CROWN RESTORATION MADE BY CEREC ZIRCONIA

1. After a cuspal fracture in a tooth restored with amalgam, I proposed a CEREC crown made of full contour zirconia.

2. I drew the preparation margins on the virtual model with the help of the automatic margin finder.

3. The CEREC software reconstructs the crown automatically with the Bijou algorithm.

4. In the preview, I checked the position of the crown in the ceramic block. Adjustments could be made at this point if needed.

5. Finally, I placed the finished polished crown made from pre-colored zirconium oxide in the patient’s mouth.

FABRICATION OF ZIRCONIUM OXIDE RESTORATIONS IN JUST UNDER TWO HOURS

1. Designing on CEREC AC: Excellent initial proposals are generated with the Bijou algorithm (8 min).

2. Milling: Zirconium oxide is milled in enlarged form. This allows for more detailed finishing of the structures (12 min).

3. Sintering: The assistant places the restoration in the CEREC SpeedFire furnace and starts the sintering process with a touch-pad (16 min).

4. Fitting and finishing: The restoration is cemented in the usual way. The remaining cement residue is then removed and the margins smoothed (8 min).

5. Polishing and glazing: The restoration can be individualized and glazed. It is ready for placement.

TITANIUM RELIABILITY

- Lightweight
- Non-slip body
- 22 Watt
- Powerful torque
- Quiet operation
- No more bur fly out
- Ceramic bearings
- Compatibility with other couplings
- 1 year guarantee

Producing Zirconium Oxide Easily in The Practice

My experiences with CEREC Zirconia have been very positive. Fabricating dental prostheses from full contour zirconia using CAD/CAM technology is easy, we familiarized ourselves with the process very quickly. This is not surprising since the process is hardly any different from producing other milled restorations. By means of full anatomical zirconium oxide chairside fabrication with CEREC becomes even more versatile and economical. A great benefit for my practice


Dr. Michael Skramstad is a dentist in Orono, Minnesota, USA. He specializes in restorative and cosmetic dentistry as well as implantology. He is a certified trainer for Patterson Dental and lectures internationally on digital dentistry.

INFORMATION

MINUTES

1. The CEREC SpeedFire sintering furnace accelerates processing time.

2. The new CEREC SpeedFire sintering furnace makes it possible to fabricate zirconia restorations in one appointment.

3. The CEREC SpeedFire sintering furnace enables me to prepare the tooth in a substance friendly way. In addition, restorations can be placed more easily.

4. Traditional cement rather than adhesive bonding is used.

5. Patients may return in a few days for a final checkup, polishing and final cementation.

High-Temperature Furnace for More Speed

By Dentsply Sirona

For high masticatory forces, zirconium oxide is the material of choice. The new CEREC SpeedFire sintering furnace accelerates processing time. In this way Dr. Michael Skramstad, from Minnesota, USA, can provide his patients in a single-visit. Zirconium oxide is almost as hard as dental alloys. The biocompatible ceramic has been successfully used in dentistry for over 15 years – first only as a veneering framework material and for the last six years also for full anatomical crowns. This gives me the assurance to now use the material chairside when placing a crown that still has to sit perfectly years from now.

Besides its high stability and durability, zirconium oxide has two more important advantages: The flexural strength of the material allows me to fabricate restorations with very thin wall thicknesses. This enables me to prepare the tooth in a substance friendly way. In addition, restorations can be placed more easily.

Traditional cement rather than adhesive bonding is used.

Making Good Use of Waiting Times

Fabricating and placing full contour zirconia restorations in one appointment is possible due to the fact that I can sinter dry-milled zirconium oxide very quickly with the new CEREC SpeedFire furnace. For one crown, the device usually requires between 12 and 13 minutes. The entire production process therefore takes less than 90 minutes. Patients do not mind having to wait such a short time for their crown and use the time to read or watch a film. There is no need for them to make a second appointment and they do not require a temporary. An immediate restoration makes a lot of sense from a clinical perspective because it allows for better preservation of the remaining tooth substance.

I personally devote only around 30 minutes of my work time to this process. In the meantime, I do the preparation, take an impression of it with CEREC Omnicam, design the restoration and then fit it into place. I then delegate the remaining work steps to my assistant. While the crown is milled on the CEREC MC XL Premium Package, I tend to other patients. My assistant also operates the CEREC SpeedFire. The user interface is self-explanatory. The restoration just needs to be placed on the occlusion surface and the start button pressed – that is all. Dental assistants can also do polishing, individualization and glazing. I only come back in the treatment room once the crown has been glazed and is ready for placement.

I immediately included the fabrication of full contour zirconia crowns as part of my services.
Pink & White Aesthetics with BEAUTIFIL II

By SHOFU

BEAUTIFIL II ENAMEL and GINGIVA from Shofu are developed as a complementary line extension of BEAUTIFIL II to easily create life-like direct aesthetic restorations. A special one-push syringe ensures controlled dispensing of the smooth and creamy material that is easy to sculpt into fine details and recreate the surface textures seen in natural teeth & gums.

Integration of nanofillers and newly developed organic-inorganic filler complex into a unique silanol modified resin network imparts BEAUTIFIL II ENAMEL and GINGIVA with exceptional handling characteristics, longer working time, high abrasion/wear resistance, stable shades, effortless and superior polish with sustained polish retention for lasting aesthetics. Shofu’s proprietary S-PRG fillers offer additional fluoride benefits and anti-plaque effect on the restoration surface.

BEAUTIFIL II ENAMEL is available in 4 naturally translucent and opalescent, value based shades that facilitate life-like shade reproduction and value adjustment in the final restoration to meet individual clinical needs.

BEAUTIFIL II GINGIVA is available in 5 natural shade variations of pink to match all ethnicities and easily mimic patient’s individual gum while restoring areas with receded or missing gums/papilla, cervical defects, root caries/erosion, exposed PFM margins and abutments to achieve red and white aesthetic harmony.

Dentsply Sirona appoints new group Vice President of CAD/CAM Systems

By DTI

BENSHEIM, Germany/SALZBURG, Austria: Dentsply Sirona has announced that Dr Frank Thiel will be succeeding Dr Joachim Pfeiffer as head of the company’s strategic CAD/CAM business unit. Owing to the Dentsply–Sirona merger at the beginning of 2016, Pfeiffer’s tasks as chief technology officer will keep expanding and Thiel, who was previously involved in the development of the CEREC Omnicam 3-D intra-oral scanner, will take over his responsibilities in the development, production and acquisition sections of the CAD/CAM division.

Thiel will be sharing the management position of the division with Roddy MacLeod, who will be in charge of product management, marketing and control.

Thiel has been working in the company’s CAD/CAM division for more than 12 years. From 2009 to 2016, he held the position of head of development for optical 3-D measurement technologies, and he oversaw basic responsibilities in the development, production and acquisition sections of the CAD/CAM division.

Thiel began as a development engineer at the then Sirona Dental Systems and took over management of the development projects soon afterwards. Prior to his career at the company, Thiel was involved in basic research in the fields of atomic, molecular and electronic physics, as well as photonics.

A-SILICONE IMPRESSION MATERIAL

PRESENTER

The Original

New Putty super soft consistency - very smooth and easy to mix -
PRESENTER wash materials show perfect flow behavior under pressure - to capture all marginal details precisely

New, fresh colors provide better contrast and more accurate detail readability -

REINFORCED COMPOSITE BLOC FOR PERMANENT RESTORATION

BRILLIANT CRIOS

High performance – made brilliant

High flexural strength – resistant restorations -
Tooth-like modulus of elasticity – shock absorbing -
Wear resistant and gentle to the antagonist.
Congress on Guided Biofilm Therapy (GBT)

By E.M.S.

DIVONNE LES-BAINS, France: More than 30 years ago, EMS developed AIR-FLOW® and PIEZON® NO PAIN and since then continuously improved these technologies. In July 2016, it is time to launch the next game changer: EMS presented the Guided Biofilm Therapy (GBT). The GBT revolutionizes what Axelsson and Lindhe started more than 40 years ago and will set a new standard in dental maintenance and oral hygiene. International guest speakers from Universities, Dental Offices and the Swiss Dental Academy were invited to a two-day conference in Divonne Les Bains. The summit provided a stage where dental professionals could discuss biofilm management, the main causes of biofilm and the clinically effective ways to remove it.

The Game Changer

“I believe that education and awareness is key to making game changers out of our colleagues.” (Jolene Pinder, Dental Hygienist)

EMS organised the GBT conference under the heading “How to manage biofilm and its effective removal?” The presented ‘Game Changer’ was developed in close cooperation with universities, dentists, dental hygienists and EMS specialists. Therefore, it is no surprise that Nina Von De Fenne, prophylaxis professional and trainer at the Swiss Dental Academy, is “proud to be a game changer.” Indeed, dental maintenance and oral hygiene has never been as important as it is today. The participants feel like pioneers who experience a high standard homogeneous solution for every patient. And it seems that a new gold standard has been created in the field of prophylaxis, coming straight out of Switzerland.

The GBT is safer, more comfortable and more efficient than conventional methods. Thus, it is definitely time to change the game!

The Game Changer was developed in close cooperation with universities, dentists, dental hygienists and EMS specialists. Therefore, it is no surprise that Nina Von De Fenne, prophylaxis professional and trainer at the Swiss Dental Academy, is “proud to be a game changer.” Indeed, dental maintenance and oral hygiene has never been as important as it is today. The participants feel like pioneers who experience a high standard homogeneous solution for every patient. And it seems that a new gold standard has been created in the field of prophylaxis, coming straight out of Switzerland.

I believe that education and awareness is key to making game changers out of our colleagues.

Try it and you like it

“GBT meeting made me realise that AIR-FLOW® can be used not only in periodontal maintenance but also for active treatment – periodontitis, peri-implantitis and peri-implant mucositis.” (Dr. Dong Xiao Xiao, Periodontist)

The GBT, which is a detailed clinical protocol, ensures a high standard in dental maintenance and facilitates complete removal of biofilm sub- and supra-gingivally. The GBT aims to bring a fast and comfortable treatment to any patient profile with the use of the high technology powder PLUS based on Erythritol, the AIR-FLOW® and the PIEZON® NO PAIN technologies. Be it children, sensitive patients, recall or pre-surgery prophylaxis, the GBT offers a complete solution. The GBT, this new, simple and predictable approach to professional dental maintenance, begins with the use of a disclosing agent. It guides the dental professional to see the biofilm normally not visible to the naked eye and to demonstrate biofilm presence to the patient. This procedure is followed by removal of biofilm and stains from the hard and soft tissues sub- and supra-gingivally by using AIR-FLOW® with the very fine Erythritol powder PLUS. After this procedure, calculus and concretions are easy to detect and can be removed using PIEZON® NO PAIN and the PS instrument. Scaling is only needed if there are hard deposits. Therefore, GBT provides a minimal invasive therapy. Afterwards, the GBT is completed with a quality control and the recall management.

Nevertheless, the presentation of the detailed GBT protocol was only one of the highlights of the conference. The guest speakers like Prof. Magda Mersi, Dr. Klaus-Dieter Bastendorf, Eva Müller, Karen Davis and Brigitta Schönheiz, board member of the European Dental Hygienist Federation, offered a course on pathogenic biofilm, the history of biofilm removal and the challenges of clinical cases. With a total of 18 speakers a variety of topics was treated, including hand piece technique and literature analysis. The attendants were professors, dentists, dental hygienists and dental assistants, actively involved in dental prophylaxis either at the clinics or in dental universities. The aim of the congress on Guided Biofilm Therapy was essentially to build a common understanding of the need to introduce the approach towards prophylaxis – based on knowledge, experience and supported by clinical evidence. Every presenter shared his personal opinion on best practices including challenges which were differentiated and country specific.

GBT – no conflict of ethics and profitability

“I prefer to earn money with the health of my patients (GBT), than the diseases of my patients!” (Dr.)
It has long time proven that oral biofilm causes caries, gingivitis, peri-osseous, peri-implant and periodontal disease, the main causes of tooth and implant loss. Helping patients to keep their natural teeth is one of the highest ethical values for a dentist — and the GBT makes this possible. As the dentist is not only a medical scientist, but also an entrepreneur, the profitability of a treatment is an important aspect. With the GBT the dentist can delegate this service to a dental hygienist and therefore generate further revenue and profit. Additionally, the GBT opens the possibility to run a successful recall operation in a dental cabinet. Empowering on patient motivation and individual oral hygiene education, the GBT strengthens the relation between the dental professional and his patient by increasing patient satisfaction and personal well-being. Following the GBT protocol, patients are not only enthusiastic for a dental prophylaxis but it also serves them as an incentive to keep their oral hygiene at the optimal level even at home. Thus, the GBT provides a sustainable and long-lasting improvement of health and attractiveness. As the GBT offers a maximal patient comfort, it subsequently increases the patient recall.

**Oral health: Why annoy when you can enjoy**

“With Guided Biofilm Therapy, no more patients complain, only smiles!” (Prof. Magda Mensi, University of Brescia)

The GBT congress emphasized the importance of high-quality dental maintenance. The effective removal of biofilm is paramount to long-term oral health. Thus, it’s definitely time to provide the neglected fields of dentistry — dental maintenance and prevention — the reputation they deserve. Indeed, the awareness of dental care and oral hygiene has never been as high as it is today. And that is why the GBT protocol is so vital. Conventional dental prophylaxis with hand instruments, rubber cups and abrasive pastes — the so-called gold standard — is not up to date anymore but is still used by over 80% of dental professionals. These methods induce recession when used in a sulcus, create scratches on exposed dentine or cementum, remove natural enamel structure and obviously, this treatment is not comfortable for the patient at all. Jasmina Kariski, dentist, has only one answer to this: “Guided Biofilm Therapy — finally to replace the traditional way of thinking that endodontics is the savior.”

**Perio for a better life**

“GBT and its focus on general health aspects reducing massively the overall oral bacterial load — thus reducing health risks” (Klethis Manolakis, Prosthodontist)

Compared to conventional methods, the GBT is more comfortable, safer and makes professional dental maintenance feel more like a wellness treatment instead of an unkoved medical examination. The AIR-FLOW® Powder PLUS has a grain size of only 14 µm, therefore it feels very soft, even if applied sub-gingivally! The presentations convinced the attending dental professionals: “GBT meeting encouraged me to use PLUS powder for all my periodontal and implant maintenance patients,” states Jolene Pinder, Dental Hygienist. And with PIEZON® NO PAIN — composed of PIEZON® NO PAIN Module, Original PIEZON® handpiece and Original SWISS INSTRUMENTS PS — the removal of calculus and concrements is comfortable and safe. And the long-term benefits are remarkable as well. By avoiding over instrumentation you preserve the natural tooth structure, the implant surface and prevent root sensitivity. For the clinician, the approach of GBT reduces treatment time and hand fatigue with minimal use of ultrasound. The safe and comfortable treatment is easy to adapt and decreases recolonization by biofilm due to antibacterial properties of Etryx®. Given the resulting advantages, it is not surprising that the prevailing mood at this congress was dominated by an atmosphere of striving, positive spirit and overall optimism, confidence and trust in the future. It’s time to shape the future of dental prophylaxis — it’s time to change the game adopting the GBT protocol in dental maintenance.

**SDA – Swiss Dental Academy**

“SDA in China encourages the training to share the ‘real’ knowledge to help the clinicians and patients through evidence based dentistry.” (Dr. Dong, Xiao Xiao, Periodontist)

The GBT is based on the state of the art technologies AIR-FLOW® and PIEZON®. They are easy to handle and guarantee a high level of safety. Therefore, the GBT is easy to adapt for dental professionals. To learn more about the GBT and all the benefits it provides, we highly recommend the Swiss Dental Academy.

Experienced dental hygienists present clinical evidence for the GBT, offer pragmatic tips for the daily business and in the hands-on part of the course, the participants have the opportunity to experience the superiority of AIR-FLOW® and PIEZON® one-by-one. One thing we can certainly take from SDA and the congress on Guided Biofilm Therapy is the GBT, or in other words: ‘Get a much Better and more sustainable Treatment!’

**“With Guided Biofilm Therapy, no more patients complain, only smiles!”**

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Klaus Dieter Bastendorf, Dental Specialist in Prevention)

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