

DENTALZEITUNG

Fachhandelsorgan des Bundesverbandes Dentalhandel e.V.

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**Carestream
DENTAL**

**JEDES LÄCHELN HAT
EINE GESCHICHTE**

Digitale Workflows live erzählt
IDS 2019, Halle 10.2, Stand T40 - U49

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Diagnostik /
Implantologie

LEIDERBERICHT // SEITE 020
t 2D- und 3D-Aufnahmen
zur sicheren Diagnostik

ACHBEITRAG // SEITE 028
brücken auf Implantaten –
eine Alternative zu
Kunststoffteilprothesen

INTERVIEW // SEITE 060
Kompetenz mit System

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 PREPARATION:** 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 swissmida. 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 SLT RC 4 Implants (4mm 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 wax-up model printed by a 3D model printing services. Two temporary cylindrical abutments were installed with the wax-up model. The surgical guide was designed in SMOP and then printed with a 3D printer. The surgical guide was made of a clear material. The surgical guide fit was also verified using the Dento.com model checker. The surgical guide for 21 and 23 were removed under local anesthesia, and a Straumann guide for implantation was prepared from the osteotomy of the implants. Two Straumann SLT RC SL Active 4 Implants (4mm implants) were placed with the surgical guide both ISQ values were above 65. Next, the provisional PMMA bridge was cemented onto the two temporary cylindrical abutments. The long defects were filled with bone graft and covered with a double layer of Bio-Guide, both materials from Gel-blich. The occlusal contacts of the bridge were adjusted to improve the overall occlusion and contact pattern of the patient's teeth. The patient was prescribed Amoxicillin and Clavulan acid for 7 days postoperative as infection prophylaxis and a proper 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. Final control radiographs and the post-healing photographs were completed in my practice, such a satisfactory result outcome and a very happy patient. **BENEFITS OF A DIGITAL WORKFLOW:** I have found using digital technology offers a number of advantages for both my patients and my practice. For example, digital workflow can significantly save time by reducing errors in the impression acquisition as well as eliminating the need for a new model set-up. And because the CS 3600 Intraoral Scanner provides open digital files, those files can be easily and securely sent digitally for transfer for faster fabrication and improved communication. Quicker, more efficient procedures also mean the patient spends less time in the chair, creating a more comfortable experience overall. This positive case was awarded the Best Digital Implant Case at the 2018 Digital Dental Academy Awards, but most importantly, it resulted in a very happy, smiling patient. Of course, a case such as this requires teamwork. Implant settings to be successful, 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 Sutter. **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, with CBCT and digital CBCT and digital impression data and add virtual crowns and implants to create a more complete and accurate plan and the CS 3600 INTRAORAL SCANNER, known for its fast, accurate and easy digital impression.

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 PREPARATION:** 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 swissmida. 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 SLT RC 4 Implants (4mm 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 wax-up model printed by a 3D model printing services. Two temporary cylindrical abutments were installed with the wax-up model. The surgical guide was designed in SMOP and then printed with a 3D printer. The surgical guide was made of a clear material. The surgical guide fit was also verified using the Dento.com model checker. The surgical guide for 21 and 23 were removed under local anesthesia, and a Straumann guide for implantation was prepared from the osteotomy of the implants. Two Straumann SLT RC SL Active 4 Implants (4mm implants) were placed with the surgical guide both ISQ values were above 65. Meanwhile, the surgical guide was designed in SMOP and the final zirconia bridge was cemented onto the two temporary cylindrical abutments. The long defects were filled with bone graft and covered with a double layer of Bio-Guide, both materials from Gel-blich. The occlusal contacts of the bridge were adjusted to improve the overall occlusion and contact pattern of the patient's teeth. The patient was prescribed Amoxicillin and Clavulan acid for 7 days postoperative as infection prophylaxis and a proper 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. Final control radiographs and the post-healing photographs were completed in my practice, such a satisfactory result outcome and a very happy patient. **BENEFITS OF A DIGITAL WORKFLOW:** I have found using digital technology offers a number of advantages for both my patients and my practice. For example, digital workflow can significantly save time by reducing errors in the impression acquisition as well as eliminating the need for a new model set-up. And because the CS 3600 Intraoral Scanner provides open digital files, those files can be easily and securely sent digitally for transfer for faster fabrication and improved communication. Quicker, more efficient procedures also mean the patient spends less time in the chair, creating a more comfortable experience overall. This positive case was awarded the Best Digital Implant Case at the 2018 Digital Dental Academy Awards, but most importantly, it resulted in a very happy, smiling patient. Of course, a case such as this requires teamwork. Implant settings to be successful, 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 Sutter. **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, with CBCT and digital CBCT and digital impression data and add virtual crowns and implants to create a more complete and accurate plan and the CS 3600 INTRAORAL SCANNER, known for its fast, accurate and easy digital impression.

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Besuchen Sie unseren Messestand auf der IDS und nehmen Sie an spannenden **Live Vorträgen** teil.

Ihre Kollegen präsentieren klinische Fälle mit **digitalem Workflow**.

Weitere Informationen und eine Übersicht aller Vorträge finden Sie unter:

www.carestreamdental.com/IDS

**Sie finden uns in Halle 10.2,
Stand T40-U49**

