

EVALUATE THE EFFICACY AND SAFETY OF HERBAL TOOTHPOWDER IN COMMON DENTAL DISEASES

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Dental caries is decay of tooth structure resulting from acid production by bacteria residing in dental plaque. Some of the causes of dental caries include inadequate oral hygiene, infrequent dental examination and poor cleaning, salivary gland dysfunction, frequent snacking and removable partial dentures, which can trap plaque around teeth and create an environment conducive to caries formation. The single best way to remove harmful plaque from teeth and gums is to brush teeth regularly and properly. Brushing with tooth powder helps to remove plaque, promote remineralization, clean and polish teeth, remove teeth stains etc. The commonly used synthetic dentifrices comprises chemical agents which are known to produce harmful side effects on prolonged use. Siddha texts describe different methods for regular practice to maintain optimal dental health. Tooth powder is a formulation which contains seven ingredients including bark of *Ficus benghalensis*: 6part, Bark of *Acacia nilotica*: 6part, fruit of *Terminalia chebula*: 4part, fruit of *Quercus infectoria*: 2part, ash seeds of *Syzygium aromaticum*: 2part, *Cinnamomum verum*: 1part, *Cinnamomum zeylanicum*: 1part. The best quality of above ingredients were purified initially with clean water. Then the ingredients were dried in sunlight. It is then fine powdered with mixed and packed in airtight container was taken for the study. This study was aimed to evaluate the clinical efficacy of common dental diseases. Adult patients, both males and females attending the private dispensary at Jaffna were evaluated for dental caries during 2009. 20 subjects with permanent dentures having dental plaque but showed good health were included in the study. Pregnant women, patients with orthodontic appliances or history of allergy to any medication and diagnosed cases of oral carcinoma were excluded from the study. All enrolled patients underwent a clinical examination, with special emphasis on local dental examination. All subjects were advised to use tooth powder for brushing twice daily for period of 6 weeks. Patients were told to restrict themselves to the "tooth powder" as the only treatment for their diseases of tooth and resort to no other active treatment investigation during the study period. The investigator demonstrated proper technique of application of investigational product. The tooth powder was evaluated during each visit for a period of 6 weeks. The patients underwent dental check-up on entry, 2nd, 4th and 6th week. The response to therapy was evaluated at intervals of two weeks up to at 6th week. patient's compliance was monitored using compliance chart which were provided to them at the beginning of the study. Adverse effects if any were recorded during each visit for a period of 6 weeks. All the 20 patients completed the study. Dental parameters like plaque index baseline 1.23 +/- 0.32, 4th week 0.74 +/- 0.28, 6th week 0.43 +/- 0.25 *, gingival index baseline 1.13 +/- 0.22, 4th week 0.71 +/- 0.34, 6th week 0.52 +/- 0.21* bleeding index baseline 2.27 +/- 0.32, 4th week 2.16 +/- 0.65, 6th week 1.43 +/- 0.71* and oral hygiene score baseline 4.32 +/- 0.42, 4th week 3.21 +/- 0.21, 6th week 2.65 +/- 0.52* (* p<0.05) Plaque index, oral hygiene score, and gingival index showed a decrease from baseline at 4th week and 6th week. None of the patients showed any adverse effects. This study of the tooth powder shows remarkable symptomatic relief in all the patients. The tooth powder is effective and safe in dental diseases.

Keywords: Herbal tooth powder, Common dental disease.

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