

CS 9300 and CS 3500

Placement of Three Endosseous Implants for Three Crowns

Bart W. Silverman, D.M.D., Oral and Maxillofacial Surgery

Case Overview

A 61-year-old male presented for evaluation of a failing mandibular right bridge (Fig 1). Options discussed with patient included to remove the bridge and leave the area unrestored; replace with a mandibular removable partial denture; or restoration with implants. The patient elected for removal of the bridge and placement of three endosseous implants for three crowns.

Treatment

Under intravenous sedation, the mandibular bridge was sectioned anterior to the mandibular right second premolar and teeth #29 and #32 were surgically removed (Figs 1 and 2). In addition, the socket of tooth #29 was debrided and curetted. A mineralized bone graft with a non-resorbable cytoplast membrane was placed in order to reconstruct bone missing secondary to local periodontal bone loss in the area of tooth #29.



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Dr. Silverman is in private practice limited to Oral and Maxillofacial Surgery in New City, NY and is an attending Physician at Westchester County Medical Center, Department of Oral and Maxillofacial Surgery and Nyack Hospital, Department of Dentistry. He is also a Clinical Associate Professor at New York Medical College. He lectures nationally on several different implant systems and is President of the Bi-State and Hudson River Implant Study Clubs. He is a past president of the Rockland County Dental Society and previously served on the Board of Governors of the Ninth District Dental Society.

Dr. Silverman graduated from Fairleigh Dickinson University in 1982 Summa Cum Laude and received his doctorate in Dental Medicine in 1986 from Fairleigh Dickinson Jr. School of Dentistry, where he was a member of the Omicron Kappa Upsilon Honor Society. He completed his Oral and Maxillofacial Surgical residency at Westchester County Medical Center in 1989 and was Chief Resident during his final year. Dr. Silverman is currently a Diplomate of the American Board of Oral and Maxillofacial Surgery.

Clinical Case



Fig 1



Fig 2



After the patient healed, the plan was to perform guided surgical implant placement using an optical scan protocol. A CS 9300 was used to perform a cone beam computed tomography (CBCT) scan and the CS 3500 intraoral scanner was used to obtain digital intraoral impressions (Figs 3-5). Both files were merged into an implant planning software for fabrication of the surgical guide. Under intravenous sedation, three Biohorizon Tapered Internal implants were placed in teeth #29, #30, and #31 areas (Figs 6-8).



Fig 3



Fig 4



Fig 5





Fig 6



Fig 7



Fig 8

After three months, custom abutments were fabricated with the scanning of scanning bodies by the CS 3500 (Figs 9-12). The crowns were fabricated by Digident labs of Orangeburg, NY (Figs 13-15). The restorations were placed (Fig 16), and a post-operative panoramic image was captured (Fig 17).



Fig 9



Fig 10

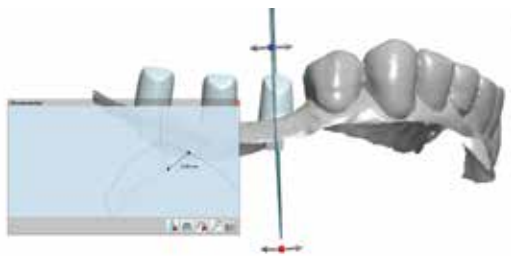


Fig 11

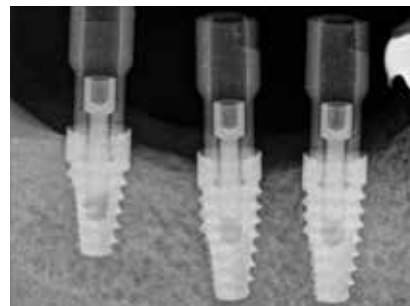


Fig 12



Clinical Case

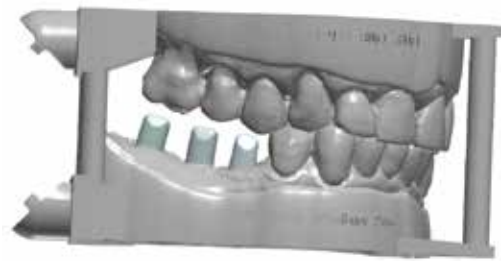


Fig 13



Fig 14



Fig 15



Fig 16



Fig 17

Testimonial

Performing CBCT and intraoral digital impressions allows me to completely digitize the implant planning process. By placing a scanning body and scanning it with the CS 3500, the custom abutments and crowns are produced via a digital model. The abutment and crown are planned virtually, reducing patient chair time and overall case turnaround time. The learning curve for the CS Solutions product line was minimal, and I have found that patients are extremely impressed with our new technology.

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