

Comparison of the Antimicrobial Efficacy of 1.3% NaOCl/BioPure MTAD to 5.25% NaOCl/15% EDTA for Root Canal Irrigation.

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The purpose of this study was to compare the antimicrobial efficacy of 1.3% NaOCl/BioPure MTAD to 5.25% NaOCl/15% EDTA for root canal irrigation. Twenty-six bilaterally matched pairs of human teeth were collected. The teeth were incubated with *Enterococcus faecalis* for 4 weeks. The teeth were divided into two experimental groups and one positive control group. The canals were instrumented and irrigated with either 5.25% NaOCl/15% EDTA or 1.3% NaOCl/BioPure MTAD. Bacterial samples were collected after instrumentation/irrigation and after additional canal enlargement. Statistical analysis of the data using the Wilcoxon Signed Rank test showed significant differences between the experimental groups. The first bacterial samples revealed growth in 0 of 20 samples with 5.25% NaOCl/15% EDTA irrigation and in 8 of 20 samples with 1.3% NaOCl/BioPure MTAD irrigation. Samples taken after additional canal enlargement revealed growth in 0 of 20 samples in 5.25% NaOCl/15% EDTA and in 10 of 20 samples in 1.3% NaOCl/BioPure MTAD group. This investigation showed consistent disinfection of infected root canals with 5.25% NaOCl/15% EDTA. The combination of 1.3% NaOCl/BioPure MTAD left nearly 50% of the canals contaminated with *E. faecalis*.

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