A CLINICAL AND MICROBIOLOGICAL COMPARISON OF THE EFFECT OF WATER AND 0.1% CHLORHEXIDINE AS COOLANTS DURING ULTRASONIC SCALING AND ROOT PLANING

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Abstract

Ultrasonic scalers become widely used in scaling and root planing in treatment of patients with chronic periodontitis with promising improvements in clinical and microbiological parameters. The usual coolant is water, very few clinical comparative studies has been conducted to compare the effect of water as coolant with other antiseptic on these parameters.

The purpose of this study was to compare the effect of two different coolants (water and 0.1% chlorhexidine) on the clinical and microbiological parameters.

Forty pairs of similarly involved periodontal pockets in 18 patients, with pocket depth range between 4-6mm were selected. Split mouth randomized study was carried out. Scaling and root planing with water irrigation was carried out in one side and the other was side treated with chlorhexidine irrigation. Plaque Index, Bleeding On Probing, Probing Pocket depth, Relative Attachment Level, Furcation Involvement were recorded at baseline, and repeated once every 2 week for one & a half month. Microbiological samples were taken at the baseline visit and at the termination of the treatment after 6 weeks.

Clinical and microbiological parameters in general showed improvement with both water and chlorhexidine irrigation, with no stastical significant difference between them. Although there was slightly more improvement in some parameters with chlorhexidine irrigation like Bleeding On Probing in which sites that bled on probing decreased to 15% with chlorhexidine against 30% for water irrigation, also Gram negative anaerobic and facultative anaerobic rods decreased from 75% to 22.5% in test sites (Chlorhexidine), while with water irrigation decreased from

72.5% to 37.5%. Other parameters almost showed similar degree of improvement.

Within the limits of this study, no stastical difference could be found between the two coolants, but chlorhexidine irrigation showed more decrease in the percentage of sites that bled on probing and more decrease in percentage of sites that harbours gram negative anaerobic rods and slightly higher increase in Gram positive growth after termination of treatment.