THERAPEUTIC APPROACH TO ENDODONTIC TREATMENT FAILURE OF THE FRONT TEETH - CASE REPORT

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Keywords: *endodontic tratment, radiological image*

Abstract: *Unsuccessful endodontic treatment can have a disabling effect on the patient if it is followed by tooth extraction. In the article, we present the clinical approach of a retreatment case of endodontic therapeutic failure at the frontal-teeth level. First, it will be preferable to try to retreat the tooth because this is the most conservative way of treatment.*

Cuvinte cheie: *tratament endodontic, imagine radiologică*

Rezumat: *Eşecul tratamentului endodontic poate avea efect invalidant asupra pacientului în cauză. In articol este prezentată abordarea clinică de retratament a unui caz de eşec terapeutic endodontic la nivelul dinţilor frontali. Este preferabil prima dată să incercăm retratamentul dintelui în cauză deoarece este varianta cea mai conservativă de tratament.*

INTRODUCTION

Endodontic treatment is a routine manual labour in the current dental practice. The success of the root treatment depends on many factors beginning with the initial diagnosis, the accuracy of the treatment itself up to each patient individual reaction. Unfortunately, we often have the chance to discover the unsuccessful root treatments only when these become symptomatic.

In the case of an unsuccessful endodontic treatment, we can either resume this or use surgery treatment. Generally, the apicectomy will be kept only for those cases where the resumption of the endodontic treatment is not possible or it was unsuccessful.(1)

PURPOSE OF THE PAPER

The purpose of this paper is to present the therapeutic approach of an unsuccessful case of root treatment at the frontal teeth level

CASE PRESENTATION

The patient, HC, 27 years, came to the dentist having aesthetic problems in the frontal area. At the intraoral examination, we noticed an incorrect acryl-metal bridge from the aesthetics point of view in the area of 1.1 and 1.2. Anamnestically, the patient knew about the endodontic treatment done about 5-6 years ago and she did not have any symptomatic symptoms regarding these two teeth. Upon percussion, the teeth were asymptomatic .At the palpation of the oral vestibule, teeth consistency of the tissues and their sensibility was normal.

At the routine radiological examination by the retroalveolar radiography it can be noticed the presence of a periapical reaction at both teeth. The radiologic aspect of the root canal filling is incorrect, lacking the expected homogeneity. (Figure no.1).

The clinical stages: The acryl-metal bridge was removed through bur cutting at high speed. At the clinical examination of the abutment (assisted by 3x magnifying glasses), we noticed that there are no discontinuity solutions which may have allowed the exogenous bacterial resettlement of the root space. Unsatisfied with the radiologic aspect of the root treatment, we decided to resume the endodontic treatment. We isolated the teeth using a rubber dam system, we removed the coronal filling, and we identified the root canal opening. We found out that in the root canals, there were gutta-percha cones and remains of root canal sealant. The removal of the root canals content was done with Kerr needles (drill type) and Haedstroem needles. After establishing the work length with the help of an apex locator and by the clinical radiological examination, the mechanical treatment was done using the regression telescoping technique. The endodontic treatment implied the canals instrumentation using bended needles of 50-55 in size with classic taper (taper 2). During the canal treatment, EDTA gel, sodium hypochlorite, chlorhexidine, hydrogen peroxideand physiological serum were used. The root canal filling was done in the same session through the gutta-percha lateral cold condensated technique and a root sealant based on calcium hydroxide.(Seal apex, Kerr).

The final result of the treatment shows a clear change of the aspect of the root canal filling from the initial situation. (Figure no. 2).

Figure no. 1. Initial radiologic aspect

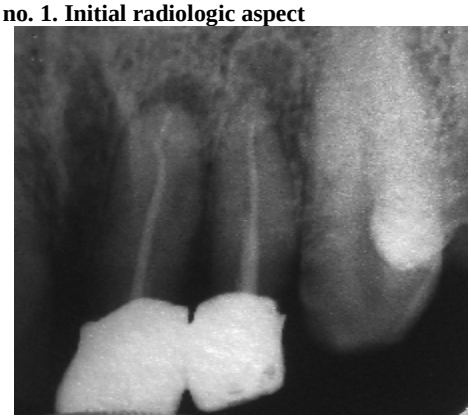

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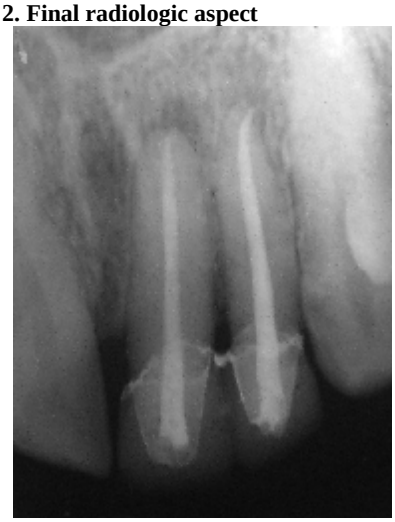
Figure no. 2. Final radiologic aspect



By mutual agreement, we decided to realize temporary polymeric prosthesis works for a period of one or two years, so that we could check the evolution of the periapical injuries. If there are signs of periapical healing at the end of this period, we consider that the treatment was a successful one and we will made full ceramic crowns. The bad evolution of these periapical injuries (extension, aggravation of the symptoms) recommends surgery treatments as apicectomy. Ultimately, the extraction of the problematical tooth can be done.

Regarding the clinical symptomatology, there is no direct correlation between the histopathological changes and the clinical manifestations in relation to the presence or the absence of certain bacterial strains in the periapical area (2). The retreatment of the root canal is a hard decision to take because there is a great risk of failure.(1) A granuloma is in general asymptomatic and it is usually discovered at a routine radiological examination. There is a correlation between the signs and clinical symptoms on one side and the presence of bacteria on the other side, but with all these, we cannot talk about a correlation between the size of the radiologic lesion and the absence or the presence of bacteria. From the radiological point of view, the lesion appears as a radio-transparency having a variable shape and size depending on the opening of the root canal at apical level or on the side of the root.(3)

The periapical granulation tissue has a 100% healing potential, but successful endodontics depends on three fundamental rules: mechanical treatment of the canals, disinfection and the rootcanal filling. The favourable result of a correct mechanical treatment depends on the anatomical difficulties and the dentist's capacity to overcome these challenges. A correct mechanical treatment offers the possibility to do a disinfection (not a sterilization), as complete as possible, of the root canals. Any micro-organisms, which may survive disinfection, would be obstructed in their niches by a correct root canal filling. In general, these micro-organisms disappear a few days later after finishing the root canal filling.(3)

Regarding the endodontic preparation, the extension and the taper of a canal are permanent subjects of discussion. In general, in the case of wide tapered canals, we can get a better irrigation, cleaning and a good removal of the remains and the lateral condensation is preferred.(2)

Endodontic treatment can be done in one or more sessions, but regarding the radiologic success on long or short term, this is alike.(4,5,6). Some authors think that the technical quality of the crown reconstruction is less important than the radiological quality of the root filling.(7)

Conclusions: When dealing with a case of unsuccessful endodontic treatment, first, it is preferable to try to restate the tooth because this is the most conservative treatment alternative. But in case we do not have complete access to the intraradicular space to perform a correct mechanical treatment, it is advisable to apply a surgical treatment, such as apicectomy. Only after the failure of the surgical treatment, we may think of extracting the tooth.

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