THE INCIDENCE OF PERIAPICAL PAIN AFTER ROOT CANAL FILLINGS OF VITAL TEETH

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Abstract: The purpose of this study was to compare the effect of two root canal filling material, Endomethasone and AH26Plus in the incidence of painful reactions immediately after completion of Endodontic treatment. Materials and methods. The study was conducted on a sample of 55 patients with various types of pulpitis, which I made Endodontic treatment and root fillings in one session using alternative Endomethasone and AH26Plus. Postoperative, each patient specified intensity of pain within 7 days after the seal, under a scheme designed by us. Results. Postoperative pain occurred more often in cases obstructed with AH26Plus (56.6%) than with Endomethasone (43.4%). Conclusions. Whatever the material, the pain giving up in the first 5 days, both materials being clinically acceptable.

INTRODUCTION

Materials used for root fillings are protected within the dentine into root canal and occlusal by the long lasting coronary fillings. At the apical foramen they are in direct contact with periapical connective tissue, which can sometimes lead to the emergence of inflammatory reactions of different intensities (7).

Ideally, root canal filling material should provide a safe, permanent sealing of endodontic space from microorganisms or their products coming from the mouth or gingival ditch.

Must have no irritant effect on the periapical tissue and does not dissolve under the action of tissue fluid. It would also be radiopaque to be easily identifiable on the radiography, the only examination which allows evaluating the quality of root restorations (5).

In the years have proposed many pasta fillings, but to date no one has been identified to meet the conditions of ideal material.

PURPOSE OF THE STUDY

The purpose of this study is to assess the incidence of postoperative pain after root canal fillings of vital teeth, with various pulp inflammations, after using the 2 pastes: Endomethasone and AH26Plus.

MATERIAL AND METHOD

The study was conducted on a sample of 55 patients, 23 men and 32 women aged 16-53 years, who were presented to the Department of Odontology - Parodontology for treatment of various forms of pulp inflammation. Thus, we recorded 24 cases of partial serous pulpitis (43.6%), 17 cases of total serous pulpitis (30.9%), 11 cases of chronic closed pulpitis (20%) and 3 cases of chronic open polyloid pulpitis (5.5%) (Fig. 1). Each patient was treated for a single tooth to facilitate the record of intensity and duration of painful phenomena as the form in Table I.

Figure no 1. Repartition of inflammatory affection in the group of study

At the initial presentation was noted the tooth, diagnosis and filling material used. Each patient received the form and must record information about postoperative pain for 7 days after completion of treatment.

For biomechanical treat was used step-back technique for preparation of root canals, we used 2.5% sodium hypochlorite and hydrogen peroxide to wash, dry paper cones for root canals and cones of gutta-percha with root canal filling paste (AH26Plus or Endomethasone used interchangeably). As a
provisional crown filling we chose zinc eugenol because of antibacterial properties and good marginal closure they offer. We give particular attention to the maintenance of root canal antibacterial properties and good marginal closure they offer. We chose the step-back technique for preparation of root canals because it ensures the maintenance of a small diameter of the apical root canal, the pulp protect against overrun with fillings or gutta-percha cone main (2).

In addition, the apical region form is moderately divergent to a coronary, which tends to keep the materials used in root inside root canal fillings. (3, 8).

Paste AH2Plus is classified as plastic resin. They are generally tough, being more difficult to des obstruction for Endodontic treatment failure. Freshly prepared paste is relatively strong and sticky, is easily inserted into root canal. Physical properties of material are good, ensuring a tight closure of the root canal and its solubility in the tissue liquid is reduced (6, 7). It is known that during the outlet reaction paste AH2Plus released small quantities of formaldehyde which can cause a severe inflammatory reaction in contact with tissue (4, 6). Moreover, once polymerization is complete, the material is well tolerated and the initially observed inflammation disappears in 10-14 days.

Endomethasone is a root filling material containing dexamethasone, was chosen precisely to reduce the incidence of inflammatory nature painful phenomena that may occur after completion of Endodontics treatment.

Alaçam (1) conducted a clinical study comparing postoperative pain occurred after use of 4 paste for fillings the root including Endomethasone, AH2Plus without finding a significant difference statistically between them in terms of postoperative discomfort.

As expected, in our study the largest number of patients recorded the presence of pain after root canal fillings were grouped within 48 hours and was described as moderate or low intensity pain.

The absence of severe pain and loss phenomena in the first 6 days of pain regardless of paste filling restorations make us to consider both materials as biologically acceptable.

RESULTS

Of the 55 patients who entered the study, a total of 51 (92.7%) returned the forms after the interval of 7 days after completion of treatment. The final evaluation was performed on 49 teeth, 2 were over obturated. Of these 46 have been pain within 24 hours (90.2%), 39 in the first 48 hours (76.8%), 21 in the first 3 days (41.2%), 8 after 4 days (15.7%) and 3 after 5 days (6%) (Fig. 2).

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DISCUSSIONS

In the literature is widely accepted that it is good to obstruct the root canals immediately after biomechanical preparation. This entails two advantages; it reduces the risk of microbial contamination and provides a significant time savings. (2)

This can be prevented by subjective and objective factors:

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CONCLUSIONS

1. Old controversy in Endodontics, choosing a root filling paste remains the subject of numerous clinical and experimental studies.

2. Although the incidence of painful phenomena in this study differ depending on the filling material used, both pastes can be considered biologically acceptable because the changes are minor to moderate and disappear during the first 6 days after completion of treatment.

3. Data from the literature related to this issue are contradictory, so that we can not exclude either the use of clinical material, part confirmed previous experimental study conducted by us.