Comparison of three Intra-canal Irrigants Effect on Flare-up Following Treatment of Necrotic Teeth

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Abstract

Statement of Problem: Acute pain and swelling following root canal therapy is considered as flare up. Pushing the infectious debris to the periapical region. Inadequate chemical and mechanical cleaning are the reasons for inflammation of this area. Microorganisms are the major causative agents of acute peri-radicular inflammation. Adequate and appropriate irrigation of the canal removes the intra-canal microorganisms, debris and infected agents from the canal space and may decrease pain and swelling. On the other hand, caustic effect of intra-canal irrigants may cause acute inflammation in the peri-radicular tissue.

Purpose: The aim of this study was to compare the effect of three intra-canal irrigants on the incidence of flare-up following root canal therapy of the teeth with necrotic pulp.

Materials and Method: In this clinical trial study, 225 patients with molar necrotic pulp and peri-radicular lesion were selected and randomly divided into three groups, 75 in each. Protaper Rotary files were used for preparing the canals and 2.5% sodium hypochlorite, 0.2% Chlorhexidine gluconate or saline were used for irrigation of the canals in each group respectively. Then, they were filled by lateral condensation technique. Questionnaires were given to the patients, asking for the level of their pain and swelling. The patients were followed for 48 hours. The data were statistically analyzed, using Chi-square, Mann-Whitney and Kruskal-Wallis tests.

Results: The results of this study showed no significant difference between irrigant solutions in the incidence of flare-up after endodontic treatment.

Conclusion: Our clinical research indicated that the type of irrigating solution used makes little difference in the incidence of postoperative flare-up. It is difficult to attribute flare-up incidence specifically to the use of any particular irrigant.

Key words: Flare-up, Sodium hypochlorite, Chlorhexidine gluconate, Saline