

Drilling treatment using the new MTA Repair HP: Clinical Case Report

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Female patient, 47 years old, presented with a clinical picture of extensive iatrogenic perforation of the furcation region of the dental element 36 (Figures I and II), associated with radiographic bone loss, vestibular fistula and pain on palpation. The patient reported history of having been previously subjected to an urgent intervention in this tooth by other professional, as it presented acute pain characteristic of pulpitis.

Figures I and II – Initial clinical and radiographic appearance of teeth 36.



The tooth was submitted to endodontic therapy, and after the initial approach with the patient, anesthesia was given, followed by preparing absolute isolation. Subsequently, the coronary access was performed, where it was possible to clinically verify the presence of pulp necrosis and perforation. A disinfecting penetration of root canals (crown-down) was performed using as irrigator agent NaOCl to 5%, and the odontometry determined by the use of foraminal locator. The preparation was carried out by Reciproc system (VDW/Germany), and as irrigator agent was employed NaOCl 2.5% associated with ultrasonic activation performed with straight inserts (Irrisonic/Helse/Brazil).

Next, the drilling was treated, with its cleaning and the regularization, employing ultrasonic diamond insert (E7D/Helse/Brazil). As a complement to the intra-channel decontamination process and the furcation region, a biweekly exchange of Calcium Hydroxide (Ultracal/Ultradent/USA) was held, observing remission of all symptoms.

The obturation was performed using the thermomechanical Hybrid Tagger technique (Figure III),

by employing GutaCondensor (Maillefer/Switzerland), TP gutta-percha cones (Dentsply/Brazil) and MTA-based sealer Fillapex (Angelus/Brazil) (Figure IX). After thermo compaction, the obturation cutting was performed, as well as vertical condensation using cold pusher; and again the region of the perforation was cleaned and filled with Calcium Hydroxide.

Figure III – Obturation of root canals.



Figure IV – Clinical and radiographic appearance of drilling filling with MTA Repair HP.



After 15 days, again, we proceeded to seal the drilled region, and initially verified the proper possibility of drying the area. The filling of the drilled region was carried out with the use of MTA Repair HP (Angelus/Brazil), previously prepared as recommended by the manufacturer, and it was inserted using an MTA Applicator (Angelus/Brazil). Clinical and radiographic criteria were used to determine the correct filling using the material (Figures IV and V); and the glass ionomer cement (Vitremer/3M/USA) used for the protection of the sealed region (Figure VI). After the temporary restoration, radiographically it was observed proper sealing of furcation region by MTA Repair HP, as well as no postoperative complications.

Figure V – Clinical and radiographic appearance of drilling filling with MTA Repair HP.



Figure VI – Protection de la région de la perforation scellée avec un Ciment d'Ionomère de Verre.



Follow up was conducted after two months, observing bone neoformation in the furcation region and absence of symptoms (Figure VII).

Figure VII – Follow-up X-ray after two months.

