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Fiber post reconstruction: fast and furious style

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Fiber post cementation management is crucial to prosthetic treatment success, as 70% of prosthetic treatments are performed on non vital teeth and need root anchorage.

Until the latest developements, we needed to use several materials, steps and techniques to fill the canal area because of difficult access (narrow diameter of the canal, location of the tooth specially after canine, ability of the tip to be bended for easy access with no modification of the flowability of the material).

Some questions are crucial for a better understanding of these issues:

- What are the clinical sequences?

- Which adhesive system (light cure or dual cure) should be used for the restoration of the root anatomy?

- Which material to fill up the root anatomy and the crown, meaning chemical cure and then light cure or everything with the same material?

- What type of post?

- How to inject precisely in the root in order to avoid air bubbles and reach a good homogeneity in the canal?

This simple article will highlight all of these purposes.

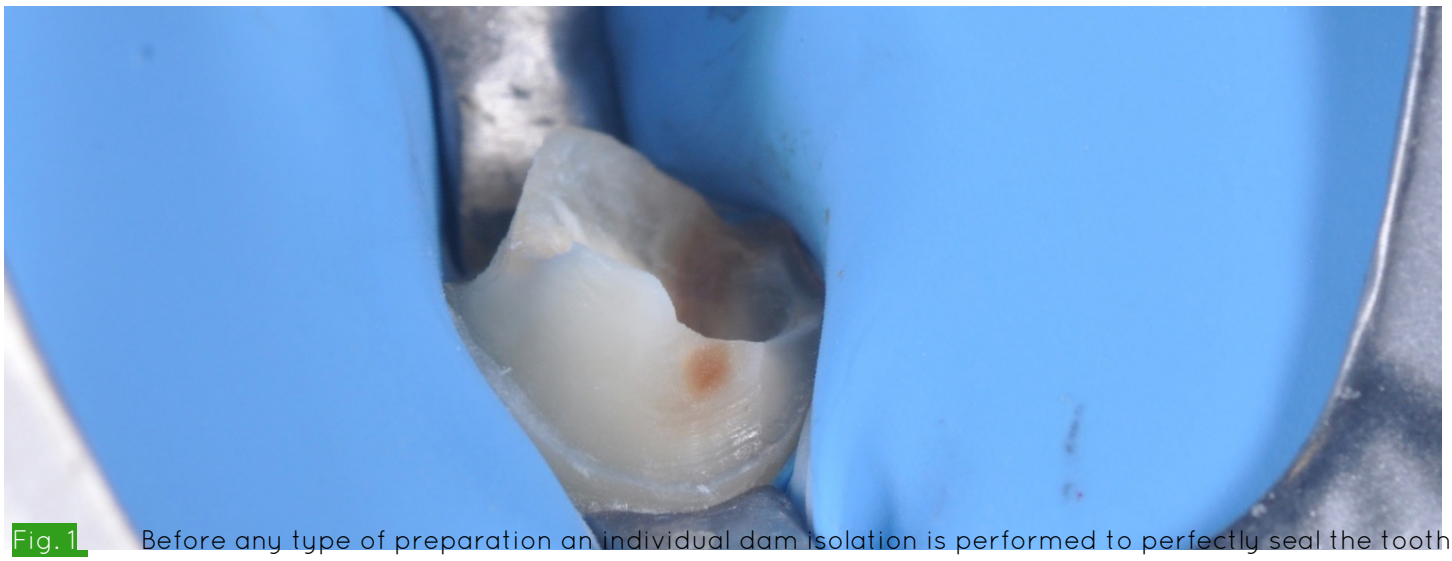

Fig. 1 Before any type of preparation an individual dam isolation is performed to perfectly seal the tooth until you get a complete vision of the margin. If some areas are not ideally isolated we must use a dental floss to strangulate the dam.

Fig. 2 After drilling with largo no. 3 the root canal is cleaned with an ultrasonic and piece to remove all the cement in the wall and improve the quality of the bonding.

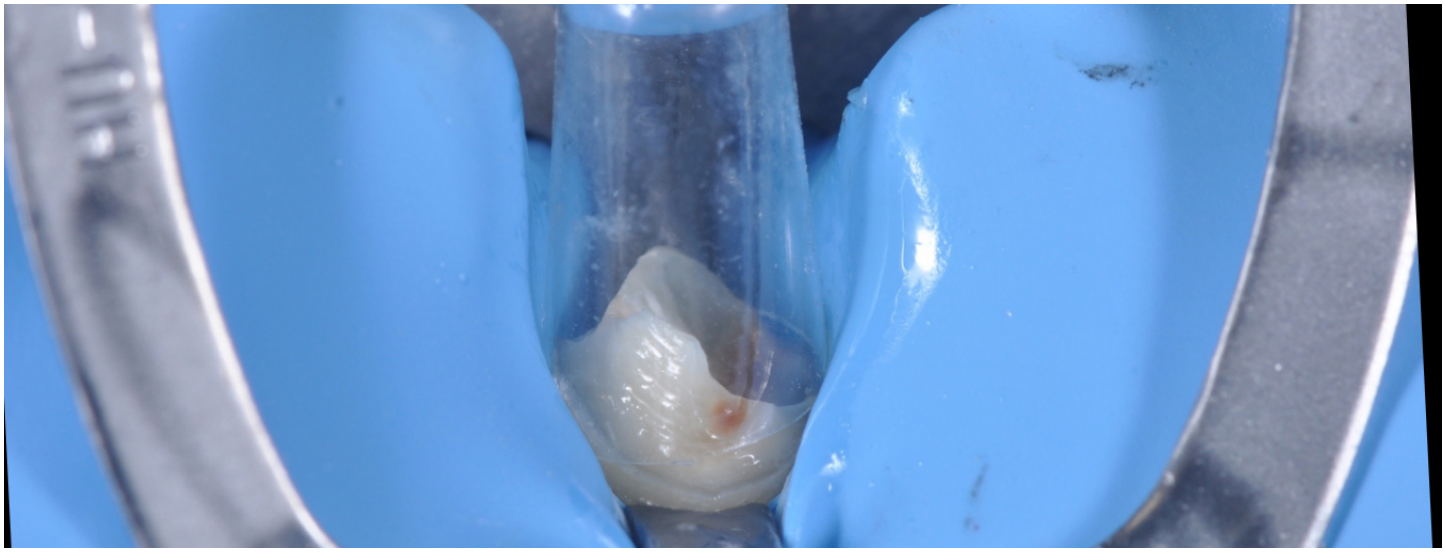

Fig. 3 After isolation a core form (dexter) is adjusted to the margin until a good fit with the existing limit is

reached. We simply use scissors to design the cervical part. This detail is the key to get the internal pressure of the composite.

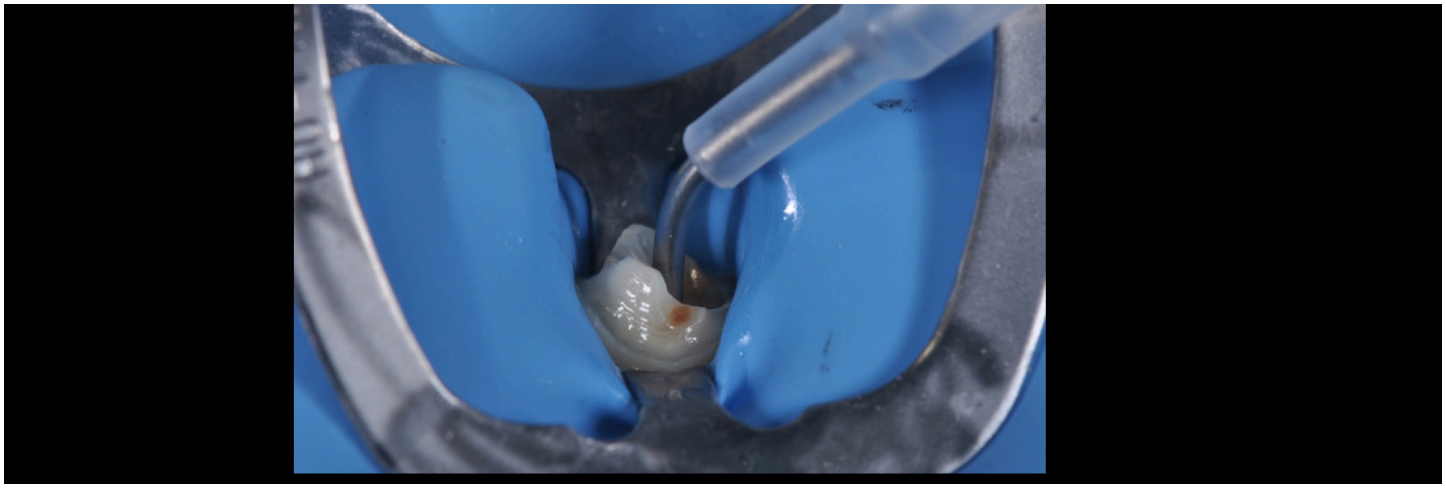

Fig. 4 A Colibri plus (Sulzer MIXPAC) mixer tip is used to inject the luxacore Z (DMG) inside the root anatomy after placing the chemical cure adhesive system (luxabond DMG).

Then the luxapost DMG is placed in the rooth canal.

Fig. 5 The luxacore Z is a versatile dual cure composite indicated for the fiber post reconstruction and the core built up for deep cavities. As all the dual cure material it is important to let the chemical cure set for 2 minutes before light curing.

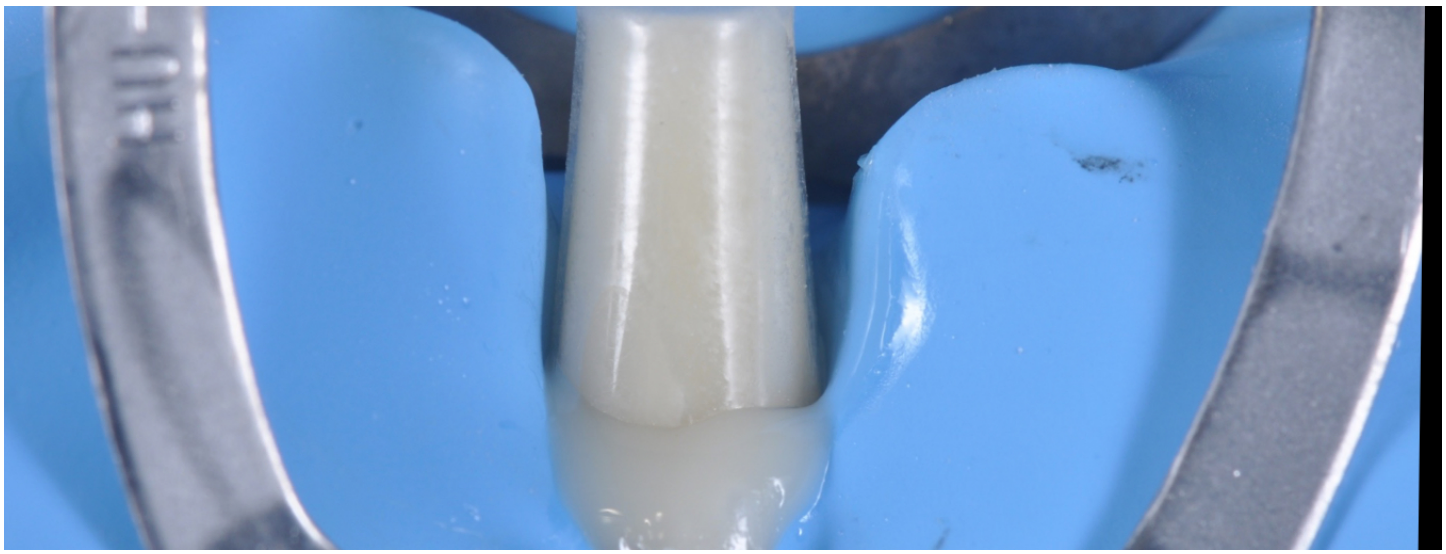

Fig. 6 Simultaneously with the filling of the root anatomy with the luxacore Z, the core form (dexter) is filled with the same core build up material and placed on the tooth to create a good pressure in order to get ideal homogeneity of the all restoration (all in one phylosophy)

Fig. 7 After the setting time, during the same appointment crown preparation is performed in order to design it as nicely as we want.

Fig. 8 After placing the retraction cord, an impression using a double mix silicone is used. The same colibri mixer system device is used but this time it is plugged on the silicone cartridge and not on the core build up cartridge in order to have a huge simplification for the mixer system. In other words one for both clinical step.

Impression is performed with honigum light body DMG and the tray is filled with MIXTARÂ honigum putty fast for the ideal homogeneity.

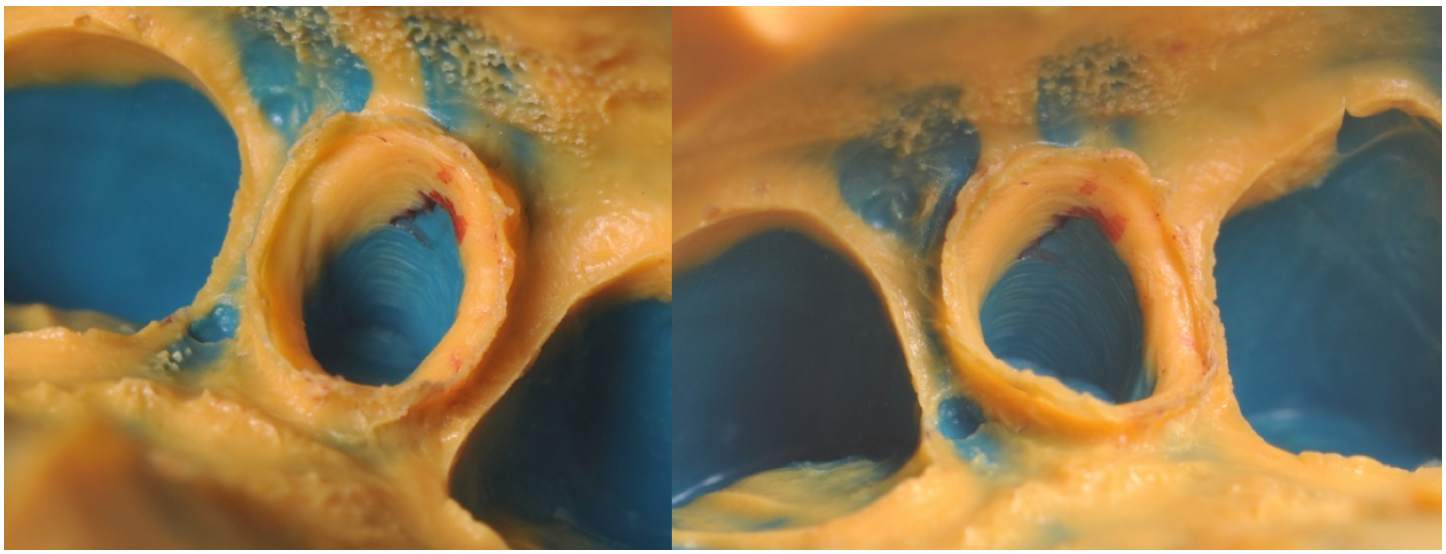

Fig. 9 The accuracy of the silicone allows us to get a very precise impression.

As all of the topics in dentistry fiber post reconstruction must fit with the everyday practice in term of timing and efficiency.

This is why a repeatable protocol in which all the step are standardized is mandatory to work fast with a good quality. Also one of the biggest advantages of this technique is that the final restoration will be a unique and monolithic core because of the adhesive capacity and will reinforce instead of weaken the residual tooth structure.

If there is no ferrule effect (less than 2mm wall in the cervical it will be recommended to go for metal post)