

With today's advanced implant technology enabling a much more digital workflow, my team and I can now help our patients achieve more effective restorations, in a quicker, more comfortable manner. As a recent example, a 77-year-old healthy male was referred to my practice for an implant rehabilitation of the maxillary left anterior region. He was recently in an accident and fractured the two pillars of his existing bridge 21 x 23. As a result, both teeth were not viable for fabrication of a new conventional bridge. **DIAGNOSTIC RECORDS AND PRE-OPERATION:** After acquiring the initial photos and radiographs, we captured a digital impression using the CS 3600 Intraoral Scanner. Carestream Dental. We also acquired a pre-operative CBCT scan. Both of these files – the CBCT and digital impression – were then sent to the dental lab technician for design. The technician imported the files into exocad software and designed a wax-up for the new implant bridge for teeth 21 x 23. Next, the DICOM data, a modified model (where the fractured roots of 21 and 23 were virtually extracted in Meshmixer software, the opposing arch model and the new wax-up from the lab technician were imported into the abutment design planning software from swissmada. Now the implants could be optimally planned to achieve the goal of immediate implantation and placement of a direct screw-retained bridge on teeth 21 x 23. Two Straumann BLT RC 4 1000 2.0mm implants were planned in regions 21 and 23. With a new import of the data into exocad, the lab technician milled a PMMA provisional bridge. The provisional bridge fit was verified using a surgical mouth form by Digital 3D model printing services. Two temporary cylindrical abutments were installed with a surgical guide. The surgical guide was designed in SMOP and then posted with a 5k x 5k x 75k (mm) resin-implant copolymer (Bio-crown) material. The surgical guide fit was also verified using the Dento-contra model. **OPERATION:** The surgical extraction of 21 and 23 – wire removal under local anesthesia, and a Straumann guided flap incision – was performed using the osteotomy of the implants. Two Straumann BLT RC SL Active 4 1mm, 5mm diameter implants were installed using a surgical guide. Both ISO values were above 65. Next, the provisional PMMA bridge was cemented onto the two temporary cylindrical abutments. The bone defects were filled with bone graft and covered with a double layer of Bio-Guide, both materials from Gel-bich. The occlusal contacts of the bridge were adjusted to improve the overall occlusion and contact pattern of the patient's teeth. The postoperative prescribed Amoxicillin and Clavulan acid for 7 days postoperative as infection prophylaxis and a prophylactic painkiller. Additionally, Chlorhexidine 0.2% was prescribed as an oral rinse. **FOLLOW-UP:** Suture removal was performed at the first control appointment, one week post-surgery. After three months, the referring dentist placed the final screw-retained full zirconia bridge. Postnatal control radiographs and the post-healing photographs were completed in my practice with a satisfactory clinical outcome and a very happy patient. **BENEFITS OF A DIGITAL WORKFLOW:** I have found that using digital technology offers a number of advantages for both my patients and my practice. For example, digital impressions can be taken digitally save time by reducing errors in the impression acquisition as well as eliminating the need for the traditional wax-up. And because the CS 3600 Intraoral Scanner works as open digital files, those files can be easily and directly sent digitally for transfer for faster fabrication and increased communication. Quicker, more efficient procedures also mean the patient spends less time in the chair, creating a more comfortable experience overall. This patient's case was awarded the Best Digital Implant Case at the 2018 Digital Dental Academy Awards, but the real opportunity resulted in a very happy, smiling patient. Of course, a case such as this requires teamwork. It requires things to be done right. So you need a talented and experienced team. In this case, that team included my practice staff, my dental technician, Andreas Schwab, Baar and my referring general dentist, Dr. Reto Sutterli. **Second, you need the latest tools and technology that allow for quick, efficient and comfortable procedures. The Carestream Dental solutions that helped make this case successful include the PROSTHETIC DESIGN AND PLANNING MODULE (PDIP), a streamlined workflow designed for efficiency, which integrates the CBCT and digital impression data and add virtual crowns and implants to create a more complete and coherent plan and the CS 3600 INTRAORAL SCANNER, known for its fast, accurate and easy digital impression capture.**

**This digital workflow improved my smile as well.**

—Dr. Beat R. Kurt  
 A great team plus great technology equals a great outcome. And that's the story behind the smile. With today's advanced implant technology enabling a much more digital workflow, my team and I can now help our patients achieve more effective restorations, in a quicker, more comfortable manner. As a recent example, a 77-year-old healthy male was referred to my practice for an implant rehabilitation of the maxillary left anterior region. He was recently in an accident and fractured the two pillars of the existing bridge, 21 x 23. As a result, both teeth were not viable for fabrication of a new conventional bridge. **DIAGNOSTIC RECORDS AND PRE-OPERATION:** After acquiring the initial photos and radiographs, we captured a digital impression using the CS 3600 Intraoral Scanner from Carestream Dental. We also acquired a pre-operative CBCT scan. Both of these files – the CBCT and digital impression – were then sent to the dental lab technician for design. The technician imported the files into exocad software and designed a wax-up for the new implant bridge for teeth 21 x 23. Next, the DICOM data, a modified model (where the fractured roots of 21 and 23 were virtually extracted in Meshmixer software, the opposing arch model and the new wax-up from the lab technician were imported into the SMOP implant planning software from swissmada. Now the implants could be optimally planned to achieve the goal of the data into exocad, the lab technician milled a PMMA provisional bridge. A great team and great technology equals a great outcome. **OPERATION:** Meanwhile, the surgical guide was designed in SMOP and then posted with a 5k x 5k x 75k (mm) resin-implant copolymer (Bio-crown) material. The surgical guide fit was also verified using the Dento-contra model. **OPERATION:** The surgical extraction of 21 and 23 – wire removal under local anesthesia, and a Straumann guided flap incision – was performed using the osteotomy of the implants. Two Straumann BLT RC SL Active 4 1mm, 5mm diameter implants were installed using a surgical guide. Both ISO values were above 65. Next, the provisional PMMA bridge was cemented onto the two temporary cylindrical abutments. The bone defects were filled with bone graft and covered with a double layer of Bio-Guide, both materials from Gel-bich. The occlusal contacts of the bridge were adjusted to improve the overall occlusion and contact pattern of the patient's teeth. The postoperative prescribed Amoxicillin and Clavulan acid for 7 days postoperative as infection prophylaxis and a prophylactic painkiller. Additionally, Chlorhexidine 0.2% was prescribed as an oral rinse. **FOLLOW-UP:** Suture removal was performed at the first control appointment, one week post-surgery. After three months, the referring dentist placed the final screw-retained full zirconia bridge. Postnatal control radiographs and the post-healing photographs were completed in my practice with a satisfactory clinical outcome and a very happy patient. **BENEFITS OF A DIGITAL WORKFLOW:** I have found that using digital technology offers a number of advantages for both my patients and my practice. For example, digital impressions can be taken digitally save time by reducing errors in the impression acquisition as well as eliminating the need for the traditional wax-up. And because the CS 3600 Intraoral Scanner works as open digital files, those files can be easily and directly sent digitally for transfer for faster fabrication and increased communication. Quicker, more efficient procedures also mean the patient spends less time in the chair, creating a more comfortable experience overall. This patient's case was awarded the Best Digital Implant Case at the 2018 Digital Dental Academy Awards, but the real opportunity resulted in a very happy, smiling patient. Of course, a case such as this requires teamwork. It requires things to be done right. So you need a talented and experienced team. In this case, that team included my practice staff, my dental technician, Andreas Schwab, Baar and my referring general dentist, Dr. Reto Sutterli. **Second, you need the latest tools and technology that allow for quick, efficient and comfortable procedures. The Carestream Dental solutions that helped make this case successful include the PROSTHETIC DESIGN AND PLANNING MODULE (PDIP), a streamlined workflow designed for efficiency, which integrates the CBCT and digital impression data and add virtual crowns and implants to create a more complete and coherent plan and the CS 3600 INTRAORAL SCANNER, known for its fast, accurate and easy digital impression capture.**

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