Antibacterial effect of mouthwash containing CPC against dental caries caused bacteria

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Objectives: The purpose of this study was to evaluate and report the antibacterial efficacy in relation to oral disease-causing bacteria using a mouthwash containing 0.05% CPC in an in vitro test.

Methods: The sterilization test and susceptibility assay of mouthwash containing 0.05% CPC were investigated against *Streptococcus mutans*, *Streptococcus sobrinus*, and *Lactobacillus acidophilus*; *Streptococcus sanguinis* as oral bacteria related to dental caries; *Enterococcus faecalis* as apical periodontitis-related bacteria; and *Actinomyces israelii*, *Aggregatibacter actinomycetemcomitans*, *Fusobacterium nucleatum*, *Prevotella intermedia*, *Prevotella nigrescence*, *Porphyromonas gingivalis*, *Tannerella forsythia*, *Treponema denticola*, and *Filifactor alocis* as periodontal disease-related bacteria.

Results: In the sterilization test, most of the bacteria had more than 99.99% sterilizing power for all samples but compared to other bacteria, the sterilizing power of these samples was not successful for *L. acidophilus* and *E. faecalis* bacteria. When comparing the sterilization power between the samples, sample 3 (0.05% CPC+20% ethanol) was the strongest.

Conclusions: In the antimicrobial activity test, sample 3 inhibited growth at the lowest concentration overall.

Key Words: Cetylpyridinium chloride, Mouthwashes, *Streptococcus mutans*