



Semi-permanent solution for endodontically treated teeth

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This is a case study of the ideal solution for compromised teeth in older patients with limited financial resources. The patient came to the doctor's office intending to repair two teeth (46, 47) that caused difficulties with maintaining oral hygiene and created a problem of bleeding gums and bad breath.

On clinical examination, we saw two teeth that had been endodontically treated and finished with composite fillings. The appearance of the fillings indicated that several filling procedures had been performed repeatedly. The gums were inflamed and of a livid color and bled when touched with the probe (Fig. 1).

An RTG showed a minimal amount of the remaining hard dental tissue and a re-instrumentation of the mesial canal on tooth 46 (Fig. 2). With a combination of these two problems, this tooth posed a high risk for potential restoration and prosthetic work. The whole situation was explained to the patient.

Because of the patient's limited financial resources and understanding that we were unable to guarantee the success of prosthetic work, the patient agreed to a compromise.

As an ideal solution in these situations, there is DMG's LuxaCrown material for semi-permanent crowns. With its properties, it convincingly shows higher levels of strength and resistance in comparison to other temporary

bis-acrylate materials used in temporary crowns. Thanks to its high versatility, incredible resistance, and easy-to-use feature, LuxaCrown is an excellent ally for the dentist.

Its esthetic properties are also impressive: there is a choice of eight shade variations, characterized by natural fluorescence and high stability over time.

In prosthetic dentistry, an extended temporary restoration time serves as a benefit for both the patient and the dentist. LuxaCrown supports the procedure with the needed time and raises the quality of the treatment.

After talking to the patient, she agreed to choose LuxaCrown material for her long-term trial crowns.

The impression was taken in the condensation silicone Optosil so that the process could be repeated if necessary (Fig. 3).

After taking the impression, we proceeded to tooth preparation, in which a large amount of dental structure was lost. The vast majority of fillings was decaying, and the severity of the problem regarding tooth 46 was noted (Fig. 4).



Fig. 1: The initial state of teeth 46 and 47.



Fig. 2: An X-ray of teeth 46 and 47.



Fig. 3: An impression in condensation silicone.

The tiny amount of the remaining hard dental tissue would require extensive lengthening procedures with a clinical crown, which would enable us to place a fiber root canal post. However, the patient did not agree to this due to the previously mentioned success uncertainty and higher production costs.

After making the crowns in the Optosil mold, we used a pencil to indicate and better see the edges of the crowns to be drilled (Fig. 5). After processing, we set the crowns in place and filled the spaces with flowable composite to the edges of the preparation area (Fig. 6). After bite adjustment, we coated the crowns with LuxaGlaze to ensure the perfect polish and shine of the semi-permanent crown surfaces. The crowns were cemented with non-eugenol cement, TempoCem NE in this case, in order to check the function and gum reaction (Fig. 7).

After a month of the trial period, the patient reported considerable improvement related to the gums, oral hygiene, and chewing function (Fig. 8). After removing the crowns, the gums showed a significant improvement in terms of healing (Fig. 9). Thus, we decided to remove the temporary cement and cement the crowns permanently (Fig. 10). The final picture shows their appearance after 18 months of function (Fig. 11).

This case study shows the ideal indication for using LuxaCrown materials in patients with financial constraints and risky endodontic work of questionable durability and success. The improved features of LuxaCrown materials promise exceptionally high levels of strength and durability of substitutes, being functional for up to 5 years. This is what makes this procedure financially and esthetically highly acceptable to patients.



Fig. 4: Situation after tooth preparation.



Fig. 5: Shaping and polishing of the temporaries.



Fig. 6: Using the flowable to fill the gaps.



Fig. 7: Filling the crowns with TempoCem NE.



Fig. 8: After one month of trial period.



Fig. 9: After removing the LuxaCrown crowns.



Fig. 10: Cementing with Fuji Plus.



Fig. 11: Final result 18 months after cementing.

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