THE INCIDENCE OF PERIAPICALE 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 AH_{26}Plus 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 AH_{26}Plus. 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 AH_{26}Plus (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.*

Cuvinte cheie: *Endomethasone, AH26Plus, tratamentul endodontic, durerea postoperatorie*

Rezumat: *Scopul acestui studiu a fost de a compara efectul a două materiale de obturaţie radiculară, Endomethasone şi AH_{26}Plus, în ceea ce priveşte incidenţa reacţiilor dureroase imediat după finalizarea tratamentului endodontic. Material şi metodă. Studiul a fost realizat pe un lot de 55 pacienţi cu diferite forme de pulpită, la care am efectuat tratamentul endodontic şi obturaţia radiculară într-o singură şedinţă folosind alternativ Endomethasone şi AH_{26}Plus. Postoperator, fiecare pacient a precizat intensitatea durerii în primele 7 zile după obturare, conform unei scheme concepute de noi. Rezultate. Durerea postoperatorie a apărut mai des la cazurile obturate cu AH_{26}Plus (56,6%) faţă de cele obturate cu Endomethasone(43,4%). Concluzii. Indiferent de materialul folosit, durerea a cedat după primele 5 zile ambele materiale fiind acceptabile din punct de vedere clinic.*

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.

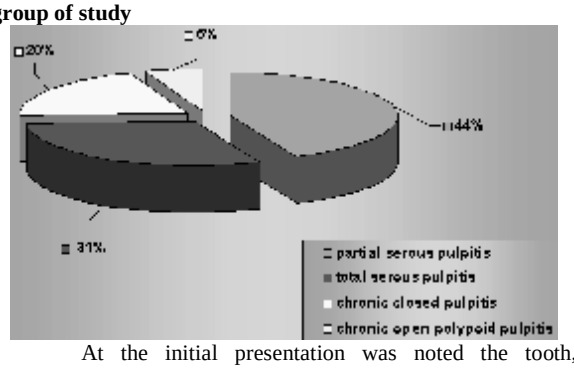
PURPOSE OF THE STUDY

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 AH_{26}Plus.

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 polypoid 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 afection 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 (AH_{26}Plus or Endomethasone used interchangeably). As a

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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 length in order not to have exceeded the apex with paste filling or main gutta-percha cone.

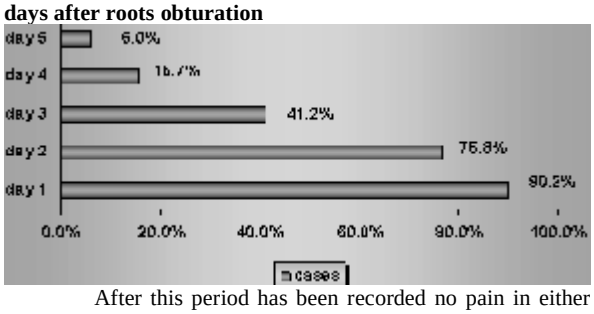
Table no. 1. Individual Form for follow up of daily symptoms after root obturation

Day postoperative / Intensity of pain	1	2	3	4	5	6	7
X							
XX							
XXX							
XXXX							

RESULTS

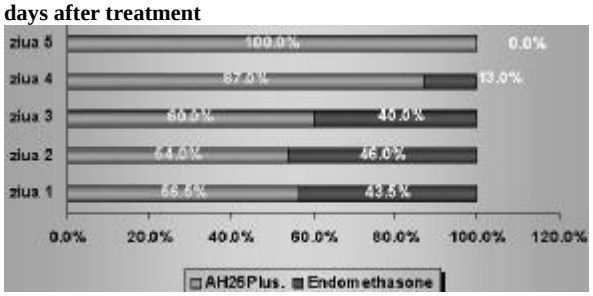
Of the 55 patients who entered the study, a total of 51 (92.7%) returned the forms after the interval of 7 days after completion of treatment. The final evaluation was performed on 49 teeth, 2 were over obturated. Of these 46 have been pain within 24 hours (90.2%), 39 in the first 48 hours (76.8%), 21 in the first 3 days (41 , 2%), 8 after 4 days (15.7%) and 3 after 5 days (6%) (Fig. 2).

Figure no. 2. The Incidence of postoperative pain in the first days after roots obturation



After this period has been recorded no pain in either case.

Figure no 3. Percent values of cases with pain in the first days after treatment



Regarding paste fillings used within each time (days) we recorded the following results:

- Day 1 of the 46 cases with postoperative pain, 26 occurred after filling with AH_{26}Plus (56.5%) and 20 cases (43.4%) after Endomethasone.
- On Day 2, we recorded 21 cases of pain (54%) after AH_{26}Plus and 18 (46%) after Endomethasone,
- The 3rd day after 12 cases AH_{26}Plus s (60%) and 9 cases (5%) after Endomethasone,
- On Day 4 of 7 cases (87%) after AH_{26}Plus and 1 Endomethasone (13%)
- On 5th 3 cases, 100% after AH_{26}Plus (Fig. 3).

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:

- The first type is the long duration of pulpectomies, which may be interrupted by the doctor or patient.
- The 2nd part is hemorrhage or hyperemia in periapicales region that appears periapical at sectional beam from vascular-nervous, which is why you should leave a period of several days before filling root canals, during which the phenomena inflammatory disappear.

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 AH_{26}Plus 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 AH_{26}Plus 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, AH_{26}Plus 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.

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.

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