



Original article

Comparison of *Andrographis paniculata* and Chlorhexidine Mouthwash on Anti-plaque, Anti-gingivitis and Side Effects

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Abstract

The purpose of this study was to evaluate the effects of *Andrographis paniculata* (*Ap*) mouthwash compared with chlorhexidine (chx) mouthwash on anti-plaque, anti-gingivitis, tooth staining, and burning sensation. This study was a double-blind, randomized two group experiments. Thirty-four healthy volunteers were enrolled in this study. Participants were assigned into two groups and mouthwash was given according to the group. Gingival index, plaque index, stain index and visual analog scale for burning sensation were recorded at baseline and three weeks after the experiment. Then, participants were switched between groups and the data were recorded. The results had shown that the baseline data were not significantly different between the groups. Both mouthwashes can reduce the gingival index but were not significantly different from baseline and between the groups. Both mouthwashes can significantly reduce plaque index but were not statistically significant between the groups. Chx significantly caused more staining on the teeth compared to *Ap* and the burning sensation reflected as VAS score was significantly lower in *Ap*. It can be concluded that *Ap* mouthwash can effectively reduce plaque accumulation, produce less staining and discomfort. This herbal mouthwash can be used as an adjunctive to mechanical oral hygiene procedures and as an alternative to chlorhexidine mouthwash.

Keywords: *Andrographis paniculata*, Chlorhexidine, Dental plaque, Gingivitis, Staining

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Introduction

Dental plaque removal is an important issue in oral health promotion. Dental plaque is the mass of bacteria that starts accumulating on the surface of a tooth as a sticky biofilm. Plaque deposition brings about the inflammatory changes on the periodontium that can lead to the destruction of periodontal tissues and loss of periodontal attachment. If adequate control measures are not undertaken, the

gradual build-up of plaque over time will lead to tooth decay and gingival diseases.¹

Gingivitis is one of the most common oral diseases which can occur with every individual.² Normally, the mechanical and chemical plaque controls are used to remove the plaque. Chemical plaque control like mouthwash is widely used for adjunctive therapy. The most widely