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Review Article

# Role of Ayurveda in Management of Oral Health - A Conceptual Study

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## ABSTRACT

*Ayurveda* is one of the ancient medical sciences originated in *India* long back, which explains various techniques to prevent diseases and promote health. Procedures explained under *Dinacharya* are merely to prevent life style diseases and protect health, practices like *Dantadhavana*, *Jihvanirlekha*, *Kavala*, *Gandusha*, *Prathisarana* and *Tambula sevana* are best practices described under *Dinacharya* to prevent diseases of oral cavity and promote Oral hygiene. Oral diseases are major problem in worldwide and western medicine having limited success in prevention of diseases concern to oral cavity. *Ayurveda* involves holistic view of human beings, his health and illness, the regimens, medicinal plants and preparations explained in *Ayurveda* which are helpful for Oral hygiene. This study is conceptual hence all available *Ayurveda* references are searched to explain importance of *Ayurvedic* procedures in preventing diseases of oral cavity. Study has been concluded by explaining significance of *Ayurveda* in promoting oral health.

**Key Words:** *Ayurveda*, *Dinacharya*, Oral hygiene, *Dantadhavana*, *Jivhanirlekha*.

## INTRODUCTION

*Ayurveda* is an ancient system of medicine for health which enlightens *Ashtanga Ayurveda* which means eight limbs of *Ayurveda*. *Ashtanga Ayurveda* is specializations of *Ayurveda* since each branch is specialized in its own way. *Ashtangas* which includes *Kaya*, *Bala*, *Graha*, *Urdvanga*, *Shalya*, *Danshtra*, *Jara* and *vrisha*,<sup>[1]</sup> in these above mentioned specializations *Urdvanga* deals with diseases of upper part of the body, *Urdvanga* is a branch of *Ayurveda* which deals with diseases and remedies related to body parts which are situated above the color bone, which means head and the neck. In other words *Urdvanga chikitsa* is named as *Shalakya tantra*, which deals with

diseases and treatment of Head, eyes, ear, nose, and oral cavity.

Oral cavity plays significant role in day to day activities, similarly Oral cavity undergo various diseases, text related to *Shalakya tantra* mentions sixty five varieties of oral disorders that can arise in seven anatomical locations in and around the mouth. Which includes nine on palate, five are related to tongue, eight are connected to teeth, fifteen on alveolar margin and eight on lips. Hence oral cavity requires proper care to prevent above mentioned diseases and promote oral health.

## AIMS AND OBJECTIVES:

Aim of this study is to collect all available references regarding promotion of oral hygiene from different classical texts of

Ayurveda and explain in such a manner to make easy understanding of the topic. To analyze the importance of Ayurveda in maintaining and protecting oral health, also prevent diseases of oral cavity.

## MATERIALS AND METHODS

This article is conceptual therefore available references from *Ayurvedic* literature is collected and compiled for better understanding of oral hygiene. Further explored several supportive literatures and humble effort have been made to draw a conclusion.

## CONCEPTS OF ORAL HYGIENE IN AYURVEDA:

*Ayurveda* is science of life which gives more importance for preventive aspects of diseases and promoting health in healthy individuals. The science which teaches individuals how to live, describes in classical text regarding regimens which should be followed by healthy individuals. The regimens mentioned in *Ayurveda* classics are *Dinacharya*, *Ritucharya*, *Sadvritta*, *Achara Rasayana* and *Pathya Ahara Vihara*. Further few procedures explained in *Dinacharya* like *Dantadhavana*, *Jivhanirlekha*, *Kavala Gandusha* and *Tambula sevana* are best to avoid oral cavity diseases and maintains oral hygiene. Moreover herbal drugs and oils mentioned in *Ayurveda* classics are good to promote oral health, thus each and every procedure mentioned in *Ayurveda* which is good for oral health will described in detail beneath.

### DANTADHAVANA:

*Ashtanga Hridayakara* explains individuals should use *Arka*, *Khadira*, *Karanja*, *Vata*, *Nyagrodha*, *Arjuna* for brushing of teeth, thickness of twig should be of little finger and length of twelve *Angulas*, making one end brush like by chewing without injuring the gums one should brush. [2] *Ashtanga Sangraha* cited herbal drugs like *Asana*, *Karavira*, *Sarja*, *Arimedha*, *Apamarga*, *Malati*, *Jathi* [3] above mentioned all drugs contain *Katu*, *Tiktha*, *Kashaya rasa Pradhana*.

*Susruthacharya* point out selection of twig according to *Rasa*, *Veerya*, *Dosha* and Season, in addition *Acharya* mentions best twigs on basis of *Rasa Pradhana*. *Nimba* is best among *Tiktha Rasa*, *Khadira* is excellent among *Kashaya Rasa*, *Maduka* among *Madura Rasa Dravyas* and *Karanja* is best among *Katu Rasa Dravyas*. [4]

Regular brushing by the drugs mentioned in classics will bring freshness, eliminate bad odour and removes coating on teeth, alleviate *Kapha dosha*, brings clearness in mouth and increase appetite and augment desire for food. [5]

*Dantadhavana* is a part of daily regimen which makes teeth and gums strong and healthy, *Ayurveda* advocates brushing twice daily that is morning and night. More over brushing must be done after every meal is advantageous for keeping oral hygiene. The majority of the tooth paste which we use regularly contains calcium phosphate dehydrate, chalk, alumina, Glycerin acts as moisturizer, Sodium laryll sulphate, Sodium carboxy-methyl gives whiteness to teeth, Cellulose for sweetness and Fluoride in form of HCL.

A systematic review article published in journal of American Dental Association, the results of this study demonstrate that for children younger than six years, fluoride toothpaste use is effective in caries control. However, ingesting pea-sized amounts or more can lead to mild fluorosis. Considering the best available evidence and the continued high caries rate in children, an appropriate amount of fluoride toothpaste should be used by children of all ages. [6] Hence children below the age of six years should not be exposed to fluoride tooth paste, excess quantity of fluoride can lead to degeneration of bones and teeth and has a cumulative effect, ones consumed it cannot be excreted. Population subjected to excess fluorine in drinking water over a period of time will suffer from fluorosis.

*Ayurveda* also advocates contraindication of brushing, individuals suffering from Indigestion, Vomiting,

symptoms like difficulty in breathing, cough, fever, affected with facial paralysis, having excessive thirst, ulceration in mouth and diseases concern to heart, head, ear, eye should avoid brushing. [7]

#### **JIHWA NIRLEKHA:**

Cleansing of tongue must be carried out with appliance made of smooth and soft material, supposed to make of silver, gold and iron. Tongue cleaning will alleviate bad taste and awful odour from mouth, cures edema, prevents stiffness of tongue and increases taste perception. [8] Individuals always perform tongue scraping every day, this will not only cleans the mouth but also stimulates whole digestive tract and improves digestive fire, by doing so one can prevent digestive disorders and enhance oral health. *Jivhanirlekha* also clears coating on tongue, taste sense will be enhanced, overall oral health will be promoted, Appropriate *jivhanirlekha* may also stimulates internal organs and increases awareness in state of health. Tongue scraping should carry out from root of the tongue to tip but not in reverse direction.

Appropriate and regular tongue cleaning stimulates taste perception and increases the salivation which is helpful in digestion. Saliva contains Ptylin, lysosome, hence it acts as Bacteriosidal, due to increased salivation will increase gastrointestinal secretions. Threshold level of the basic taste perception will be increased. Increases stimulation levels of unconditioned reflex in cephalic phase for gastric secretion. Hence increases appetite and also proper digestion impacts on the organs like liver, kidney and spleen.

#### **GANDUSHA AND KAVALA:**

*Gandusha* and *Kavalagraha* are unique techniques explained under *Dinacharya*, which are highly regarded in *Ayurveda*, it is extremely important to gargling the mouth after brushing and after every meal. Keeping mouth full of oil without moving is called as *Gandusha* and moving the material easily in the mouth or gargling is named as *Kavala*. [9] According to *Ashtanga Hridayakara* oil or meat soup

are ideal material to perform *Gandusha* every day. [10]

*Acharya* mentions one should use decoction of *Khadira*, *Ksheeravriksha*, *Irimedha*, regularly for *Kavalagraha* will alleviate loss of appetite, removes bad taste from mouth and cures excess salivation. *Gandusha* can also be practiced by using Luke warm water will cleans the mouth and promotes health of oral cavity. [11]

In *Ashtanga Sangraha Acharya* mentions four types of *Gandusha*, those are *Snaihika Gandusha* to cure diseases of *Vata*, preparations or decoctions are made up of using drugs which are having sweet, sour and salt taste and hot in potency added with ghee or oil. *Shamana Gandusha* to eliminate *pittaja* diseases, decoction prepared with bitter, and astringent and sweet taste cold in potency added with honey and milk. *Shodhana Gandusha* preparation made from drugs having pungent, sour and salt in taste this will eliminate *Kaphaja* diseases. *Ropana Gandusha* which cures mouth ulcerations, preparations made of drugs having astringent and sweet in taste and cold in potency, [12] thus dissimilar drugs are mentioned for different types of *Gandusha*.

Through observation mode of action of *Gandusha* can be explained like Oral mucous membrane has capacity to absorb the lipid soluble drugs, thus the lipid soluble components present in *Kavala* and *Gandusha* gets absorbed effortlessly. Regular and appropriate practice of *Kavala* will assist in proper movements of the jaw and also offer suitable work out for facial muscles, which intern assist for speech and mastication. These techniques are accountable to treat several health conditions pertaining to head region and nourishes sense organs which are present predominance in this region.

#### **PRATHISARANA:**

In *Ashtanga Hridaya Sutrasthana* it is mentioned that gently Rubbing of teeth and gums by using *Kalka*, *Rasakriya* or *churna*. [13] Similar context commentator *Arunadatta* mentions *Prathisarana* is a method of rubbing gums and teeth by using

finger. In *Ashtanga Sangraha Acharyas* mentions *Prathisarana* using same drugs which are indicated for *Kavala* and *Gandusha*, this method is useful for prevention of *Dantamulagata Rogas*.<sup>[14]</sup> *Prathisarana* or rubbing of teeth by using herbal powders, *Saindavalavana*, Honey will strengthen teeth and gums. Further this procedure will remove plaques, food debris from teeth and also enhances oral hygiene.

#### **TAMBULA SEVANA:**

*Tambula* preparation explained in classics by using main ingredients like *Tambulapatra*, *poogaphala*, *Khadirasara*, *Churna* and *Lavanga*. Regular chewing of *Tambula* exerts a cleansing effect in oral cavity, eliminates bad odour from mouth and have excellent effect on voice. Individuals should prefer *Tambula Sevana* after waking up in early morning, after a bath, after having lunch and dinner, before and after sexual intercourse, after *Vamanakarma* and with the company of friends. *Tambula sevana* by using all ingredients mentioned in *Ayurveda* will cheer up spirit and eliminates lethargy and tiredness.<sup>[15]</sup>

*Tambula Patra* contain *Teekshna guna*, *Ushna Veerya*, *Ruchikaraka*, *Kashayarasa pradhana*, *Saraguna*, *Pooga Phala* having *Guru guna*, *Sheeta veerya*, *Kashaya rasa*, *Kapha pitta Nashaka* and *Deepana*, *Asyavairasya Nashaka*, *Khadira Sara* contain property of *Kapha pitta Shamaka* and *Churna* is *Vata Kapha Shamaka*. These ingredients eliminate *Kapha*, provide clarity, good taste, and smell in the oral cavity also enhances oral health.

#### **RESULTS**

*Ayurveda* is dated back to ancient times originated in *India* which explains many techniques to maintain our oral cavity healthy. Traditional knowledge of *Ayurveda* is given more importance for oral cavity to identify diseased condition and as well healthy status of living being. Further to maintain oral hygiene *Ayurveda* advocates several methods under the heading of Daily

regimens. Results of this conceptual study shows that by following the regimens explained above individuals can avoid diseases concern to oral cavity successfully. Appropriate practice of *Dantadhavana*, *Jivhanirlekha*, *Kavala*, *Gandusha*, *Prathisarana* and *Tambula Sevana* by using special drugs mentioned in *Ayurveda* will enhance oral hygiene effectively.

#### **DISCUSSION**

Oral cavity diseases are one of the most important common problems in public health and presently on the rise in developed and developing countries. Oral health indirectly reflects physical health of an individual's, preponderance of the diseases in oral cavity is caused by bacterial infections. There is need for safe and effective method for prevention and treatment of oral cavity disorders, since modern medicine having limited success in this field. *Ayurveda* is most excellent oldest system for medicine and health having history of 5000 years back, this medical system having novel method of preventive and therapeutic measures in promoting oral hygiene.

*Ayurveda* highlights prevention and promotion of positive health as its primary objective, where as curing the disease is secondary. Several regimens are prescribed in classical text of *Ayurveda* for prevention of diseases and promotion of health, those includes *Dinacharya*, *Ratricharya*, *Ritucharya*, *Sadvritta* and *Achara Rasayana*. Further for the prevention of oral diseases and for maintenance of oral hygiene *Ayurveda* prescribes *Dantadhavana*, *Jivhanirlekha*, *Kavala*, *Gandusha*, *Prathisarana* and *Tambula Sevana* under the heading of *Dinacharya*. Additionally herbal drugs and formulations mentioned in *Ayurveda* for above mentioned procedures are best to enhance oral health.

Oral health in *Ayurveda* is described under the heading of *Shalaky Tantra*, one among the eight branches of *Ayurveda*. In classical text of *Ayurveda* we can find elaborated explanation regarding oral

health, diseases, treatment and preventive aspects but it is in scattered manner. This traditional medicine provides lot of information regarding prevention of oral diseases and promotion of oral hygiene. The regimens explained in classical texts for oral hygiene are safe, effective, economical and practicable. Studies conducted on oral health in Ayurveda are mentioned beneath.

A randomized control study conducted by Avinash Kadam published in *Ayu – An international quarterly journal of research in Ayurveda*, concludes that Both UDM toothpowder and standard control treatment group shows statistically significant reduction in scores of gingival index and plaque. Both the groups showed a similar effect in treating gingivitis. A poly herbal combination of herbs mentioned in *Ayurveda* for oral hygiene has a potential for management of gingivitis. [16]

An observational study on *Kaval* by using *Ksheeri Vriksha Hima* in *Mukha Swasthya* published in International Journal of Research in *Ayurveda* and Pharmacy, study concludes that regular practice of *Kavala* prevents *Mukharogas* and maintains *Mukhaswasthya*. *Kaval* also provides strength to the structures in oral cavity; *Ksheeri Vriksha Hima* will remove aggravated *Kapha* and *pitta* from oral cavity. Post treatment results show that reduction in *Asysvairasya*, *Mukhadourgandhya*, *Vaktra Laghavata*. Practicing of *Kavala* with *Ksheeri Vriksha Hima* as a routine should be popularized among people for better *Mukhaswasthya*. [17]

*Ayurveda* oral hygiene practices not only keeps oral cavity healthy, which can also helps to prevent and eliminate incidence of dental problems like cavities, tooth sensitivity, receding gums and cracked teeth also other major problems of oral cavity. Majority of oral diseases are caused by lack of oral hygiene as well bacterial infections. The regimens and herbal drugs helpful for oral health are particularly well described in classical *Ayurvedic* literatures. Since time immemorial plants are used as major source of medicines for number of

diseases in *India* and in all over the world. Till today in rural areas of *India* people are using plant medicines for oral diseases and to maintain oral hygiene.

## CONCLUSION

Subsequently referring each and every accessible classical text on *Ayurveda* it is obvious that concept of oral health is completely developed and well practiced in ancient time. Mouth is mirror for general physical health, hence it is extremely important to maintain and enhance oral hygiene. The regimens like *Dantadhavana*, *Jivhanirlekha*, *Kavala*, *Gandusha*, *Prathisarana* and *Tambulasevana* are unique methods explained in *Ayurveda* to promote oral health. Further herbal drugs which are mentioned for these regimens are most excellent and cost effective to prevent oral diseases and promote oral health. To conclude this conceptual study developing country like *India* need for alternative preventive, treatment and products in oral diseases which are safe, effective and economical. Further specific studies are required to prove *Ayurvedic* regimens and products are satisfying all above stated qualities.

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