



COMPARATIVE ANTI - PLAQUE EFFECT OF HERBAL DENTAL FORMULA

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ABSTRACT

Ayurveda and Sri Lankan traditional medical system devotes a significant importance to oral health problems on its preventive aspect rather than curative. This herbal formulation is specified as a dentifrice in *Thalpathe Piliyam*. But it was not scientifically evaluated. Therefore, this study was carried out to evaluate the effectiveness of reducing plaque accumulation on teeth, maintenance of oral hygiene and compare the efficacy of powder with the novel toothpaste. Forty patients were selected with written consent from Dental OPD. They were randomly divided into two groups; group A and B (20 patients in each) irrespective of their sex, religion, habitat etc. Group A was advised to brush twice a day for 01 month by using the toothpaste and Group B from same formula as in powder form. Oral Hygiene Index (OHI -S), Calculus Index (CI - S), Debris Index (DI -S) and Plaque Index (PII) were used as objective criteria. According to the statistical analysis, it can be concluded that clinical effectiveness of toothpaste is more significant than tooth powder. Therefore, long term studies should be carried out to confirm the result.

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INTRODUCTION

Oral hygiene is an integral part of general health and quality of life. Since early 20th century varying degrees of attention have been given to the significance of dental infections for the wellbeing of the body. However, at present dental infections are considerable as a source of the spread of microorganisms to other critical sites in the body which causes a serious threat to the health of certain high risk patients.

The WHO defines as oral health as a state of being free from mouth and facial pain, oral and throat cancer, oral infection and periodontal (gum) diseases, tooth decay, tooth loss and other diseases and disorders that limit an individual's capacity in biting, chewing, smiling, speaking and psychosocial wellbeing.

Oral health problem arises mainly as a result of two oral diseases such as dental caries and periodontal diseases. Although, the prevalence of these two diseases are changing still it remains true that virtually every adult in the world has experience of either dental caries or periodontal disease or both.

According to WHO report in April 2012, globally 60-90% of children have dental cavities and about 100% of adults have dental cavities, often leading to pain and discomfort in periodontal diseases. Severe periodontal disease which may result in tooth loss is found in 15-20% of middle aged (35-45y)

adults. The natural history of periodontal diseases is not yet being clearly understood as that of dental caries, although both are plaque induced diseases. The main prevention strategy for periodontal disease is therefore, been related with the regular and continuous removal of plaque.

Over the past several decades there has been a gradual shift in the focus from treatment of oral diseases to prevention procedure. However, the ancient system of Indian medicine (Ayurveda) devotes a significant importance to oral health problems especially on its preventive aspect than curative. In Susruta Samhita, there are numerous descriptions of severe periodontal diseases with loose teeth and purulent discharge from the gingiva. The Charaka Samhita has emphasized on modalities of tooth brushing and maintenance of oral hygiene in *Dinacharya*.

The importance of tooth brushing and maintain of oral hygiene have been clearly mentioned in Ayurveda. It has been emphasized that the herbal stick (*Dantakashtaka*) for brushing the teeth should be either astringent, pungent or bitter. The chewing herbal stick is very similar to the tooth brush. In that, both have bristles and are used to remove plaque from the tooth surfaces mechanically. Therefore, in this study herbal tooth formulation was introduced to the study population as a tooth brushing remedy in two different forms as tooth powder and tooth paste. This herbal formulation is specified as dentifrice in authentic text. But it was not scientifically evaluated.

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