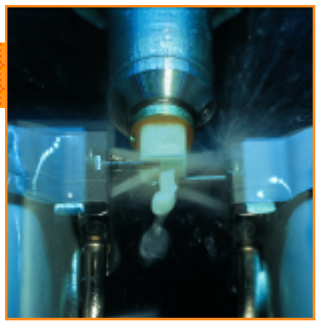
CEREC World

User Tips for Efficiency & Profitability



Clinical Tips Part 2: CEREC Powder & Optical Impression

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Last month, our CEREC World column focused on tooth preparation for CEREC restorations. The next steps involve accurately capturing the optical impression from which dentists can design the final restoration.

Prior to capturing the optical impression, the teeth need to be coated with a thin, opaque layer of white titanium dioxide powder in order to achieve uniform scatter of the light that clearly defines the surface anatomy. Once the tooth has been properly prepared, a clear liquid adhesive is generously applied with a small brush to all surfaces of the prepared tooth and the adjacent teeth that allows maximum adhesion of the powder.

After the liquid is blown thin with air, the powder is then applied evenly throughout the area with an aerosol propellant spray can apparatus. Uneven or blotchy application of the powder will result in an inaccurate optical impression.

Once powdered, the area is now ready for the optical impression with the infrared camera. The camera features a telecentric fixed focus lens with a 10mm depth of field. The sharpness of the image depends upon the distance between the camera face and the preparation. With the camera held in place over the teeth, the dentist looks at the computer monitor and first rotates clockwise or counterclockwise in order to align the teeth along the long axis of the video screen. Once aligned, the dentist must then tilt the lens so that it aligns parallel to the occlusal surfaces. If tilted excessively in a mesial or distal angle, the result will be a partially out of focus image. The image is captured via a foot pedal mounted on the underside of the CEREC unit.

Powder/Optical Impression Guidelines:

- Generous liquid application - blow thin
- Even titanium dioxide application without clumps or thin areas
- Close proximity of camera face to tooth surface
- Rotate camera to align teeth with vertical axis of screen
- Assure camera angulation is parallel to occlusal plane
- Be able to clearly read all pertinent preparation lines on screen

The importance of quality optical impression technique with CAD/CAM dentistry is equal to that of traditional crown and bridge impression methods in achieving a well fitting final restoration. With a little practice beforehand on typodont models, most dentists get the hang of the CEREC powder and impression technique intraorally very quickly. Most take no more than 60-90 seconds to achieve a good result before moving on to the design phase. DT

What are your concerns?

If you have a CEREC question, please send it by fax to 480-598-3450 or send by email to: dwvdds@earthlink.net or carol@dentaltown.com

Douglas Voiers is a reconstructive and aesthetic dentist who has won top honors in the annual Dental Economics' Practice of the Year Awards. He maintains a full time practice in Avon Lake, OH and is currently a clinical instructor for restorative dentistry at the Great Lakes Educational Center in Southfield MI. Douglas recently earned a fellowship in the World Congress of Microdentistry. He is the Director of clinical dentistry at the Great Lakes Regional Educational Center in Southfield Michigan where he teaches CEREC and advanced technology dentistry, the ICOI and the AACD. Douglas can be reached at 440-933-3270 or by email at: dwvdds@earthlink.net.

Mark Morin, DDS, FWCM, graduated from the University of Detroit in 1985 and immediately started his new practice in Southfield, MI. He became one of the first dentists in North America to begin using CEREC I technology. He currently places 10-15 CEREC restorations daily and continues to study CEREC technology extensively in Germany and Switzerland with inventor, Dr. Werner Mormann. Dr. Morin maintains a 6000 sq ft office and ExperDent center. He is one of 10 internationally certified CEREC trainers in North America and has had the distinction of training some of dentistry's most well-know clinicians such as Dr. Rela Christensen and Dr. Howard Farran. Mark can be reached by email at: drmorin@earthlink.net or by calling 248-828-9989. Visit his website at www.drmorin.com.