

## REVIEW ARTICLE

# Holistic Approaches to Oral Health - A Review

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### ABSTRACT

**Introduction:** Globally, oral disorders persist as a significant health concern. A person's whole quality of life, which goes beyond the capabilities of the craniofacial complex, is closely linked to their oral health. The prevention of periodontal disease and the treatment of other oral disorders have not yielded great results for mainstream Western medicine.

**Aim and Objective:** The aim and objective of the study are to evaluate the role of holistic approach to oral health.

**Materials and Methods:** Different classical Ayurveda texts, websites, journals, and research articles were referred in above context.

**Results and Discussion:** As a result, the hunt for substitute products never ends, and natural phytochemicals that have been extracted from plants and utilized in conventional medicine are seen to be good substitutes for artificial compounds. Several hundred to several thousand years of use have demonstrated the safety and efficacy of the botanicals found in Ayurveda material medica as well as *Kriya Kalpa* procedures such as *Kavala*, *Gandush*, and *Pratisarana*. Novel preventive or therapeutic approaches for oral health may result from research into the use of botanicals in traditional medicine.

**Conclusion:** It can be concluded that ayurveda and contemporary system of medicine have significant impact in the prevention and management of oral health.

## 1. INTRODUCTION

Oral health (*Mukha Swasthya*)<sup>[1]</sup> is very essential for overall health, because *Mukha* is such *anga(part)* which is exposed to start of many infections in day-to-day life. *Mukha* is one of the main nine openings of our body. The *dosha* dominance in both individual and nature determines health care in *Ayurveda* as it is individualistic varying with each person's body constitution depending upon predominance of *dosha (prakruti)* and changes resulting form (*kala-parinama*). Incidences of diseases pertaining to oral cavity have increased due to habits of chewing tobacco and smoking practices. Oral hygiene not properly maintained due to the lack of time and negligence. In slum areas due to low hygiene, there are same problems.

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Even though oro-dentistry was not a specialized branch of *Ashtang Ayurveda*,<sup>[2]</sup> it is included in its *Shalaky Tantra*. In *Ayurveda*, teeth are considered part of *Asthi dhatu* (bone tissue). Herbs taken internally to strengthen *Asthi dhatu*, i.e., the skeleton and the joints, are good for long-term health of the teeth. Problems of oral cavity, plaques, and dental infections were managed in ancient India by above-mentioned medicinal plants. The *Sushruta Samhita* and the *Charaka Samhita* are earliest authoritative texts. Traditional medicine can treat various infectious and chronic conditions. Scientific validations of the *Ayurveda* dental health practices could justify their incorporation into modern dental care. There are many remedies in modern medicine for the treatment of oral hygiene problems which are quite costly and causing lots of inconvenience to the patients. Hence, it became necessary to develop a safe, feasible, and budget friendly for such problems if traditional medicine is to be acknowledged as part of primary health care.

Most of the oral health conditions are preventable and can be treated in their early stages by addressing common risk factors:

- It includes promoting a well-balanced diet free from sugars, rich with fruits and vegetables, and water as main drink.
- Stop usage of all forms of tobacco including chewing of areca nuts and reduce alcohol consumption.
- Encourage usage of protective equipment while travelling and doing sports to reduce the facial injuries.
- Adequate dental fluoride exposure is an essential factor to prevent dental caries.
- Tooth brushing with fluoride containing pastes (1000–1500 ppm) twice a day should be encouraged.
- Scaling should be preferred to prevent calculus which later causes gingivitis.
- Dental flushing and mouth wash should be encouraged for good oral and dental health.

In *Ayurvedic* texts,<sup>[3]</sup> they are different types of *Datun* (tooth sticks), *Kavala*, *Gandusha*, and *Pratisaran* to prevent oral health problems.

### 1.1. Aim and Objective

The aim and objective of the study are to evaluate the role of holistic approach to oral health.

## 2. MATERIALS AND METHODS

Different classical *Ayurveda* texts, websites, journals, and research articles were referred in above context.

## 3. RESULTS AND DISCUSSION

Treatment of this can be divided into the following categories<sup>[4]</sup>

1. *Roga pratibandhaka* – Preventive
2. *Rogahara* – Curative – Dental and oral curative.

### 1. *Roga pratibandhaka* (Preventive)

As the proverb says, prevention is better than cure, our ancient *Acharyas* have stressed on the maintenance of health by various kinds of diets and regimens in ones routine life. To stress on this fact, the chapters such as *dinacharya* (daily routine) and *ritucharya* (seasonal routine) have been elaborately described.

### 2. *Roga pratibandhaka chikitsa* is of two types:

- *Samanya*
- *Sthanika*.

#### 1. *Samanya*

- *Dantamamsa*, i.e., gums is an associated tissue of muscles, hence in diseases of gums, *ahara*, *vihara*, and *dantarasayana* which act on muscular tissue should be tried. *Hamsa yoga* consisting of *Patola* (*Trichosanthes cucumerina*), *Nimba* (*Azadirachta indica*), *Triphala* (*Embllica officinalis*), *Musta* (*Cyperus rotundus*), *Kutaja* (*Wrightia antidysenterica*), etc. should be given orally in the form of decoction or medicated ghee to improve form include *Bakula* fruit, *Kakoli* (*Roscoea purpurea*), *Haritaki* (*Terminalia chebula*), Black Sesame seeds, *Nyagrodha*, *Arjuna*, *Mouktika* (*Pearl*), etc. should be administrated in dental disorders. *Kapha dosha* naturally dominated in the oral cavity. Hence, in any diseases of the teeth, gums as well as mouth, it is important to use medicines having *Kapha Shamaka* action.

#### 2. *Sthanika*

- *Dantadhavana*: Each tooth should be brushed individually by *koorchaka*, i.e., a soft tooth brush. The tooth brush should be

rotated over the gums and the teeth in a vertical manner. Side by side brushing should be avoided, as it may damage necks of teeth and also the gums.

- *Dhatuna*:<sup>[2]</sup> A soft brush can be made by biting and chewing the tips of fresh stems of *Arka*, *Nyagrodha*, *Khadira*, *Karanja*, *Arjuna*, or *Katunimba*. Mastication of stems acts as good exercise for the teeth and gums. The stems mentioned above should be healthy, soft, and straight without any leaves and knots and picked from growing in a clean place. The stem should not be dry or sticky or foul smelling. The stem should be one finger in breadth, 10–12 fingers in length and should have bitter, pungent, or astringent taste. These three tastes neutralize the *bodhaka kapha* and help to clear the viscid mucoid secretions in the mouth. Usages of tooth stick with *Rasa*<sup>[1]</sup> dominance are shown in Table 1.

### *Danta Manjan*

- Powder of *Triphala* or *Trijataka* with honey or *Saindhava* salt should be use daily as a tooth powder as well as tooth paste. Massaging the gums daily with *Triphala* mixed with *tila* oil maintains them in healthy state.

### *Gandusha and Kavala*

- *Gandusha and kavala* are both variation of gargling. In *Gandusha*, one takes such as a large quantity of fluid into mouth that one is unable to move it inside the mouth. One should hold the fluid in the mouth, till the nose and nose starts watering. Here, the fluid penetrates the oral mucosa and gums by pressure and exerts it specific action. In *Kavala*, one holds and moves the semisolid, pasty solution in the mouth. It exerts a soothing and cleansing action on the mouth. Gargling with decoction of *Khadira*, *Lodhra*, and *Triphala* makes the teeth strong. *Acharya Vagbhata*<sup>[5]</sup> describes 4 types of *Gandusha snigdha* (*madhu*, *amla*, *lavana*), *shaman* (*tikta*, *kshaya*, *madhur*), *shodhana* (*tikta*, *katu*, *amla*, *lavana*), and *ropana* (*kshaya*, *tikta*) *gandusha* based on *dosha* and its effects.
- Gargling is contraindicated in unconscious, poisoned weak or marasmus persons or persons suffering from bleeding disorders or conjunctivitis.

### *Jivha Nirlekhana*<sup>[6]</sup>

- It should be use a thin plate of gold, silver, or copper for cleaning the tongue or may alternatively use a leaf or thin wooden plate, and the tongue cleaner should be soft and smooth with rounded edges. Its length should be 10 fingers. Cleaning the tongue helps to get rid of waste products and foul smell of the mouth, improves tastes sensation, and exerts a tonic effect on the tongue.

### *Danta Rasayana*

- Chewing 2–4 tea spoonful of *tila* (black sesame seeds) daily in the morning keeps the gum healthy and strong.

### *Rogahara*<sup>[7]</sup>

It is also divided into two types:

1. *Samanya*
2. *Sthanika*.

#### *Samanya*

- If a patient is suffering from any systemic disorders, it should be treated first. The general treatment should be prescribed after detailed examination of the patient and should consist of *Ahara*, *Vihara*, and *dantyarasayana* depending on the constitution and season. *Panchkarma* therapy, i.e., purification of body by *vamana*,

*virechana*, *basti*, *nasya*, and *raktamokshna* should be under taken, if the patient suffers from general symptoms, accumulation of *dosha* in the body and is strong enough to undergo these cleansing procedures.

### Sthanika

- The individual treatment should be given, if patient is suffering from any systemic disease. In a few of *dantamulgata rogas*, surgery is indicated. Whereas Para-surgical measures like blood-letting, cauterization are mentioned in almost all the classics.

### Pathya

According to *Yogaratanakara*, some wholesome diet are useful in *mukharoga*, they are as under:

- *Trinadhanya*
- *Balamulaka*
- *Jangal mamsarasa*
- *Mudga*
- *Khadira*
- *Karvellaka*
- *Tambula*
- *Katu- Tikta dravya*
- *Yava*
- *Karpura jala*
- *Shatavari*
- *Kulatha*
- *Grita*
- *Patola*
- *Ushnodaka*.

### Apathya

In *sushruta samhita*, some unwholesome diet in *mukharoga* such as *amla phala*, *shitambu*, and *ruksha anna*. *Dhantadhavana* and *kathina dravyas* are mentioned. In *Yogaratanakara* also described some unwholesome diet in *mukharogas*, they are:

- *Dantkashtha*
- *Amla dravya*
- *Anup mamsa*
- *Guda*
- *Snana*
- *Matsya*
- *Dadhi, kshira*
- *Masha*
- *Ruksha anna*
- *Kathin dravya*
- *Adhomukha shayana*
- *Divaswapna*

### Pratisarana<sup>[8]</sup>

Gentle rubbing of *churna*, *kalka*, and *avaleha* with finger is called *pratisarana*.

- *Acharya vagbhata* has classified *pratisarana* according to the type of the medicinal preparations as follows:
  1. *Kalka*
  2. *Raskriya*
  3. *Churna*

### Mode of Action<sup>[9]</sup>

Gentle rubbing of *churna*, *kalka*, and *avaleha* with finger exerts a cleansing action on gums and healing effect too.

### 3.1. Dental Curative<sup>[10]</sup>

To cure dental problems in contemporary science, we have restoration technique and mouth wash for dental caries. In *Ayurvedic* texts, it is correlated with *krimidanta*. In early stage, few *school* and *Krimi nashak* remedies like *Saptaparna/Arka dugdha*, roasted *Hingu*, *Sariva patra* kept between teeth, *danta pratisaran*, *Taila siddha Gandush*. In *achala dhanta* condition *raktamokshana* after doing proper *swedana*, *Vataghna*, *Avapidana Nasya*, *Sneha gandush*, *lepa* (*Badrardaryaadi*, *Punarnavaadi lepa*), *snigdha aahaar* and in *chala dhanta* condition extract, the tooth and *dhahan karma* followed by *Ksheersiddha Nasya* treatment protocol are mentioned in our classical texts (in *sushrut samhita*, *bhav prakash*).

Potassium nitrate paste, gels, mouthwashes for oral sensitivity/pulpitis in contemporary system of medicine and in *Sushruta Samhita* *Dantharsha* treated with *Vatanashak kriya* like *Chaturvida Sneha*, *Trivrut Ghrita*, *Vatanashak dravya kwatha kaval dharan*, *Snehahik dhum*, *Nasya*, *Snigdha bhojan*, *Mamsarasa*, *Mamsarasa sidhha yavagu*, *dugdha*, *santanika*, *ghee*, *shirobasti*. *Vagbhata* told *sukhushna*, *sheeta tila kalka udaka gandusha dharan* in *ayurvedic* texts.

Gum paints, gels for local application over gums, chlorohexidine mouthwash for gingivitis (gums swelling) in contemporary system of medicine and *Shoshir/Shushir* treated with *raktmokshana*, *lepana karma*, *ksheerivraksha kwatha gandusha*, *ksheersidha ghrita nasya* in our classical texts.

*Sheetad* (periodontitis) in chronic stage of gingivitis they suggest antibiotics course, scaling and root cleaning to prevent further damage and is treated with *raktamokshana*, *pratisarana*, *gandush*, *lepana karma*, and *nasya*. *Vatanashak taila* and *ghrita* are beneficial in *sheetad* (*yogratnakar*).

### 3.2. Oral Curative

Oral infections are big public health problem around the world. Over hundreds to thousands of years of use, the herbs mentioned in the *Ayurvedic* materia medica have been proven to be healthy and reliable in oral health.<sup>[11]</sup> OSMF (oral submucous fibrosis) is very common and difficult to treat mainly in tobacco chewers. In modern world, the treatment protocol is removal of causative factors such as stop the usage of tobacco chewing, advice some exercises, Vitamin A multivitamins, antioxidants, mouthwashes, and surgery at the end. In *Ayurvedic* texts, *mukha vrana daha* and *trishna madhugandush dharan* are mentioned by *Vagbhata*.<sup>[12]</sup>

Mouth ulcers are the most common in today's junk food world as it is mostly due to stomach issues so in allopathic, they treat it locally with colin salicylates gels, lignocaine gel, painkillers, multivitamins, and steroids and in *ayurveda*, we locally give *Madhu Pratisarana* to relieve pain and for *Mukha Vrana daha*, *madhugandush dharan*<sup>[13]</sup> is mentioned by *Vagbhata*. Moreover, few *ayurvedic* preparations made such as *turmix mouthwash* and *sneec-gel* by some *Ayurvedic* GMC approved companies.

## 4. CONCLUSION

In today's world, the ancient medicine is highly used over contemporary ones because of its preventive as well as curative usage, feasible, and cost effective as we have *Datun*, *Dant prakshalan*, *medicated kavala*, *gandusha*, *jivha nirlekhana*, *raktamokshana*, *lepana*, *danta dahan*, and *nasya* for preventive as well curative. In contemporary medicine, they have different types of mouthwash, gels, toothpaste for preventive

means but for curative antibiotics, multivitamins, steroids for everyone, scaling, root canal treatment, and surgeries are opted which is very costly and not permanent but in our *Ayurvedic* texts based on *prakruti (roga-rogi)* different medicated sticks for *dhatun, churnas for kavala gandush, lepas* for local application in oral and dental health.

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This study does not require ethical clearance as it is review study.

## 9. CONFLICTS OF INTEREST

Nil.

## 10. DATA AVAILABILITY

This is an original manuscript and all data are available for only review purposes from principal investigators.

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**Table 1:** Usages of tooth stick with *Rasa* dominance

<b>Constitution</b>	<b>Stem indicated</b>	<b>Rasa dominance</b>
<i>Vata Prakriti</i>	<i>Madhuyashti</i>	<i>Madhu</i>
<i>Pitta Prakriti</i>	<i>Nimba</i>	<i>Tikta</i>
<i>Kapha Prakriti</i>	<i>Karanja</i>	<i>Katu</i>
<i>Rakta Prakriti</i>	<i>Khadir</i>	<i>Kshaya</i>