Abstract

Effects of 30 seconds mouthrinse of alkaline electrolyzed water and sword beans tea on periodontopthic bacteria in saliva and buccal mucosa

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Abstract

Aspiration pneumonia can be prevented by oral care, such as brushing. However, elderly people with disabilities such as paralysis are not good at brushing. Mouthrinse is expected to be an efficacious method of oral care. Several studies reported that the daily use of mouthrinse prevented plaque formation, and that have an anti-inflammatory effect. However, the effect of 30 seconds mouthrinse is not clear. Some of commercial mouthrinse reagents have side effects as anaphylactic shock or mucosal irritation. The aim of this study was to evaluate the effect of 30 seconds mouthrinse with alkaline electrolyzed water (AEW) and sword beans tea (SBT) by analyzing changes in the numbers of periodontopathic bacteria. Thirty and 19 patients who were receiving the supportive periodontal therapy or begin to initial periodontal therapy were participated in this study. AEW, SBT or distilled water (DW) were randomly distributed to the subjects. Saliva and buccal mucosal tissue samples were collected before and after mouthrinse, then extracted bacterial DNA. All subjects underwent periodontal examination and questionnaire. The numbers of periodontopathic bacteria were measured by real-time PCR. Spat mouthrinse reagents were anaerobically cultured, and calculated colony forming units. The antimicrobial effects of each mouthrinse reagent evaluated using *Porphyromonas gingivalis* ATCC33277 strain. As a result, periodontopathic bacteria were decreased after 30 seconds mouthrinse. AEW and SBT were effective to reduce multiple periodontopathic bacteria of saliva or buccal mucosal tissue. AEW significantly suppressed growth of bacteria compared to SBT or DW. This study suggested that 30 seconds mouthrinse of AEW or SBT reduced periodontopathic bacteria in saliva or on buccal mucosal tissue. AEW revealed significantly higher antibacterial effects than other reagent.