



ORO-DENTAL CARE: A HOLISTIC NATURAL APPROACH

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ABSTRACT

Introduction - Oral cavity is the mirror of the body health, it acts as gateway of the alimentary canal, guards from infections, helps in digestions of food, and also plays an adjunct role in proper speech. Long before other countries could dream about systematizing the concept of remedies for human ailments, the sages of ancient India have well explained about the holistic view of man, his health and illness. The 5000 year old Ayurveda system of medicine not only recommends some therapeutics procedures for daily usage for the prevention of oral pathology and maintenance of oral health like dantadavana (brushing teeth), jihva nirleha (tongue scraping), pratisarana (teeth and gum massage), kavala (gargling), gandoosha (oral filling) and also explains about the use of various natural herbs in oro-dental diseases.

Methods - The materials were collected from the classical Ayurveda literatures, magazines, research journals, as well as a comprehensive literature search in Pubmed, MedLine, Research gate, science direct, and Google Scholar databases.

Results - Herbs have been used in oro-dental care for centuries to prevent and control diseases. Herbal extracts are effective because they interact with specific chemical receptors within the body and pharmacodynamics of the whole drug reverts the pathology apart from its active principle. Taking into consideration the ineffectiveness, potential side effects, and safety concerns of synthetic drugs, the herbal alternatives for dental usage might prove to be advantageous.

Conclusion - Phytomedicine has been used in oral health and dentistry for enhancement of hygiene as well as therapeutically as an anti-inflammatory, antibiotic, analgesic, sedative and also as endodontic irrigant. Age old therapeutic procedures such as chewing sticks, gum and teeth massage, oil pulling, tongue scraping, oral filling, and herbal gargling has an important role in prevention and control of oro-dental diseases.

INTRODUCTION

Oral diseases are one of the most important problems in public health especially in developing countries. Along with general well-being oral health is integral and relates to the quality-of-life that extends beyond the functions of the craniofacial complex. The link between oral diseases and the activities of microbial species that form part of the micro biota of the oral cavity is well studied and established. Even

though several chemical agents are commercially available, they can alter oral micro biota and have undesirable side-effects such as vomiting, diarrhea and tooth staining. Oral cavity is the mirror of the body health, it acts as gateway of the alimentary canal, guards from infections, helps in digestions of food, and also plays an adjunct role in proper speech. There is evidence that oral biofilm-associated diseases may affect systemic health by mechanisms such as



spreading infections to adjacent tissues and spaces, hematogenous dissemination of oral biofilm organisms or inflammatory mechanisms. Further, evidence suggests that oral biofilm-associated chronic periodontitis enhances the risk of coronary heart disease and cerebrovascular disease and that poor glycemic control in diabetic patients with periodontitis is a concern for clinicians.

Hence the prevention and treatment of oral diseases is not only important for maintenance of good oral health but also for general health. For prevention and the treatment of oral diseases, modern medicine has had only limited success. Oral hygiene is the practice of keeping the mouth and teeth clean for dental health and to avoid bad breath. Tooth brushing, dental floss, toothpicks and gargling are main techniques for oral hygiene in modern science. Oral health care professionals need to put home oral hygiene at the priority of their advice on preventive practice. Ayurveda is good alternative for that and may lead to the development of novel preventive or therapeutic strategies for oral health. This 5000-year-old system of medicine not only recommends treatments with specific herbs and minerals to cure various oral diseases but also recommends some daily therapeutic procedures for the prevention and maintenance of oral health and these have been proven to be safe and effective. Bacterial infections are considered as causative factors in most of the dental diseases and it has been well-documented that Ayurvedic medicament produce considerable antibacterial activity against microorganisms, including bacteria responsible for periodontitis and dental caries. According to World health Organization (WHO) 75% of the world's population uses 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. All the Ayurvedic medicines and local remedies are easily available in the rural areas where socioeconomic condition of the people is not good enough to buy costly toothpaste or curative medicines. *Ayurveda* must be reinterpreted in the light of our new knowledge and it must be incorporated in modern medicine along with other forms of traditional medicine.

DANTADHAVANA

Dantadhavana means cleaning teeth by means of brushing, *Manjana*, *Pratisarana*, etc., each tooth should be brushed individually by *Kurchaka*, which is a soft tooth brush made from medicated plants. The tooth brush should be rotated over the gums and the teeth in a vertical manner i.e. from below upwards in the lower jaw and from above downwards in the upper jaw.

Biting and chewing the tips of fresh stems can make a soft brush. The stems that are indicated for dantadhavana are *Arka*, *Malati*, *Nyagrodha*, *Asana*, *Khadira*, *Karvira*, *Karanja*, *Amra*, *Arjuna*, *Katunimba*, *Apamarg*.^[1-3] These stems mentioned above should be healthy, soft, and straight without any leaves and knots and picked from a tree growing in a clean place. The stem should not be dry, sticky and foul smelling. The stems should be 1 finger in breadth, 10-12 fingers in length and should have bitter, pungent or astringent taste^[4]. *Swadu*, *Amla*, and *Lavana Rasa* should be avoided. Ayurveda also mentions about using of these stems according to *Prakriti* of a person. A person with *Pitta* constitution should use a bitter stem like *Katunimba*, *Arjuna*. A person with *Vata-Pitta* constitution should use a stem of *Nyagrodha* etc. A person with *Kapha* constitution should use pungent such as *Karanja* or *Arka*. Children and adults with *Vata-Pitta* constitution should use sweet stems of *Glycerrhiza*. The stem should be chewed until it is broken into a soft brush like form. *Dantadhavana* should be done twice a day followed by rinsing of mouth with hot water or cold water according to constitution. The third molars have become a vestigial structure in most persons and the cooked food sticking to the dental cervices serves as good medium for bacterial growth. Therefore, it is essential to clean and brush the teeth in the morning after getting up, after lunch and dinner or after eating anything for that matter.

The main advantages of dantadhavana are it cleans the oral cavity, keeps the oral cavity healthy by its taste. It is good exercise for periodontal ligament by masticating the stem. It removes food particles, perceives the taste better. It can be Cheap and readily available. It also Prevents pocket formation. It acts as a Cleansing agent and have gum massage action. It Leads to anchorage of teeth in bony socket and makes them immobilized.

In some of disease conditions dandadavana is been contraindicated they are *Jwara*, *Ajirna*, *Chardi*, *Swasa*, *Trishna*, *Aruchi*, *Mukhagataroga*, *Kasa*, *Netraroga*^[5]etc.

In the above diseases, even though *Dantadhavana* is contraindicated it does not specifically mean that oral care is to be avoided in these disorders. While going through the literatures minutely one clearly finds different medicated formulas mentioned as a therapeutic measure and for oral hygiene even in the alone contraindicated diseases.



JIHVA NIRLEKHANA

It is also a part of cleaning the oral cavity. Cleaning of tongue is known as '*Jihva Nirlekhana*'. A thin plate of gold, silver, copper or leaf or a thin wooden plate may be used as a tongue cleaner [6]. It should be soft and smooth with rounded edges. Its length should be ten fingers [7]. It helps to get rid of waste products of food, It helps to reduce foul smell of the mouth and improves taste sensation.

PRATISARANA (TOOTH POWDER OR TOOTH PASTE)

They are substances used with toothbrush or other applicator on tooth surface and gingiva for cosmetic and sanitary purposes and for applying specific agents to tooth surface for preventive and therapeutic purposes. It is also used as tongue cleaner by *Pratisarana*. If a person is contra indicated for *Dantadhavana* with *Dantapavana*, then he is advised for *Pratisarana*.

TOOTH PASTE

As general measure, one can use tooth powder consisting of equal quantity of *Shunthi*, *Maricha*, *Pippali*, *Twak*, *Lavanga*, *Tamalapatra*, *Triphala*, *Khadira* and *Saindhava* which should be used as a paste after mixing it with *Tila Taila*^[8]. Before use, powder must be filtered through a fine cloth.

SELECTION ACCORDING TO CONSTITUTION

One can use powders of *Triphala*, *Trijataka* with honey and *Saindhava* for person with *Kapha* and *Pitta* constitutions. For those with *Kapha* constitution, *Trikatu* with honey and *Saindhava* can be used as tooth paste. Massaging the gums daily with *Triphala* mixed with *Tila Taila* maintains them in healthy state.

ADVANTAGES OF PRATISARANA

- It removes food particle.
- It removes also Impacted food between inter dental space.
- It decreases secretion of excess Saliva.
- It regenerates the gingiva and increases the keratinization.
- It increases in mitotic activity of epithelium.

Kavala and Gandoosha

Gandusha and Kavala graha are two primary oral cleansing techniques; specialized therapy to treat as well as to prevent oral diseases. The difference between the two is only in the dosage and procedure of using the drug. In gandoosha, a medicated fluid is held mouthful for a specific period until there is lacrimation and nasal

discharge, and then the patient spits it out. In kavala graha, the mouth is only three-fourths filled with the medicated fluid; the fluid is swished in the mouth for a specific time and then spat out.

The benefits of regular gandoosha are swarabalam (strength to voice), hanubalam (strength to jaws), strength to face, ruchyam (better taste perception), drudadhantha (strong and healthy teeth), and resistance against doshaja or aaganthuja mukharogas. These oral cleansing techniques can also benefit bad breath, decay bleeding gums, dryness of throat, cracked lips and for strengthening teeth, gums and the jaw.

Ayurveda advises kawala to purify the entire system; as it holds that each section of the tongue is connected to different organ such as to the kidneys, lungs, liver, heart, small intestines, stomach, colon, and spine, similarly to reflexology. Brushing is contra indicated in the cases of mouth ulcer, fever, indigestion, those who have tendency to vomit, asthma, cough, thirst. Oil pulling can be used to clean the oral cavity in all these cases.

The exact mechanism of the action of oil pulling therapy is not clear. It was claimed that the swishing activates the enzymes and draws the toxins out of the blood. New researches have proof that the oral mucosa does not act as a semi-permeable membrane to allow toxins to pass through. The medicated oil and fluid used in Kavala and Gandoosha probably protect the oral cavity from infection and inflammation by its antioxidant property. These mechanisms could be probable mode of action for the reduction of plaque scores and colony count of the microorganisms in the oral cavity. The viscosity of used medicated oil probably inhibits bacterial adhesion and plaque co-aggregation.

CONCLUSION

Oral diseases are one of the most important problems in public health and are on the rise in developing countries. Most of the oral diseases are caused due to the bacterial infections. The anti-bacterial activity of Ayurvedic plants are due to the presence of potential bioactive compounds, which help to reduce bacterial load in the oral cavity and thus prevent the formation of plaque, dental caries and ulcers. Phytomedicine has been used in oral health and dentistry for enhancement of hygiene as well as therapeutically as an anti-inflammatory, antibiotic, analgesic, sedative and also as endodontic irrigant. Age old therapeutic procedures such as chewing sticks, gum and teeth massage, oil pulling, tongue scraping, oral filling, and herbal gargling has an important role in prevention and control of oro-dental diseases. The



traditional knowledge of Ayurveda should be integrated with the modern dentistry. For this, the active principles of plants should be studied into modern oral health-care practices and dentists should be encouraged to use Ayurvedic remedies in various oral health treatments.

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