



## Endodontic treatment of dental element 41: Case Report.

Anderson De Oliveira Paulo<sup>1</sup>, Henrique Ruella Torres<sup>2</sup>.

*1 PhD in Endodontics from UNESP, Professor of Microbiology at IESB, Professor of Endodontics at UNICEPLAC, Coordinator of Endodontics Specialization at FACIT.*

*2 Master in Endodontics from UNITAU, Professor of Endodontics at UNIRG, Professor of Endodontics Specialization at FACIT*

### Introduction

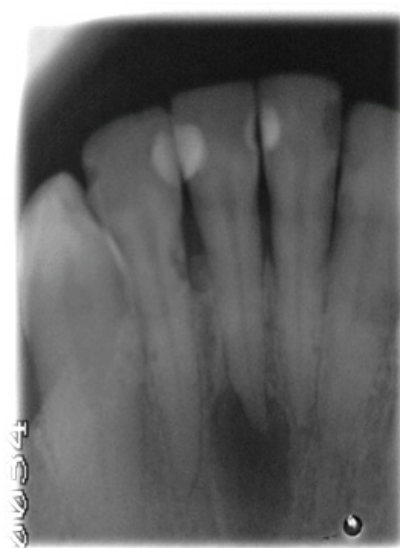
Endodontic treatment of teeth with chronic periapical lesion requires a series of precautions, such as decontamination and stimulation of apical repair. Among the alternatives for success in this type of case, the use of iodoform paste associated with disinfection, modeling and hermetic sealing of the canal are crucial steps to success in this type of clinical condition<sup>1</sup>.

The purpose of this study was to observe, by means of a clinical case, the treatment of dental element 41 using manual instrumentation with K and Flexofile type files, combined with iodoform paste medication and filling using the lateral and vertical condensation technique with MTA Fillapex endodontic cement<sup>1,2,3</sup>.

### Case Report

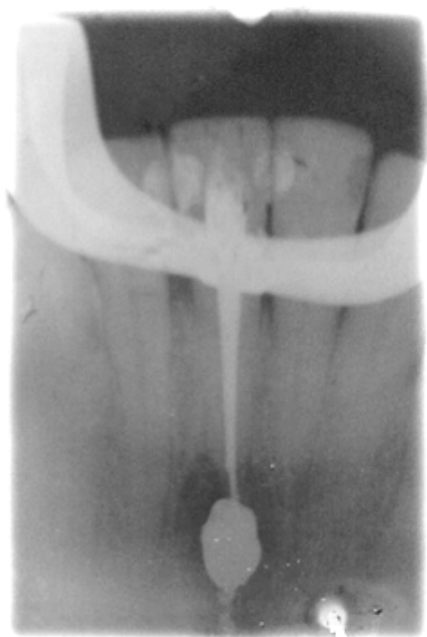
A 29-year-old male patient, asymptomatic, came in to the FACIT dental clinic (Araguaína, Tocantins, Brazil) with a case recommended for endodontic treatment in tooth 41 and a history of trauma in the region. X-rays were taken of said tooth (Fig. 1), then palpation and percussion tests were performed, with a slight positive response, and the response to the cold test with refrigerant spray was negative. The probably clinical diagnosis was chronic periapical abscess.

**Figure 1. Initial X-ray**

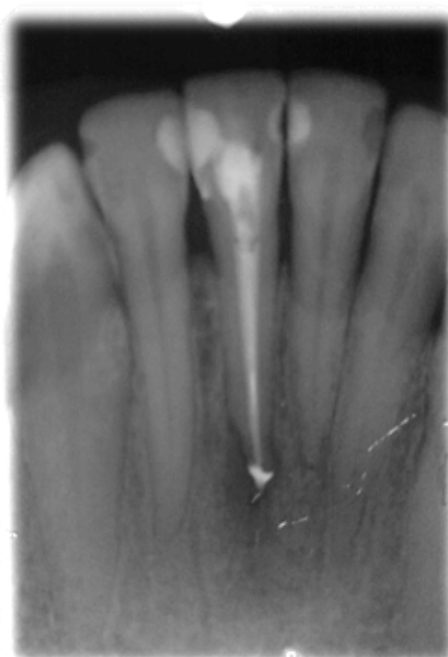


In the first session, after anesthesia and absolute isolation, surgery was performed to access the pulp chamber, along with disinfectant penetration using abundant irrigation with 2.5% sodium hypochlorite. Instrumentation of the canal followed with manual K and Flexofile type files, up to file 40 in the apical portion. After instrumentation of the canal, the foramen was enlarged with a 25 Flexofile and later with a Lentulo spiral. The iodoform paste, consisting of iodoform and polyethylene glycol, was inserted into the canal until it filled the lesion, which was confirmed by X-ray (Fig. 2). The canal was then sealed with glass ionomer cement and the patient was scheduled to come back 30 days later.

**Figure 2. Extruded iodoform paste**



**Figure 3. Canal filled with traces of extruded iodoform paste and regression aspect of the lesion**



After 30 days, the patient did not return, only coming back 90 days later asymptomatic. The medication that was still inside the canal was removed. Instrumentation was recapitulated with the Flexofile 40 associated with abundant irrigation with 2.5% sodium hypochlorite. The gutta-percha 40 cone was tested, and then the canal was dried with paper cones. MTA Fillapex endodontic cement was injected into a sheet of the attached block and the main cone was wrapped with the cement, which was taken to the canal until it was locked, after which, with the aid of a digital spacer, R8 accessory cones were introduced, which were also wrapped in the cement until the canal was completely filled, when the quality of the filling was confirmed by X-rays. The cones were cut with an instrument heated red-hot a lamp, condensed with a cold press foot, sealed with glass ionomer cement and coated with light-polymerized resin (Fig. 3).

After seven months, the patient returned to the clinic for follow-up. He reported absence of any signs and symptoms, and a new X-ray was taken which showed complete repair of the apical lesion, demonstrating the endodontic success of the treatment (Fig. 4).

**Figure 4. Follow-up X-ray taken after 7 months**



### ***Final Considerations***

This case demonstrated that achieving success in endodontic treatment does not only depend on one instrumentation technique, or on one medication, or on a cement or even maintenance of the aseptic chain. Success depends on a combination of all these factors, along with correct diagnosis of the clinical condition to allow for the appropriate treatment plan for the case.

The regression of the lesion is, therefore, due to the combination of all the factors mentioned above, underscoring the importance of technical and balanced conduct by the operator in decision-making during endodontic treatment.

### ***References***

1. MACHADO, MEL. Endodontia: Ciência e tecnologia. São Paulo. Quintessence. 2017.
2. CAMILLERI, J. ET AL. Sealers and Warm Gutta-percha Obturation Techniques. JOE – Volume 41, Number 1, January 2015
3. GOMES FILHO, J E; Rat tissue reaction to MTA-Fillapex Dental Traumatology 2011; doi: 10.1111/j.1600-9657.2011.