ABSTRACT

THE DIFFERENCES OF IRRIGATION WITH RED BETEL LEAF EXTRACT 25% AND EDTA 17% ON ROOT CANAL CLEANLINESS

Background: Quality of root canal obturation depends on root canal preparation, especially cleaning and shaping stage. During cleaning and shaping stage, smear layers are formed. Smear layers need to be removed from root canal in order to hermetic obturation. Irrigation is used to facilitate smear layer removal. Red betel leaf extract contains saponin that can dissolve smear layer components. EDTA is a chelating agent commonly used in endodontic. Purpose: To see the differences of red betel leaf extract 25% and EDTA 17% as root canal irrigants on their effect to root canal cleanliness. Method: Twenty one extracted human teeth with straight single roots were randomized into 3 groups (n=7). The root canals were prepared using ProTaper for hand use instrument. During instrumentation, each root canal on the first group was irrigated with red betel leaf extract 25%, on second group was irrigated with EDTA 17%, and control group was irrigated with aquadest. Then, the teeth were splitted to be observed on Scanning Electron Microscope (SEM). Result: There were significant differences between each group (p<0.05). Red betel leaf extract 25% is better in cleaning root canal. Conclusion: There were different effects on root canal cleanliness by using red betel leaf extract 25% and EDTA 17% as root canal irrigants. The cleanliness of root canal irrigated with red betel leaf extract 25% is better than EDTA 17%.

Keywords: Red Betel Leaf extract, EDTA, Smear Layer, root canal cleanliness