

ORAL HEALTH CARE THROUGH AYURVEDA: A REVIEW

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ABSTRACT

Oral health is reflection of the health of entire body. Diseases related to oral cavity are among the major health problem all over the world and their incidences are on rise especially in developing countries. Poor oral hygiene can have hazardous consequences on physical and psychological well-being and can contribute to various systemic diseases too. Modern medicine provides important contribution in treatment of oral disorders but has some limitations like chemical hazards, unaffordability, lack of accessibility etc. *Ayurveda* is in practice even before the commencement of modern medicine and it follows life style approach for good health and disease prevention. It can be validated by the reference of *Dincharya* (daily regimen) in

which oral health care is executed by the use of twigs of herbal plants for *Danta dhavana* (brushing) followed by *Jihwa nirlekhana* (Tongue scrapping), *Pratisarana*, use of *Gandusha* and *Kavala* as a part of routine practice to strengthen and prevent the diseases of *Mukha* (oral cavity). In the present paper, an attempt has been made to meet the challenges in oral healthcare by exploring the various therapeutic procedures and herbs advised in *Ayurveda* for the preservation and management of oral health.

KEYWORDS: Oral health, Chewing stick, *Jihwa-nirlekhana*, *Pratisarana*, *Gandusha*.

INTRODUCTION

Oral cavity (*Mukha*) is considered as one of the important part of the *Urdhwajatru* (organs situated above clavicle) since it supports essential human functions such as eating, chewing, speaking, smiling, breathing and socializing. It is called as mirror of the body health. Thus

oral health and general health are closely related. World Health Organization (WHO) defines oral health as a state of being free from mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal disease, tooth decay, tooth loss and other diseases and disorders that limit an individual's capacity in biting, chewing, smiling, speaking and psychosocial wellbeing.^[1] Most common problems resulting from poor oral hygiene are dental caries, sensitive teeth, periodontal diseases, halitosis, aphthous ulcers, oral cancers etc.

Indians have relatively high incidence/prevalence of dental caries of permanent teeth and about 16% with periodontal problems as compared to the entire South Asian population.^[2] Dental treatment is costly and oral health care demands are beyond the capacities of the health care systems in most low and middle income countries. Risk factors for oral diseases are changing life style habits, unhealthy diet high in free sugars, use of tobacco and alcohol, inadequate exposure to fluorides, poor oral hygiene etc.^[3] Moreover mouthwashes advised for oral health in modern medical science have their own side effects like tooth staining, dry mouth, increased tartar, decreased and unusual taste perception, mouth sores etc. Oral diseases may directly affect a limited area of human body, but their consequences affect people throughout their lifetime, causing pain, discomfort, disfigurement and even death.

For preventing all the above mentioned problems due to poor oral health much has been described in Ayurveda texts for maintenance of oral health. Among eight branches of Ayurveda, dentistry and oral cavity diseases comes under the branch *Shalakya Tantra*. *Aacharya Sushruta* has explained the diseases of the oral cavity with full details by enumerating 65 types of *Mukha Roga* in seven anatomical locations of *Mukha*.^[4] There is no any separate chapter in *Ayurveda* on oral health but all *Aacharyas* have mentioned about oral hygiene as a part of routine practice (*Dincharya*) in a very scientific manner. *Aacharya Charaka* has explained about *Dantapawan*, *Mukhprakshalana* etc. in *Matrasheetiya Adhyaya* by considering it as an inseparable part of *Dincharya*. *Aacharya Sushruta* has explained about oral health in *Anagatabadhapratishedha* chapter. The chapter name itself indicates towards the practice of routine therapeutic measures, *Swasthavritta*, *Sadvritta*, *Rasayana* etc. to prevent the possible future diseases. Hence the description of *Dantapawan*, *Jihwanirlekhana*, *Pratisarana*, *Tambula sevana* etc. as a part of daily regimen emphasize on the importance of oral health to prevent the future possible oral diseases. Similarly *Aacharya Vagbhatta* has explained about oral health in *Dincharya* chapter. Therefore all the measures for maintenance of oral health described by various *Aacharyas* are given below-

Dantadhawan (Brushing teeth) by Dantapawan (Tooth Cleaning Stick)

In *Dincharya Adhyaya* *Aacharya Vagbhatta* has described that for protection of life one should get up during *Bhrahma Muhurta* and after attending ablutions, then the person should clean his teeth with twigs of *Arka* (*Calotropis procera*), *Nyagrodha* (*Ficus bengalensis*), *Khadira* (*Acacia catechu*), *Karanja* (*Pongamia pinnata*), *Kakubha* (*Terminalia arjuna*) etc. which are *Kashaya* (astringent), *Katu* (pungent) and *Tikta* (bitter) in taste.^[5] *Aacharya Charaka* and *Sushruta* have used the word *Dantapawan*, equivalent to contemporary tooth brush, but it is prepared from crushing and chewing the tips of fresh stems of medicinal plants. This *Dantapawan* (tooth cleaning stick/ chewing stick) should be 12 fingers in length and size of little finger in thickness, without any socket and knots. The twigs should be picked from a tree growing in a clean place and full of *Rasa* and *Virya*.^[6] The twig whose tip has been made very soft by chewing should be used early in the morning and in evening (after having meals during bed time) without harming the gums.^[7] Twigs made from stems of *Nimba* (*Azadirachta indica*), *Khadira*, *Madhuka* (*Madhuca indica*) and *Karanja* are best among the stems with bitter, astringent, sweet and pungent taste respectively.^[8] In *Ashtanga Sangraha*, *Aacharya Vagbhatta* has mentioned that the stems which are *Shuska* (dry), *Sushira* (hollow), *Puti* (foul smelling), *Pichhila* (sticky) and *Madhura* (sweet), *Amla* (sour) and *lavana* (salty) in taste should not be used. Along with this, there is also description of the plants which should not be used for *Dantadhawan* such as *Shleshmantaka* (*Cordia dichotoma*), *Arishta* (*Sapindus trifoliatu*s), *Bibhitaka* (*Terminalia bellirica*), *Dhvav* (*Anogeissus latifolia*), *Dhanvana* (*Grewia tiliaefolia*), *Bilva* (*Aegle marmelos*), *Vanjula* (*Salix tetrasperma*), *Nirgundi* (*Vitex nigundo*), *Shigru* (*Moringa oleifera*), *Tilvaka* (*Simplocos racemosus*), *Tinduka* (*Diospyros peregrina*), *Kovidara* (*Bauhinia variegata*), *Shami* (*Prosopis cineraria*), *Peelu* (*Salvadora persica*), *Pippali* (*Piper longum*), *Ingudi* (*Balanites aegyptiaca*), *Guggulu* (*Commiphora mukul*), *Paribhadra* (*Erythrina variegata*), *Amlika* (*Tamarindus indica*), *Shalmali* (*Salmalia malabarica*), *Shana* (*Crotolaria juncea*) and *Palasha* (*Butea monosperma*).^[9]

Kapha Dosha naturally dominates in the oral cavity and it is all the time moist and sticky due to the presence of saliva. During description of *Mukha Roga Nidana*, *Aacharya Vagbhatta* has described that *Kapha* is the dominant *Dosha* in origin of all the diseases of *Mukha*.^[10] Hence any diseases of the teeth, gums as well as mouth, it is important to use medicines having *Kapha Shamak* action. *Katu*, *Tikta* and *Kashaya Rasa* have *Kapha Shamaka* property.^[11] Therefore use of twigs with the above mentioned tastes helps in prevention of

various oral pathologies. Mastication of the twig acts as a good exercise for the teeth and gums. It also causes attrition of biting surfaces, which get leveled out. 12 fingers length also seems appropriate as all teeth become accessible for brushing with this length. Apart from the effects on teeth and gums, the fresh juice in the various twigs when digested and absorbed also exerts its beneficial effects on different parts of body. Tooth cleaning stick made from Banyan improves *Teja*, *Karanja* brings victory, Pomegranate, *Arjuna*, and *Kutaja* improve complexion of skin, *Badar* stem improves voice, *Khadira* stem exerts cleansing action on mouth, *Bilva* stem increases money, Mango stem imparts health, *Champaka* stem improves hearing and speech, *Apamarga* stem increases intellect and also improves voice.^[12]

***Pratisarana* (massaging teeth and gums) by *Dantashodhaka Churna* (tooth powder)**

A gentle massage over teeth, tongue and oral cavity by *Churna* (powder), *Kalka* (paste) or *Avaleha* with the help of finger is called *Pratisarana*. It is indicated in all oral cavity disorders. Various preparations like *Kalaka Churna*, *Peetaka Churna*, *Dashansanskar Churna*, *Pathadi Manjana* etc. are mentioned for teeth and gums diseases in the Ayurveda classics. Brushing teeth with chewing sticks is contraindicated in some diseases such as diseases of throat, palate, lips and tongue, *Aasyaapaka* (mouth ulcer), *Swasha* (asthma), *Kasa* (cough), hiccough, vomiting, indigestion, *Murchha* (fainting episodes), *Mada* (alcohol intoxication), *Shiroruja* (headache), *Trishna*, *Ardita* (facial palsy), ear pain, *Danta Roga* and patients having weakness and fatigue.^[13] In these conditions, the oral health can be maintained by using *Pratisarana*. Gentle massage of gums and teeth with simple formulations like *Tankan bhasma*, *Shubhra bhasma* or *Saindhava lavana* mixed with honey, *Trikatu* with honey and *Saindhava*; *Triphala* mixed with *Tila taila* etc. maintains them in healthy state and plays a great role in preventing various oro-dental diseases. *Aacharya Sushruta* has mentioned daily use of *Dantashodhaka Churna* which is composed of *Trikatu*, *Trijataka* and *Tejovati* with honey, *Tila Taila* and *Saindhava* for cleaning of teeth. Every tooth should be cleaned by this *Churna* smeared chewing stick without harming the gums.^[14] Thus *Pratisarana* can be used with the help of both chewing stick and finger. This process of *Pratisarana* removes the food debris and plaque which are the main causative factor of the various oro-dental disorders. It also helps in increasing the local blood circulation and thereby augments gingival fibers to maintain the gingival and periodontal health.

Jihwanirlekhana (Tongue scrapping)

After cleaning the teeth with *Dantapawan*, the tongue is cleaned by using *Jihwanirlekhani* (tongue scraper). It can be made either by the twigs of plants or by metals like gold, silver, copper etc. The tongue cleaner should be soft and smooth with round edges and 10 fingers in length. Cleaning of tongue improves mouth tastelessness, halitosis, *Shotha* (swelling), *Jaadya* (absence of any sensation in tongue) and gives feeling of freshness and comfort.^[15] *Aacharya Charaka* has mentioned that the waste coated on root of tongue dorsum causes difficulty in breathing and halitosis.^[16] Therefore proper cleaning of tongue from its root to tip plays important role in preventing various diseases of oral cavity. Thus tongue scrapping acts as an important pillar of oral health.

Kavala and Gandusha (Oil pulling/ Gargling)

Kavala and *Gandusha* both are variants of gargling. It is important to gargle after meals, eating any food and after brushing the teeth. One may use cold or hot water, cold milk, medicated ghee or oil, various decoction or simple *Tila taila* for gargling. In *Kavala*, one holds and moves paste or semisolid solution in mouth whereas in *Gandusha*, a large quantity of fluid is taken into mouth that one is unable to move it inside the mouth.^[17] The fluid is hold in the mouth till the nose and eyes start watering and mouth gets filled with *Kapha Dosh*.^[18] *Gandusha* and *Kavala* are further divided into four types-

1. *Snehika* (Lubricating) - useful for *Vataja* disease of mouth i.e. disease associated with dryness and roughness in the mouth.
2. *Shamana* or *Prasadana* (Palliative) - used in *Pittaja* diseases of the mouth like stomatitis or ulcers in the mouth or gums.
3. *Shodhana* (Purifying) - used for its cleansing action in *Kaphaja* disorders like excessive salivation and stickiness in the mouth.
4. *Ropana* (Healing) - used in *Raktaja* disorders and *Vrana* (ulcers) in mouth.

Acharya Charaka has given importance of *Taila Gandusha dharana* (oil pulling) as it gives strength to jaw bone, voice and facial muscles; helps in developing taste; one will never suffer from dryness of mouth and throat, cracked lips, tooth destruction, toothache, sensitivity of teeth by sour foods and drinks. Thus roots of teeth become strong and one can chew even hard foods easily.^[19] When tooth cleaning twigs are not available and the conditions where brushing is prohibited, one should clean mouth by gargling with twelve handfuls of water. By doing so, there will be no disease in the tongue and teeth due to bad taste and accumulation of

excreta. The mouth becomes non-slime and light. By gargling, *Kapha*, *Kandu* and the deposited waste on teeth and tongue gets eliminated.^[20] According to disease condition, various formulations of *Gandusha* or *Kavala* exert cleaning, hemostatic, tonic, astringent, healing and anti-inflammatory action on gums, teeth and the entire oral mucosa.

***Mukha shuddhikar dravya* (Mouth freshening herbs)**

Aacharya Charak has stated that for maintenance of oral hygiene, interest in food, mouth freshness and fragrance, one should chew the herbs like- *Jaatiphala* (*Myristica fragrans*), *Latakasturi* (*Hibiscus abelmoschus*), *Puga* (*Areca catechu*), *Lavanga* (*Syzygium aromaticum*), *Kankola* (*Piper cubeba*), *Tambula* (*Piper betel*), *Karpura* (*Commiphora mukul*), *Ela* (*Elettaria cardamomum*).^[21] *Aacharya Sushruta* has mentioned that consumption of *Tambula* with *Karpura*, *Jaiphala*, *Kankola*, *Latakasturi*, lime and *Puga* is beneficial. Chewing these herbs brings cleanness and fragrance in mouth, facial complexion and beauty, purification of *Hanu* (mandibular area), *Danta*, *Swara* (voice), *Jihwa* and *Indriya* (senses), alleviation of nausea, strength in the heart, and prevention from throat diseases.^[22] *Aacharyas* have described *Tambula sevan* (betel chewing) as a part of daily regimen and also it's an ancient custom of India. Here none of the Ayurveda texts mentioned tobacco and such other intoxicating substances to be mixed with *Tambula* (betel). Chewing of tobacco along with betel leaves is very injurious to health and chief cause for cancer of oral cavity. But chewing of betel leaves, arecanut, lime and other fragrant substances like cardamom, cloves etc. has definite medicinal properties and hence beneficial for health. *Aacharya Vagbhatta* has specified the conditions in which *Tambula sevan* is contraindicated such as person suffering from wounds, bleeding diseases, dryness and redness of the eyes, poisoning, unconsciousness, alcoholic intoxication and tuberculosis.^[23]

Dantya rasayana – In *Rasayana Vidhi* chapter, *Aacharya Vagbhatta* has described *Rasayana* (rejuvenating medicine or tonic) for teeth also. If a person consumes *Krishan Tila* (Black sesame seeds) followed by drinking cold water every day gets his body nourished well and his teeth becomes firm till death.^[24] *Taila Gandusha*, *Aamlaki* (*Emblica officinalis*), *Triphala*, *Yastimadhu*, *Ikshu*, *Mouktika bhasma* etc. have *Rasayana* properties and acts as gingival and dental tonics.

CONCLUSION

Poor oral health has an adverse impact on general health and quality of life. Ayurveda offers a holistic way of perfect living with nature. Herbal chewing sticks for brushing and tongue

scraping, gargling preparations, oro-dental massaging herbs, dental tonics as discussed above have very low cost, easily available and can be freely implemented in the routine life. Most of the herbal plants described above have scientifically proven anti-inflammatory, antibacterial, analgesic, rejuvenating and healing property which helps in preventing various oro-dental problems like gingivitis, pyorrhoea alveolaris, periodontitis, dental caries, teeth staining and calculus deposition, halitosis, ulcers, glossitis, oral submucous fibrosis, oral cancers etc. Therefore ancient medicinal science of *Ayurveda* can prove as a safe, economical, patient friendly and effective treatment approach for both preventive and therapeutic purpose of oral health.

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