

An Ayurvedic view to oral hygiene

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Abstract: A clean mouth and properly functioning teeth are essential for physical and mental well-being. Many researches indicate that a clean and hygienic mouth prevent pneumonia, gum and tooth diseases, oral cancer and also helps in preventing heart diseases. Oral diseases continue to be a major health problem worldwide. Dentistry is not a separate branch in Ayurveda, but it is included in *Shalakyta Tantra*. Though Modern dentistry is with a limited success, Ayurveda has an effective science of preventing the oral diseases. Brushing, flossing and rinsing are used in modern dentistry and also chemical substances are widely used in toothpastes. Many day-to-day life procedures has described in Ayurveda for the prevention of and maintenance of oral health. In Ayurveda many herbs have been describe due to their wide range of their pharmacological actions and various therapeutic procedures have been advocated and they are effective for oral health and oral diseases.

Key Words: Oral hygiene, Modern dentistry, Ayurveda, *Shalakyta tantra*.

1. INTRODUCTION:

Oral diseases are one of the most important issue in public health in the world. Oral health is an integral element of general health and wellbeing. Good oral health enables individuals to communicate effectively, to eat and enjoy a variety of foods, and is important in overall quality of life, self-esteem and social confidenceⁱ. A wide range of diseases and conditions can be coming under oral diseases including dental caries, periodontal diseases, oral cancers, dental erosion, dental fluorosis, etc. Oral diseases are highly prevalent and their impact on both society and the individual is significant. Oral health also reflects the body health. Good oral health is not only important for prevention and treatment of oral diseases but also for maintaining general health. Modern dentistry had limited success in the oral hygiene and in prevention of oral diseases. In modern dental science tooth brushing, flossing, rinsing techniques; chemical base paste and gargling with the different mouth washes are advocated for maintaining oral hygiene.

Ayurveda provides good alternative for that and may lead to the development of preventive strategies for oral hygiene. Various herbs and products have been used for their pharmacological properties viz. anti-inflammatory, antimicrobial, antiulcer, and antioxidant etc.ⁱⁱ

Nowadays the hike of demand is more towards the usage of various Ayurvedic products for treatment and management of oral diseases, due to anti-inflammatory, antimicrobial, antioxidant properties. Many therapeutic procedures i.e. *Danta-Dhavana* (tooth brushing), *Jivha Nirlekhana* (tongue cleaning), *Gandusha & Kavala* (gargling) etc. and natural herbs & products have been mentioned in classics. According to World Health Organization (WHO), 75% of the world's population consumes herbs for basic health care needs. WHO has recommended for the incorporation of the traditional systems of medicine like Ayurveda into the primary health care system, for those communities where it is accepted?

SHALAKYA TANTRA AND MUKHA ROGA

Shalakyta tantra deals with all diseases above the clavicle through authentic Ayurveda *Chikitsa*. *Acharya Sushruta* mentioned 65 varieties of *Mukha Roga* can arise in seven *Aayatana* (Anatomical locations) as follows; 8- *Osthagata Roga*, 15-*Dantamoolagata*, 8- *Dantagata*, 5- *Jihvagata*, 9- *Talugata*, 17- *Kanthagata* and 3- *Sarvasara Roga*.ⁱⁱⁱ *Acharya Vagbhatta-75*, *Acharya Sharangdhara-74* and *Acharya Yogratnakara / Acharya Bhavprakash-67* mentioned 65 types of *Mukha Roga*. Oral cavity includes the *Oshtha* (lips), *Dantamoola* (gingiva and tooth supporting structures), *Danta* (teeth), *Jivha* (tongue), *Talu* (palate), *Kantha* (throat) and *Sarvasara* (oral mucosa). Hygiene of oral cavity is more important due to the chief entrance and digestion process begins in the mouth itself. *Kaphaja Nidana* is predominant factor for *mukha Roga* “*Slesmaulvana dosha kurvantya antramukham gadhan*”^{iv}

MUKHA SWASTHYA NIRDESHA

Ayurveda is an ancient science of life that emphasizes on maintenance, promotion of health and prevention of diseases through various dietary & lifestyle regimens and treatment of diseases through various therapeutic measures substantiating the principles. “*Swasthasya Swasthya Rakshanam*” i.e., preserving the health of healthy persons and “*Aturasya Vikara Prasamanam*” i.e curing the diseases of diseased. Ayurveda propounds *Dincharya* and *Ratricharya* (daily routine), *Ritucharya* (seasonal activities), Dietary guidelines and *Sadvritta* (code of conduct for mental health) for maintenance, promotion of health and prevention of ailments. *Under the Dinacharya (daily routines) various procedures for maintaining oral hygiene are well explained in all classical texts of Ayurveda. These include procedures like Dantadhavana (brushing the tooth), Pratisarana (Massaging the teeth and gums), Jivha Nirlekhana (tongue cleaning), Gandoosha and Kavala (gargling) etc.*

DANTAPAVANA / DATUNA^v

Before tooth brushes, chewing sticks of different herbal sticks were used and even in the present they are being used to cleanse the teeth. Recent studies have authenticated the use of chewing sticks as being at least equal to or greater than the currently using cleansing and mechanical methods. It is saying that gingivitis and cavity prevention effects of these sticks are better compared to the common toothbrush. *According to Acharya Sushruta, Dantapavana should be fresh and straight. Its length should be 12 Angula (9 inches), while thickness should be equal to Kanshtika Anguli (little finger). These herb sticks should be either Kashaya (astringent), Katu (pungent), or Tikta (bitter) in Rasa. Acharya Sushruta also includes Madhura rasa.*^{vi}The basic method includes chewing the twig at one end. Generally, a fresh stick is taken from the tree of specific plants. Common plant sticks which are used in different vitiated *dosha* conditions are:

In vitiated Vata Dosha:

- Commonly experiences the problem of receding gums
- Recommend bitter-sweet or astringent tastes sticks:
 - *Yastimadhu (Glycyrrhiza glabra)*
 - Black catechu or the cutch tree (*Acacia catechu linn*)

In vitiated Pitta Dosha:

- Commonly prone to have inflamed gums
- Recommend bitter taste sticks:
 - *Nimba (Azadirachta indica)*
 - *Arjuna (Terminalia arjuna),*

In vitiated Kapha Dosha:

- Commonly prone to have pale or hypertrophic gums
- Recommend pungent taste sticks:
 - Fever nut (*Caesalpinia bonduc*)
 - *Arka (Caltropis procera)*

2. OTHER COMMON HERBS CAN BE USED FOR GENERAL ORAL HEALTH:

- *Parijata (Zanthoxylum americanum)*
- *Babul (Acacia arabica)*
- *Amalaki (Emblica officinalis)*
Amalaki helps to restructure and maintain tissue health as it is a most potent source of antioxidants and vitamin C. Amalaki supports healing, develops connective tissue, and tonifies the tissue of the oral cavity.^{vii}
- *Haridra (Curcuma longa)*
Extracted from turmeric, curcumin is a potent anti-inflammatory and anti-bacterial herb to support the health of the mouth
- *Triphala*
Recent studies have shown that *Triphala* has antibacterial properties against *S. mutans* bacteria, plaque and gingival index, and is as or more effective than the standard mouthwash, Chlorhexidine.

- Acharya Sushruta suggested that Nimba (*Azadiracta indica* A.juss) is better among bitter ones, Khadira (*Acacia catechu* Linn.f) among Astringent ones, Karanja (*Pongamia glabra* Vent) among pungent ones and Madhuka (*Bassia longifolia* Koen) among sweet ones^{viii}.
- The benefit of Dantpavana is to get rid from bad odour of mouth along with increasing palatability towards food by clearing Mala from tooth, tongue and mouth. Dattuna described in ancient Ayurvedic literature, possessing medicinal properties and is capable of maintaining oral health. Chewing on these stems is facilitate salivary secretion and possibly help in plaque control while some stems have an anti-bacterial action and anti-cariogenic properties.
- Nimba is most commonly used herb for Dattuna in India. Nimba contains the alkaloids margosine, resins, gum, chloride, fluoride, silica, Sulphur, tannins, oils, saponins, flavonoids, sterols and calcium. Nimba extract have significant antiplaque efficacy and antimicrobial activity. Nimba oil have bactericidal activity independent of the temperature and energy.

JIVHA NIRLEKHANA (TONGUE CLEANING):

- According to Ayurveda, parts of the tongue are related to different body structures, such as: lungs, heart, stomach, liver, spleen, kidneys, thyroid, spine, and intestines. Thus, by maintaining the health of the tongue, one can affect different organs in a positive manner. This simple procedure will remove excess coating on the tongue, prevent and remove bad breath (halitosis), stagnation, toxins and help with proper functioning of the digestive system.
- Tongue cleaning is to be done after Dantapavana by using a soft tongue scraper. Tongue scrapping is done gently with a metal scrapper from root to tip. It is ideal to use gold, silver, copper, stainless steel or branches of the tree for the scrapping of the tongue. Length of scraper should be 10 Angula.^{ix} Its margin should be blunt in order to prevent damages the tongue and should be curved so can be easy to use.
- Clinical evidences show that use of tongue scrapers on a regular basis, has a significant improvement on eliminating anaerobic bacteria and decreases bad odour. Tongue scrapping stimulates the reflex points of the tongue, cure the complaint of bad odour (halitosis), improves the sense of taste and stimulates the secretion of digestive enzymes.

PRATISARANA (LOCAL APPLICATION):

- Pratisarana is done with Kalka or Churna of herbs or with Madhu/Taila with herbal powder. It can be applied with fingers and scrubbed softly on teeth and gums with fine powder of Vapya or Kushta and three groups of three drugs - Triphala, Trikatu and Trijata mixed with Madhu. This process removes the food debris & plaque and helps to maintain the periodontal health. According to Acharya Sushruta,^x Dattuna dipped in Madhu, Trikatu, Trivargha, Tila Taila and Saindhavlavana can be used as tooth powder.

KAVALA AND GANDOOSHA (OIL PULLING)

- Newer to the Western world, oil pulling has been touted in Ayurveda as a practice that cures over 30 systemic illnesses, including headaches, hypertension, diabetes, and asthma. Oil pulling also helps prevent bad breath, decay, bleeding gums, dry mouth/throat, loss of taste, cracked lips, strengthens teeth, gums and the jaw, and purifies the entire system.
- Recent studies have validated the use of oil pulling in oral health. Specifically, there has been significant benefit in gingival index scores, plaque index scores, and total colony count of aerobic microorganisms, including *Streptococcus mutans* and *Lactobacillus* count. The effects have been found to be comparable to the “gold standard” of chlorhexidine mouthwash.

THE TWO METHODS:

- In *Kavala Graha*, the mouth is filled in the mouth and then swished for 15-20 minutes in the morning and evening. In *Gandusha*,^{xi} the oil is filled in the mouth and just kept closed for 15-20 minutes in the morning and evening. Over time, the viscous oil becomes thin and white as it fills with toxins and bacteria and should be spit out. This is done in the morning when first waking, prior to using a toothbrush or chewing stick. Oil pulling is typically done with sesame oil, which is *Tridoshaja*, coconut oil, or olive oil. For an added benefit, powdered herbs can be added to the oil.

- *Kavala and Gandusha help in removing the odour, stimulates the taste buds, strengthens the gums and teeth and increases the appetite. It can be used to clean the oral cavity in those cases where brushing is contraindicated*
- *Kavala and Gandusha therapy is very effective against plaque induced gingivitis both in the clinical and microbiological assessment. Study showed that oil-pulling therapy could reduce the plaque index, modify gingival scores and the total oral bacteria count in gingivitis patients.*
- *According to Prakash et al 2014, Triphala mouth rinse shows significant result in anti-cariogenic property and reduction in gingivitis and periodontitis.^{xii}*

3. CONCLUSION :

As such, the general hygiene of the mouth extends from just a toothbrush, floss and mouthwash. Daily practices are held in place to not only maintain the health of the oral cavity, but also the health of the entire body, as each body part is connected and impacted by one another. *Ayurveda, as a holistic medicine, is also recommending some daily therapeutic procedures for the prevention and maintenance of oral health. Most of the oral diseases are due to the bacterial infections. Materials used in daily basis for oral health have anti-bacterial activity against numerous microorganisms. Oral procedures like Kavala, Gandusha Dantapawana, Pratisarana and used material have helps to reduce bacterial load in the oral cavity and thus prevent the formation of plaque, dental caries, mouth ulcers and other oral problems. Many Ayurvedic drugs also possess antibiotic, anti-inflammatory, analgesic and anti-ulcerative properties. Dattuna can be a good alternative to the toothbrush. Kavala and Gandusha can be a good alternative to the flossing. Research has shown that all kinds of tooth sticks or dattuna and kavala/Gandusha material described in Ayurveda texts have therapeutic and anti-cariogenic properties.*

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