. In 2012 he started his PhD at ACTA (Academic Center of Dentistry Amsterdam) on digitization in implant dentistry. In 2015 he graduated from the ACTA 3-year “Oral Implantology and Implant Prosthodontics” post-graduate program. He is a co-author of the current 5th ITI Consensus Review on Computer Guided Surgery, chairman of the Dutch Society of Young Implantologists, editor of Quality Practice dental journal, was awarded an ITI clinical research grant in 2013 and became an ITI Fellow in 2015. His current expertise and research focuses on guided surgery, intra-oral scanning, abutment choices, CAD/CAM and chairside (implant) restorations.

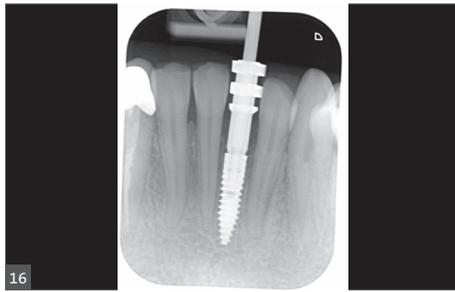
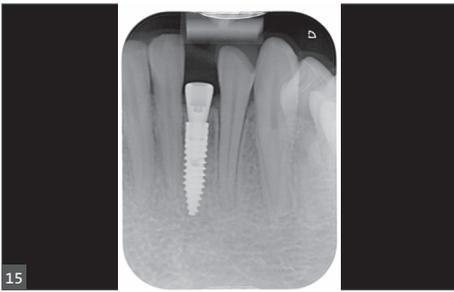
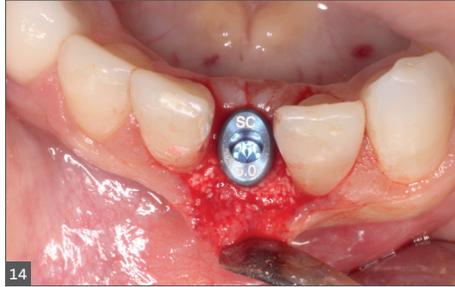
A 21 year old male patient presented with a missing 24 as a result of trauma. The clinical diastema was only 4.5 mm, however 5.5 mm of space was available at bone level (Fig. 01 & 02). The CT image showed sufficient bone width for implant placement without prior bone augmentation (Fig. 03). The anatomy of the underlying bone however, would direct the implant into a buccal angulation; a buccal screw access-hole or cement-retained restoration will therefore, be inevitable. Figure 04 demonstrates the clinical situation directly before implant surgery. After applying local anaesthetics, a small midcrestal incision, without releasing incisions, was made. The osteotomy was prepared using the new 1.6 mm needle drill and finished by using the 2.2 mm pilot drill (Fig. 05 & 06).

Since the bone was soft, no profile drill or tap was applied. The osteotomy was created within the bony envelope and the future implant site was surrounded by native bone. However a slight buccal contour change is discernible (Fig. 07). A Straumann BLT SC Ø2.9 Roxolid® SLActive® 12mm implant was selected and inserted with the correct buccal orientation (Fig 08, 09 & 10). The implant was surrounded by bone. However, due to the contour dip it was decided to augment the buccal contour (Fig. 11). Due to the shape of the lower incisors and the limited space, a special asymmetrical two-piece healing abutment was designed by the manufacturer and placed accordingly (Fig. 12 & 13). After abutment insertion the buccal contour was augmented using a slowly resorbing DBBM-graft (Geistlich Bio-Oss®) (Fig. 14).

Two single interrupted sutures (polypropylene 6-0, Hu-friedy) were used to close the surgical site. Directly after surgery a periapical radiograph was obtained to verify the implant position (Fig. 15). Three months after implant placement the implant was well osseointegrated and an open-tray conventional impression was obtained (Fig. 16). Due to the buccal angulation of the implant it was decided to create a screw retained zirconia coping luted on a 2 mm Variobase abutment with an adhesively cemented lithium disilicate veneer (Fig. 17 & 18). This restoration design guarantees a biocompatible transmucosal zone and prevents cement excess. Due to the asymmetrical Variobase abutment and this biocompatible restoration design, bone remodeling will be reduced (Fig. 19). This new implant diameter gives clinicians the opportunity to provide our patients with clinically acceptable implant restorations even in narrow spaces (Fig. 20).







Straumann North American Headquarters

Straumann USA, LLC

60 Minuteman Road

Andover, MA 01810

Phone 800/448 8168 (US) • 800/363 4024 (CA)

Fax 978/747 2490

www.straumann.us • www.straumann.ca
