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Cementation protocol

Cementing a Zirconia (Zr) implant crown onto a Titanium Ti-Base

DT Kamal Jawabra presents the cementation protocol for crowns and Ti-Base on implants for guaranteed success

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CASE PRESENTATION

The cementation of a zirconium crown onto an implant in its corresponding interface is a crucial process for the success of any prosthetic restoration, ensuring a strong and durable bond. This process requires careful attention and attention to detail.

Armamentarium

Zirconia Crown | Titanium Base | Cement (preferably a resin-based cement) | Bonding Agent (if applicable) | Etchant (for zirconia) | Cleaning Solutions (alcohol or acetone) | Instruments (hand instruments, spatula, applicator tips)

Introduction

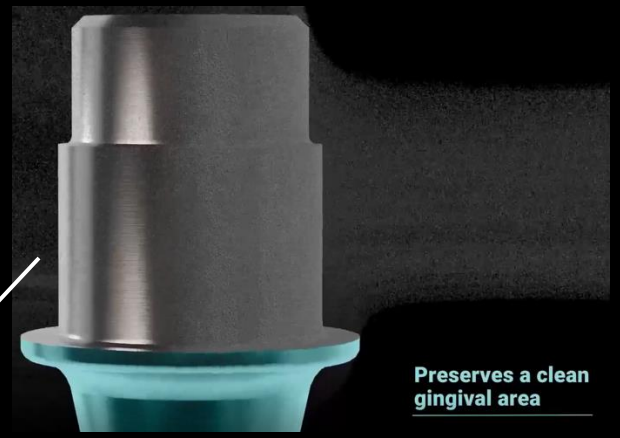
POLISH AND CLEAN THE CROWN

After the final crown´s glazing is done, polish the cervical aspect of the crown which comes in contact with the soft tissue.

Clean the fitting surface of the Zirconia crown using alcohol or acetone to remove any debris or contaminants. Additionally, ultrasound bath cleaning is also recommended.

CLEAN THE INTERFACE

Clean the Titanium base using a suitable cleaning solution (Alcohol / Acetone) to ensure it is free of oils and/or contaminants.



Preserves a clean gingival area

DESS® manufactured process

Almost imposible to get in a laboratory manual practice.

500% more bonding retention

SelectGrip®

Micron precision, maximum retention

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CHECK FIT AND SEATING POSITION

Align the crown and Ti-Base and check to ensure any wobbling.

Mark the final seating position by using an indelible marker across from the crown to the Ti-Base.

TREAT THE FITTING SURFACES

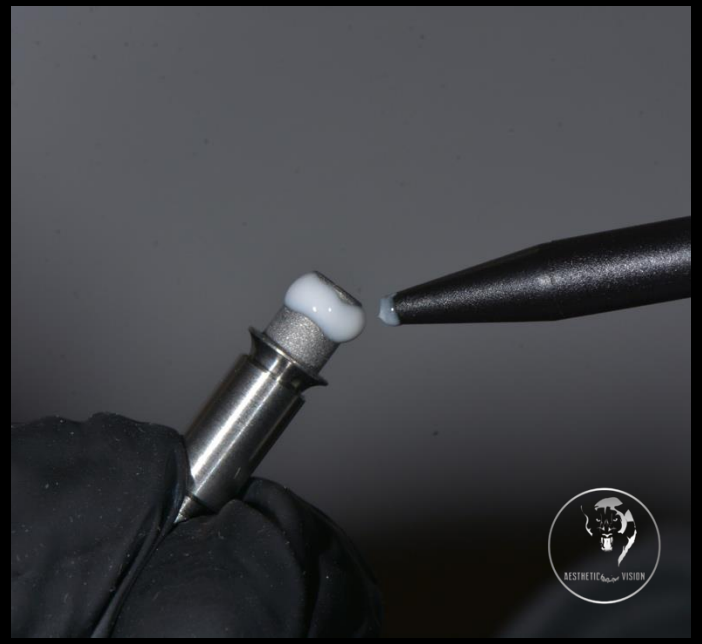
Apply Zirconia Primer and/or Bonding agent to the fitting surface of the crown

If the Ti-Base fitting surface isn't pre-sandblasted (DESS Interfaces are always sandblasted with SelectGrip Technology), airborne-particle abrasion should be done to increase the surface area for bonding.

While doing this, ensure that the parts of the abutment that will contact the tissues or the implant are protected.

CEMENTATION

Follow the manufacturer's instructions for mixing the resin cement. Ensure that the correct proportions are used for optimal adhesion.



Apply the cement evenly to the treated surface of the Titanium base.

This is done to avoid cement flowing into the screw channel. You can use an applicator tip for precision.

Alternatively, you can apply the cement to the internal surface of the zirconia crown, however, the screw channel should be blocked with a medium like Teflon or wax.

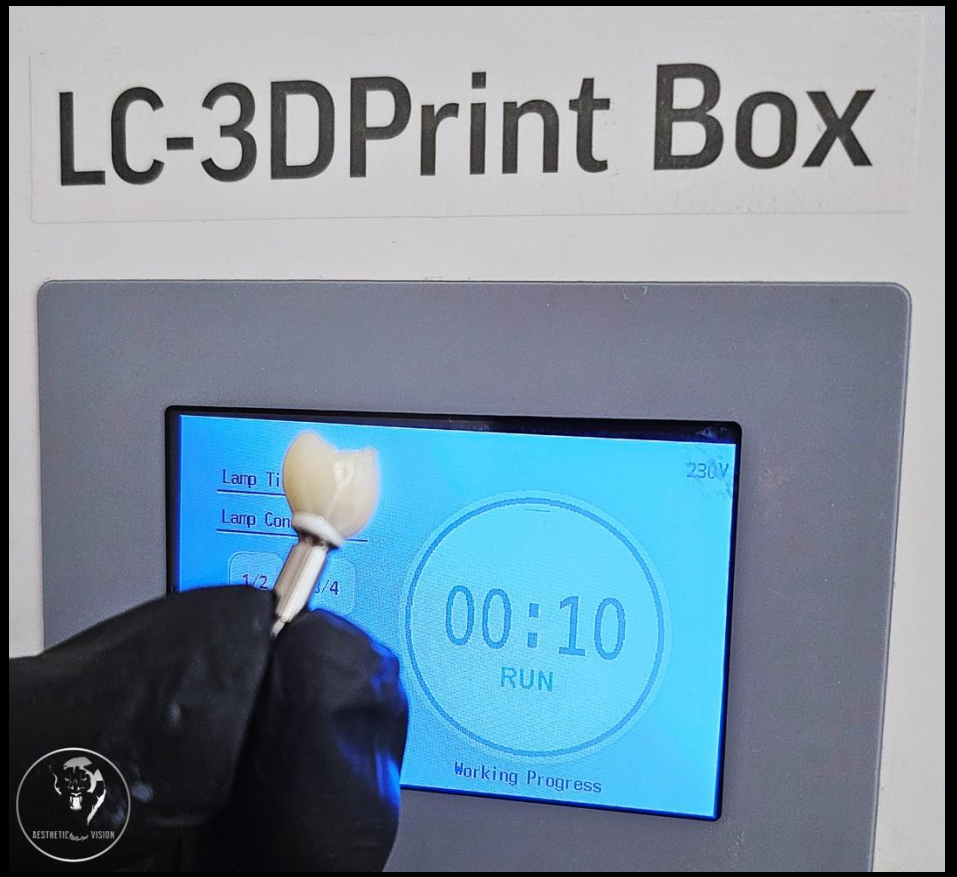
CEMENTATION

Carefully position and seat the Zirconia crown onto the Titanium base.

Ensure proper alignment and avoid any rocking of the crown.

Apply gentle pressure to allow the excess cement to express out.

Depending on the cement used, either allow it to cure at ambient temperature or use a light-curing unit as specified by the cement manufacturer.

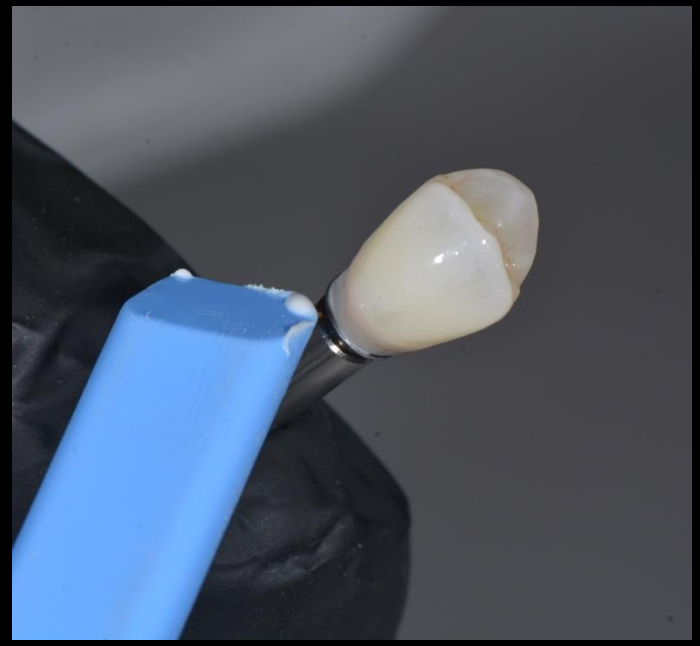


CLEAN-UP

Remove any excess cement that may have extruded at the margins.

This is crucial for avoiding plaque accumulation and ensuring smooth margins.

Ensure that the crown is fully seated andin proper occlusion.



FINAL VERIFICATION AND NOTES

- Check the occlusion, inter-proximal contacts, and overall aesthetics. Make any necessary adjustments before finalizing.
- Always refer to the specific instructions provided by material manufacturers, as protocols may vary based on products used.
- It is essential to ensure that all surfaces are dry before applying cement for optimal bonding.
- Following these protocols will help achieve a successful cementation process for Zirconia crowns on Titanium bases.

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