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Pulpo-periodontal pathologies- Treatment by filling three-dimensional with warm gutta-percha

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Introduction: Teeth are affected by diverse pathologies. Their lifespan depends on the therapeutic and endodontic treatment. The endodontic treatment success depends upon the complete filling of the tooth root, wherein the excipient material includes all parts of the tooth canal. Long-term success of this approach is three-dimensional filling in pulpo-periodontal pathologies, to avoid the development of germs and toxins in the periapical tissues. Filling the canal with the gap to 2 mm away from the apice is among the important factor that causes the treated canal infection. Among the techniques used in the treatment of pulpo-periodontal pathology it is warmed gutta-percha.

Aim: To evaluate three-dimensional filling with vertical condensation of warm gutta - percha, observing the uniformity and homogeneity of filling the root canal with pulpo-periodontal pathology.

Material and methods: The study is of a time - treatment type and was conducted in Dental Studio "Lauren Muhametaj". 150 patients of 6-70 years old were treated with pulpo-periodontal pathologies. The study is extended over a period of five years (2010-2015) and patients were followed dynamically. The study included patients with acute pulpo-periodontal pathology. Sample size ratio group 1 / group 2 = 1, adapted by gender and age. For data analysis was used SPSS 16.0 statistical program. Continuous variables are summarized as average \pm standard deviation (SD).

Results: In the study, there was no difference between groups in terms of socio-demographic and clinical characteristics, such as preoperative pulp condition and preoperative apical parodontitis. The average time rechecking was 219.6 (\pm 21.4) days in the group with condensation 3D and 214 (\pm 23.5) days in the group with lateral condensation, no statistically with no significant difference between them. The average time until recuperation was lower in the 3D condensation group with 51 days (\pm 6.4) compared to the lateral condensate group, 60 days (\pm 7.6). The effect of anterior and posterior dental treatment was the same in both groups. Also, there were no changes in groups, in relation to the number of canals (single vs multiple) and apical parodontitis after treatment. The overflow and the short filling was found with higher frequency in the treatment group with lateral condensation. Radiographic presence of side canals was observed more frequently in group with 3D condensation. Moderate and strong pain had higher frequency in the lateral condensation group. The success of non-clinical or radiographic defects was achieved in 40 teeth (95.2%) treated with the 3D condensation method and in 27 teeth (61.4%) treated with the lateral condensation method. Clinical defects were found in 1 tooth (2.4%) treated with the 3D condensation method and in 13 teeth (29.5%) treated with the lateral condensation method. Radiographic defects were found in 2 teeth (4.8%) treated with the 3D condensation method and in 17 teeth (38.6%) treated with the lateral condensation method. Combined clinical and radiographic defects were found only in 2 teeth (4.6%) treated with lateral condensation. The long-term effect after treatment and the quality of filling was better in the 3D condensation treatment group. This overflow was more common in the treatment group with lateral condensation.

Conclusion: Using the method of 3D condensation with warm gutta - percha for root canal treatment, has clinical and radiographic priority to other methods.

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