

Electroforming bar-retained restorations on implants

Esthetical, precise, tried and tested



The initial situation

The 54-year-old female patient had a full temporary denture in the maxilla and a partial temporary denture with bent clasps in the mandible.

Since the patient's profession included tasks in public, she made high demands on her definite dental restoration:

- proper retention
- good phonetics and esthetics
- without inclusion of the palate
- a good price-performance ratio

After extensive information and consultation sessions, the patient chose a telescopic denture for the mandible and a bar-retained denture based on 6 implants for the maxilla.

The realization

The patient's maxilla was furnished with 6 implants. After individualizing the abutments, a bar was cast out of a non-precious alloy, then it was processed and polished.

In order to achieve perfect fit and good functionality, the bar attachment out of 24K gold was directly electroformed onto the cast bar.

The tertiary construction was modeled, cast, and processed in the conventional way. Then, the electroformed bar was glued to the tertiary construction.

The dental technician designing the (acrylic) facing made sure that the patient's mouth got an esthetical appearance.

The advantages

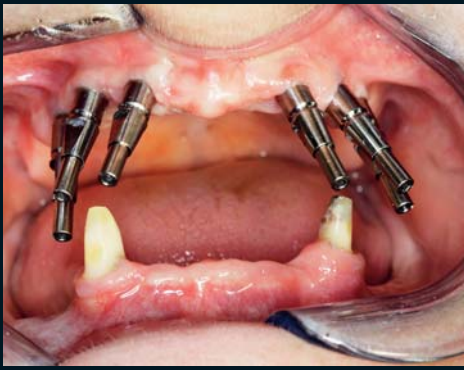
- a reduced selection of bio-compatible materials
- direct electroforming onto the primary parts, without requiring conductive silver lacquer, ensuring perfect fitting precision and accurate inner surfaces
- precision thanks to homogeneous surfaces to facilitate the handling for the patient
- long durability prognosis offering a good cost-benefit ratio

The conclusion

The finished restoration distinguishes by esthetics and function. A perfect fitting precision and smooth inner surfaces are guaranteed due to the direct electroforming technique onto the primary part – **adhesion thanks to perfection.**

Here, the saliva serves as separating medium; the restoration runs very smoothly in the patient's mouth and can be inserted and removed without jerking or tilting. These are also basic conditions for the long durability prognosis. Patient and dental-care provider are expecting a long functional duration of the dental restoration because of the direct electroforming technique – **perfection thanks to adhesion!**





1
View into the patient's mouth: Six implants were inserted prior to impression taking.



2
The bar was cast out of a non-precious alloy, divested, and sandblasted. Then, the bar was milled using Gramm cutters (ø 1–3 mm).



3
Diamond polishing paste (Gramm diaPOLISH) was used to polish the cast bars. The bar construction was screwed to the master model to check its fit.



4
Then the bar was screwed to a lab analog and contacted at the plating head.



5
The 5-hour electroforming process ran fully automatically in the GAMMAT® optimo2 unit.



6
After the electroforming process, the electroformed part was removed from the bar: The lateral view shows the smooth and brightly glossy gold layer.



7
Wax-up of the tertiary construction with the attached sprues and funnel prior to being invested.



8
The ready, faced restoration. An esthetical improvement was gained by hard-gold-plating the visible parts out of non-precious alloy in the GAMMAT® optimo2 unit.



9
The finished restoration.

Electroforming telescopic and bar-retained restorations may be provided by:

Patient case:
Family Dental Zahntechnik GmbH,
Jahnsdorf/Chemnitz, Germany



Gramm Technik GmbH
Dental Division
Einsteinstrasse 4
D-71254 Ditzingen-Heimerdingen
Phone +49 7152 5009 60
Fax +49 7152 5009 80
www.electroforming.de