INTERVIEW

PERFECTER OF THE GOOD: KURT ZUBLER

COLOR DROPS: PROGRESSIVE WAX-UP IN COLORS

ULTRACONSERVATIVE ESTHETIC REHABILITATION USING VENEERS

A DIFFERENT PERSPECTIVE IN OCCLUSION

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DR. JAVIER VASQUEZ
100% PRETTAUF® BRIDGE
MADE BY CAD/CAM

Occlusally screw-retained maxillary Prettau® restoration on gold-coloured anodized titanium bases

DENTAL TECHNICIANS:
DT. Tauber Evi - Maria,
Federico Presicci
(Dentallabor Steger, Brunico, Italy)

DENTIST:
Dr. Julie (Adamczyk) Eipers
(UNC School of Dentistry,
University of North Carolina, USA)
BASELINE SITUATION

The patient had previously received an implant-supported Prettau® Zirconia mandibular restoration, produced by our laboratory to the patient’s complete satisfaction. She now requested a high-quality fixed implant-supported restoration for her maxilla as well.

The upper and lower jaw were to be a perfect aesthetic match.

The implants were inserted at sites 16, 13, 23 and 26. The dentist provided our laboratory with photographs of the patient taken from different angles, articulated maxillary and mandibular master casts and a diagnostic model of the situation.

Prettau® Zirconia is the material of choice for this restoration and meets the patient’s aesthetic and functional needs thanks to its high translucency and flexural strength.

The upper model with implants and Zirkonzahn scanmarkers (titanium bases for AstraMua 20°).

The upper model with present restoration.

The lower model (antagonist).

Following the above process, registration scanning was performed so that the models could virtually be brought into occlusion (the scanned versions of the upper and lower models were automatically adjusted to each other).
Then a bite-indexing scan was performed to align the virtual casts in occlusion (i.e. to match the survey scans of the maxilla and mandible).

As the casts had been positioned in the articulator on the basis of a face-bow registration, we also scanned the dentist’s articulator complete with the casts. The S600 ARTI scanner is capable of scanning any articulator and transferring the data to the virtual articulator of the modelling software on a 1:1 basis.

By default, a resin prototype is manufactured to for the resin try-in to ensure the quality of the planned restoration. This makes it easier to execute the practitioner’s instructions and facilitates any subsequent adjustments that may become necessary. The existing denture was used as a diagnostic model for the mandibular resin prototype in TEMP Basic. TEMP Basic is a flexible resin for restorations from single crowns to extended bridges and serves as a short-term provisional.

For aesthetic reasons, and taking into account the physiognomy of the patient, the Thalia denture teeth were selected teeth from the Heroes Collection tooth library and adapted to the specific situation. The Heroes Collection is a virtual, intelligent tooth library consisting of ten natural, aesthetically pleasing tooth sets, each perfectly suited for the respective tooth shapes.

Following the virtual set-up, the case was nested in the blank and tested for correct occlusion. The virtual articulator displays premature static and dynamic contacts and corrects them automatically. The framework was positioned in the blank, milled in TEMP Basic using the modular upgradeable M5 simultaneous milling unit with 5 + 1 axes, then finished and veneered with Zirkonzahn Gingiva Composite Fluid Tissue 4 (light) and 5 (medium). The Gingiva composites are high-viscosity light-curing veneering composites for building up gingiva analogues on resin frameworks. A conspicuous aspect of this case is that, at the request of the dentist, two TEMP Basic restorations were made and veneered. One of them was left in the mouth as a short-term aesthetic provisional, whilst the other was inspected for function and aesthetics and then sent back to the laboratory as a wax-up.

During the chairside try-in, minimal adjustments were made to the occlusion of the provisional denture. This situation was then used for reference at the laboratory. The model was scanned and matched one more time.

The changes were adopted for the definitive Prettau® Zirconia restoration and milled with the M5 unit.
To obtain maximum aesthetics, parts of the anterior and posterior surfaces were slightly reduced. This cut-back can be performed either manually or else virtually, in the modelling software – depending on the technician’s preference. In this case it was created from the left to the right canine. It is important, however, to leave a functional incisal edge at full contour to obtain some degree of edge protection. By doing so, ceramic chipping can be eliminated almost entirely.

The structure was stained with Colour Liquids Prettau® Aquarell using the brush technique and sintered. For this purpose, Zirkonzahn now offers the convenient Colour Liquid Prettau® Aquarell Pen Brush with its integrated Colour Liquid reservoir.
The use of titanium bases can reduce stress within the zirconia structure, avoiding cracks and chipping. In this case, the titanium bases were anodized to a golden colour using Zirkonzahn's Titanium Spectral-Colouring Anodizer. This reduces the transparency of the zirconia, making the titanium less visible and reducing the grey value of the restoration.

For fine-tuning, the sintered structure was stained with the new ICE Zirkon Stains 3D by Enrico Steger. ICE Zircon Stains 3D are three-dimensional stains with a special depth effect. By incorporating the stains directly into the glaze material applied to the structure, the stain and glaze firings can be consolidated in one step.

The completed restoration was returned to the dentist for final delivery to the patient. The result of the work was greatly appreciated by all those involved.
The completed restauration in situ.

**DR. JULIE (ADAMCZYK) ELPERS**
- Born and raised in Chicago (Illinois, USA)
- Bachelor of Science in Biochemistry, Notre Dame University, 2007
- Doctorate in Dentistry (DMD), Harvard School of Dental Medicine, 2011
- Master of Science in Prosthodontics, University of North Carolina Chapel Hill, 2014

Her primary clinical and research interests are centered around treatment of the edentulous maxilla, with particular interest in full-arch implant-supported reconstructions.

**DR. TAUBER EVI - MARIA**
- Born in Bressanone (South Tyrol, Italy)
- A professionally trained Dental Technician, Landesberufsschule Baden (Vienna), Austria and professionally trained Orthodontic Assistant, University Clinic Innsbruck, Austria
- Since 2012 working as a Dental Technician at the dental laboratory and education centre Dentallabor Steger, Brunico
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