As CEREC® owners, you're at the forefront of technology in dentistry. More importantly, you're on the leading edge of providing your patients with the best that dentistry has to offer.

Just as dentistry experienced the “esthetic revolution” in the late 1990’s, dentistry is getting ready to experience the “implant revolution” in the coming years. As CEREC Doctors, you are going to have the opportunity to once again be on the leading edge.

I am going to share with you current techniques to further maximize your investment and improve your patient care utilizing CEREC for implant dentistry. I will also be giving you a sneak peak into some breakthrough technology involving CEREC and Sirona’s GALILEOS technology. In next quarter’s issue of CERECDoctors.com the Magazine I will go into specific details and showcase the new 3-D digital workflow for implant treatment.

THE TECHNIQUE

If you have already restored implants, you have probably experienced the shock of looking at your laboratory bill. In fact, I actually lost money on my first few implant restoration cases!

With the introduction of IPS e.Max CAD (aka “Blue Block”), CEREC finally has a material that is indicated by the manufacturer for use as an implant crown. This means that you can now officially use CEREC for many of your implant restorations.

As is the case with many things in dentistry, there are various ways to complete an implant restoration with your CEREC. What I would like to do is outline, in detail, the method I have found to be the most predictable and useful for many different situations.

For the simplest of cases you can torque the abutment onto the implant and make your restoration directly in the mouth. This would require near ideal implant position, little to no need for abutment modification, and perfect soft tissue control.

My preference is to work indirectly and have significant control over the final restoration. The indirect method allows me to modify the abutment without risking danger of heating the implant and having to grind titanium in the oral cavity. Additionally, the indirect method allows me to have greater control over soft tissue contours if necessary. Here’s a pictorial illustration of the implant restoration.

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From left to right, top to bottom:

» Fig. 1: An implant level impression abutment is placed on the implant to be restored.

» Fig. 2: An antagonist with bite registration is taken off the tooth to be restored.

» Fig. 3: A heavy-light PVS impression is taken of the implant level abutment.

» Fig. 4: The implant level abutment is carefully placed back into the impression.

» Fig. 5: The analog is added onto the impression and assistant pours the model using typical office stone.

» Fig. 6: A stock abutment is placed onto the analog and evaluated for any necessary modifications.

» Fig. 7: Once any modifications are completed the analog and model is powdered with optispray and optical impressions are taken with CEREC.

» Fig. 8: The crown is designed and milled; margins and contacts verified on model.

» Fig. 9: Close up picture shows IPS e.Max CAD milled restoration on abutment.

» Fig. 10: Using object fix the blue block is placed on pin and single fire/stain/glaze/crystallization is completed.

» Fig. 11: Final stain & glazed e.Max CAD block is verified on model.

» Fig. 12: Closeup picture of e.Max CAD final restoration after crystallization.

» Fig. 13: The abutment is torqued onto the implant and the restoration is seated using an RMGI cement.

» Fig. 14: Final radiograph showing intimate fit of restoration on abutment.
By using CEREC for fabricating my implant restorations, I have opened a new arena to maximize my investment in CEREC, given my patients fewer visits, decreased time to final restoration, enhanced my practice enjoyment, and increased my practice profitability.

**SNEAK PEAK**

Now the news that we have all been waiting for …

For the past several months I have been one of the few dentists in the world to beta test the upcoming CEREC-GALILEOS integration. The endpoint of this “fusion” of 3D data still has not been completely realized. In fact, it can open so many doors it may completely revolutionize the way we look at and perform implant dentistry.

The Sirona GALILEOS is a CBCT X-ray that allows us to take 3D radiographic images of our patients. This type of data and imagery is especially useful for implant planning.

Two of the most common issues facing implant-restorative dentistry are the difficulty in restoring implants that are placed with little regard to the final restorative position and the time consuming and confusing process of making an implant temporary. The fusion of CEREC and GALILEOS will eliminate this!

You will take CEREC Bluecam images of the quadrant for implant treatment and design your final crown. This data will then be “fused” to the CBCT GALILEOS data (Figures 15-16). With complete visualization of the restoration (CEREC data) and bone (GALILEOS data) in three dimensions, you will be able to plan the placement of your implant based on final crown positioning (Figure 17). From here, you can order an implant placement guide and have the data necessary to fabricate your temporary and final restoration.

I hope you are as excited as I am about the possibilities. In the coming issues I will be sure to bring you the most pertinent and practical applications of this technology directly to you, my fellow CEREC Doctors.

For a more in-depth look at GALILEOS, see Dr. Neal Patel’s article on page 14.

Be sure to pick up the Q4 issue of CEREC Doctors.com the Magazine for Part II of Dr. Agarwal’s CEREC and Implants article series.