



Apexification treatment using MTA Repair HP: Clinical Case Report

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Clinical Case Report

Male patient, 28 years old, presented with asymptomatic clinical picture of chromatic alteration on dental element 11 (Figure I), reporting dental trauma history during childhood. Clinical and radiographic testing found traces of pulp necrosis (Figure II), and it was submitted to endodontic treatment.

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. A crown-down disinfecting penetration was performed using as irrigator agent 2.5% NaOCl, and odontometry by radiographic method (Figure III), due to impossibility of using a foramen locator in these anatomical conditions, as it could influence its accuracy.

A manual preparation technique (step-back) was performed, using 3rd generation K Files (Maillefer/Switzerland), seeking to dilate the entire conformation of the root canal, and as irrigator agent 2.5% NaOCl. At each instrument exchange, passive ultrasonic irrigation was performed with flat inserts (Figure IV) in order to enhance the cleaning effect. As a complement to the

intra-channel decontamination process, two biweekly exchanges of Calcium Hydroxide (Ultracal/Ultradent/USA) were performed (Figure V), also with the purpose of analyzing quality of cleaning, through the radiopacity of the filling observed radiographically (Figure VI).

After removal of intracanal medication and drying, the apical plug was prepared with MTA REPAIR HP (Angelus/Brazil) (Figure VII), and inserted through direct technique by employing previously measured endodontic condensers (Figure VIII), with the purpose of filling and subsequent sealing the apical 4 mm (Figure IX).

After 24 hours, root canal filling was performed using Tagger's hybrid thermomechanical technique, with an MTA-based sealer, Fillapex (Angelus/Brazil). Radiographically, it was observed ideal sealing of the entire root canal area, as well as no postoperative complications (Figure X). Follow-up was conducted after six months, observing bone neoformation in the apical region (Figure XI).

Images

Figure I - Clinical appearance of dental element 11



Figure II - Initial radiographic appearance of dental element 11



Figure III - Radiography for odontometrics

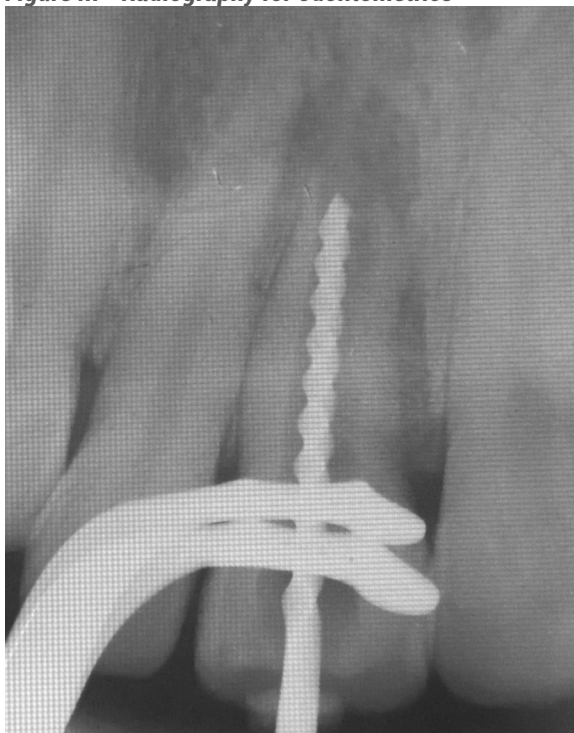


Figure IV - Supplementary cleaning process using ultrasonic irrigation

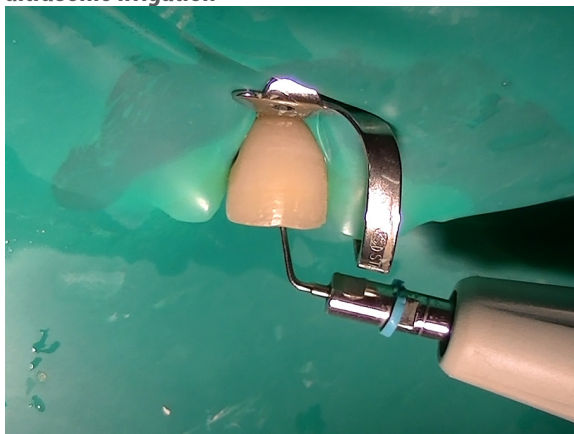


Figure V - Intracanal medication with Calcium Hydroxide



Figure VI - Radiographic appearance of root canal filling with Calcium Hydroxide



Figure VII - Presentation of MTA REPAIR HP (Angelus / Brazil)

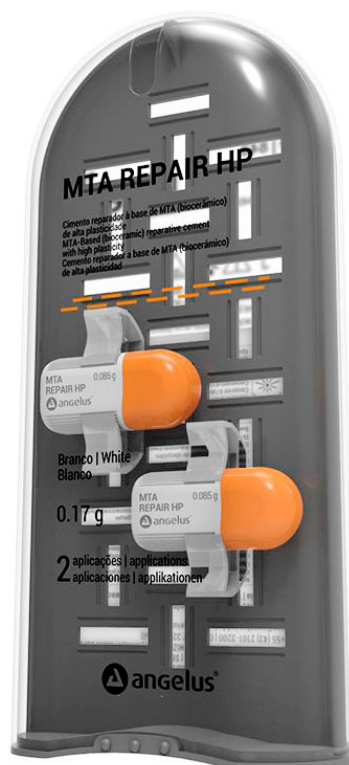


Figure VIII - Direct Condensation of MTA REPAIR HP

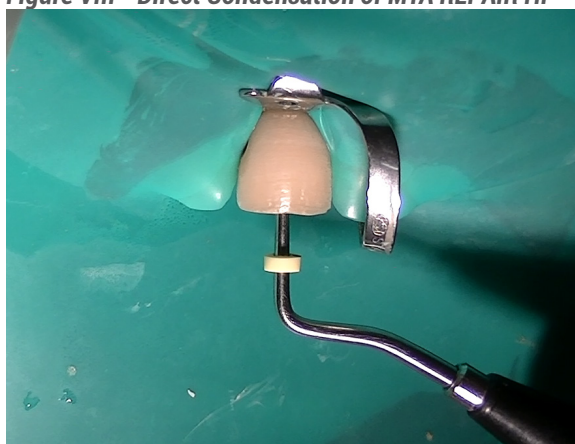


Figure IX - Radiographic image of apical plug



Figure XI - Follow-up after 6 months



Figure X - Final X-ray

