

Endodontic flare-ups incidence and related factors

Hye-Young Jung*, Kyoung-Kyu Choi, Gi-Woon Choi

Department of Conservative Dentistry, College of Dentistry, Kyung Hee University

I. Objectives

The purpose of this prospective study was to assess the incidence of flare-ups among patients who received endodontic treatment for the last 11 months and to examine the correlation with pre-operative and operative variables.

II. Materials and Methods

Data were gathered on 840 teeth of 755 patients over a 11 months. At first visit, information was obtained on each patient as to their demographics, presenting signs, symptoms and diagnosis, and treatment performed. Treatment procedures were routine. If additional appointments were necessary, the access cavity was closed with a dry cotton pellet and ZOE. And the patient was given post-treatment instructions. A decision of flare-up was made as to whether active treatment was necessary, simply talking to the patient or only prescribing or dispensing medication did not constitute a flare-up. Analysis was in two aspects (a) percentage of flare-ups that occurred as related to various factors such as patient demographics, diagnosis, and treatment procedures and (b) overall incidence of flare-up as expressed by a percentage of all patients visits. These percentages were compared statistically to determine those factors which were significantly related to an increased or decreased incidence of flare-ups. The chi-square analysis was used to compare the variables ($p < 0.05$).

III. Results

1. As to tooth groups, there was no significant difference in flare-ups (anterior-1.21%, premolar-2.27%, molar-1.17%).
2. As to gender of patients, there was no significant difference in flare-ups (male-1.32%, female-1.76%).
3. In the teeth with pre-operative symptom, there was a statistically significant higher incidence of flare-ups than the teeth without it (symptomatic teeth-2.86%, non-symptomatic teeth-0.89%).
4. As to pulp and periapical status, teeth with necrotic pulp there was higher incidence as compared with vital pulp, irreversible pulpitis (necrotic pulp-3.08%).
5. In the teeth with apical periodontitis, there was a statistically significant higher incidence of flare-ups (apical periodontitis-3.08%, non apical periodontitis-0.22%).
6. Multi-visits treatment resulted in the higher incidence of flare-ups than one visit treatment (multi-visits treatment-1.80%).
7. Re-treatment procedures had a statistically significant higher incidence of flare-ups than root canal treatment (re-treatment-3.09%, root canal treatment-0.86%).
8. From the 840 teeth which were examined in this study, the total number of flare-ups was 13. This was an overall percentages of 1.55%.

IV. Conclusions

In this study to examine to endodontic flare-ups incidence and related factors, overall percentages of flare-ups was 1.55%. It showed a statistically significant higher incidence related to pre-operative symptom, apical periodontitis, re-treatment. There was no significant difference in flare-ups related to gender, tooth groups.