A REVIEW ON THE ROLE OF DANTADHavana IN THE MAINTENANCE OF ORAL AND GENERAL HEALTH

Sharma Ramavtar 1*, Mapdar Amitabha 2, Narayan Raksh 3, Shahi V.K 3, Goel Sumeet 1, Kale Kiran 1

1Research Officer (Ayu.), Central Council for Research in Ayurvedic Sciences. New Delhi, India
2Assistant Professor, Swasthavrittta, Raghunath Ayurveda Medical college, Kolkata, West Bengal, India
3Additional Director, Central Council for Research in Ayurvedic Sciences, New Delhi, India

Received on: 07/11/17 Accepted on: 24/12/17

*Corresponding author
E-mail: dr.ramavtarcras@gmail.com

DOI: 10.7897/2277-4343.0911

ABSTRACT

Good oral health denotes healthy teeth, healthy gum and healthy surrounding tissue. Despite the fact that a large number of people in India suffers from periodontal diseases but has been remain neglected area where more social awareness is required. After consumption of food, within 15 to 20 minutes some bacteria acts on residue food particles and produce acid which causes dental decay. In addition of this the accumulated debris, bacteria etc. causes dental plaque. Dental caries and periodontal disease are the two most common worldwide prevalent dental ailments. Further maintenance of oral health is important not only for the structures of oral cavity, it also deliver huge impact on general health. Food particles cling between infected gum and teeth helps in development of pathogenic as well as commensal organism which may causes systemic disorder like rheumatic carditis, infective endocarditis etc. Dantadhavana, jivha nirlekhana, kavala, gandusha etc. are some procedure which helps to maintain oral health. Dantadhavana using herbal twig is an ancient custom and also in practice at present days although chemically produce tooth paste also used by a large number of population. The bristle of twigs mechanically removes the food debris which are trapped between the teeth. Its extract which are comes out during the bristle preparation alters the acidic media of oral cavity towards alkaline and thus helps to neutralise the acid, produced by the bacteria and thus prevents caries formation. Further the twigs also pose antimicrobial activity and healing property thus it is also helpful for prevention as well as to cure the periodontal disease. In addition of this regular dantadhavana increase the salivation which further helpful for the maintenance of oral health.

Key words: Dantadhavana, Oral health, Herbal twig, Ayurveda.

INTRODUCTION

Digestion and absorption of food is necessary for sustention of life and the process of absorption starts in mouth through the act of chewing 1. The act of chewing and tasting of food is called ‘mastication’, and teeth are necessary for this activity. Food particle divided into small spice and various salivary secretions mixed with it during mastication. Beside this, it also gives emotional satisfaction of eating food. With addition of these teeth are also important for clear speech and good appearance. Good oral health denotes sound teeth, healthy gums and healthy surrounding tissue. Beside the structures of oral cavity it has great impact on general health of an individual also. Dental caries and periodontal disease are the two most common worldwide prevalent dental ailments 2. Regular tooth brushing or dantadhavana is necessary to remove dental plaque and food debris. Accumulation of food debris between the unhealthy gum and teeth helps in the growth of commensals as well as pathogenic organisms leading to the development of pyorrhoea alveolaris, subsequently which may cause premature fall of teeth, Infective endocarditis, Rheumatic carditis and Aspiration pneumonia 1. In addition of this bad oral hygiene is main responsible factor for halitosis (bad breath) along with some other factors like sinus infection, tonsillitis and infection of throat and nose etc. 2. Food particles accumulated in the mouth after eating begins to ferment and form an acid within 15 to 20 minutes. Prolonged contact of this acid with the teeth leads to development of cavity on the enamel surface 3.

So maintenance of proper oral hygiene is necessary not only for prevention of teeth ailments, but also to prevent some deadly systemic consequences. Regular tooth brushing is the best way to maintain proper oral hygiene. Tooth brushing and other measures of oral health maintenance are emphasized and described in detail in various Ayurveda classics. Plenty of research related to tooth brushing using herbal and herbo-mineral compound, various chemical compound and their impact in the maintenance of oral as well as general health also available at present day and exploration of all these are the main aim of this article.

Time and process

Teeth should be cleaned twice a day, after elimination of urine and faeces at morning and after consumption of food at evening. Principally twigs of kasaya, katu and tikta rasa dominant tree like arka (Calotropis procera), nyagroda (Ficus begalensis), khadira (Acacea catechu), karanja (Pongamia pinnata) etc., are used for this purpose although madhurara containing twig like madhuka (Glycyrrhiza glabra) also used in some particular instance 2. The tip of the twig should be chewed to prepare soft bristle and without harming the gum teeth should be cleaned one after another starting for the lower tooth 4 facing east or northern direction 5. The twig which is used for dantadhavana should poses some special character like it should be straight, knotless or having one knot and free from cavity (caused by insect infection). Each time fresh twigs should be taken from a tree grown in good land. Factors like season, doshic predominance of the person, rasa and virya of twig etc. must be considered before selection of the twig. Twig of Nimba (Azadiracta indica) is best among tikta rasa (bitter), khadira (Acacea catechu) among kasaya rasa (astringent), madhuka (Glycyrrhiza glabra) among madhura rasa (sweet) and karanja (Pongamia pinnata) among kasaya rasa (sweet).
Research has shown that dantadhavana using herbal twig alters the salivary pH and it become alkaline which helps to neutralize the acid which is produced by pathogenic bacteria. This phenomenon helps to protect the teeth as this acid is the main responsible factor for dental decay. Further it has been also proved that high pH causes suppression of salivation which is further associated with increased risk of periodontal diseases. Arvind et al. has shown in his study that herbal dentifrices effectively reduce formation of plaque and gingivitis, without any adverse effects on the oral cavity.

Basically twigs of arka (Calotropis procera), khadira (Acacia catechu), karanja (Pongamia pinnata), neem (Azadiracta indica) etc. are used for dantadhavana and antimicrobial activity of these herbs has been established in several studies. Studies revealed that latex of arka (Calotropis procera) poses strong inhibitory effect on specific microorganisms. Further, Taxifolin, which is the main constituent of Khadira (Acacia catechu), possesses antifungal, antiviral, antibacterial, anti-inflammatory and anti-oxidant activity. Certain studies prove that Karanja (Pongamia pinnata) poses antimicrobials well as effective in prevention of dental caries. Kasaya, katu and tikta rasa are used in dantadhavana. All these three rasa pacifies kapha dosha; katu rasa purifies oral cavity, exterminates krimi and opens channels. Tikta rasa also having krimi nashaka property. Kashaya rasa poses vrina (ulcer) purification and healing property. There is sense of freshness and salivation increases after dantadhavana, as it pacifies kapha dosha and open up channels.

Chemicals like triclosan, chlorhexidine, calcium carbonate, sorbital, sodium lauryl sulfate, hydrated silica, flavor, potassium nitrate, benzyl alcohol, sodium silicate, cellulose gum, triclosan, and sodium saccharin etc. are used in mouth rinses and dentifrices to prevent plaque and gingivitis now a days. But some of these chemical especially Sodium lauryl sulphate may have toxic effect.

Special care should be taken regarding brushing technique and regular diet. Herbal twig is chewed to prepare soft bristle and tooth is cleaned one after another starting from the lower jaw. 12 anguli (around 15 cm) long twig is used for this purpose, longer or shorter than the above mentioned length may causes extra pressure over teeth as well as gum and difficult to handle too. In addition of this the additional benefit of chewing is herbal extract comes out during this procedure and mixed with saliva and spreads throughout the oral cavity, this extract is mainly responsible for antimicrobial activity and alteration of pH.
due to the direction of the bristle, cleaning of the molar teeth is difficult to some extent. All the inner, outer and biting surface should be brushed alike at least 5 times with enough pressure as the bristle can clean the surface between the teeth. After proper brushing, gum should be massaged by finger with the help of herbo-mineral compound. Beside this some specific fruits and vegetable should be incorporate in daily diet, especially green leafy vegetables and fruits rich in minerals and vitamin C should be taken regularly. Intake of milk, egg, tomatoes, guava, gooseberry etc. should be encouraged. Fruit like apple, carrots etc. which are called natural toothbrushes as they reduce the chance of dental caries, should also consumed daily. On the other side excessive intake of refined carbohydrates like sugar, sweets, biscuits, pastries, cakes etc. should be discourage. Mouth should be rinsed with cold water during hot seasons (grishma and sarad ritu) and with warm water during cold seasons after intake of any food and after dantadhavana also. As a whole the herbal twigs and herbo-mineral compound which are used for dantadhavana effectively maintain oral health.

CONCLUSION
Dantadhavana abide the rule of Ayurveda obviously helpful in maintaining of oral health. It prevents dental carries by maintenance of salivary pH and promotion of salivary secretion. Regular mechanical removal of food debris and control over acid formation helps to prevent dental plaque which in turn prevents periodontal diseases. Further antimicrobial and healing property also present in the herbal twigs which are used for dantadhavana. This prevents as well as pacifies periodontal disease and as the gist it can be concluded that regular dantadhavana not only helpful for oral health maintenance but it also gives protection from some systemic disorder which is the consequence of bad oral hygiene.

REFERENCES
9. Yogaratnakara Purvakhandha nityapraprittriprakar 1/12, Sastri. Brahmasankar editor, with Vidyotini Hindi Commentary; Varanasi; Chaukhamba Prakashan; Reprint 2013, page 36.


Cite this article as:

Source of support: Nil, Conflict of interest: None Declared

Disclaimer: IJRAP is solely owned by Moksha Publishing House - A non-profit publishing house, dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJRAP cannot accept any responsibility or liability for the site content and articles published. The views expressed in articles by our contributing authors are not necessarily those of IJRAP editor or editorial board members.