

**Review Article** 

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# A CRITICAL REVIEW ON THE PLANTS AND PRACTICES FOR ORAL CARE IN KAIYYADEVA NIGHANTU

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#### ABSTRACT

Oral cavity - a gateway of gastrointestinal tract and has many pivotal roles in human's life. It includes few important structures such as tongue, teeth, palate and lips that act in co-ordination to accomplish some of the basic physiological functions such as chewing, drinking, licking and swallowing. Besides, it is responsible for speech, smile and perception of taste. All of these functions are affected to a certain extent if anything goes wrong in the oral cavity. However, the people of modern age have developed a habit of exposing their oral cavity to different forms of harmful substances like tobacco, alcohol and carbonated drinks. With the increasing number in the incidence of oral diseases in India, it is the time to contemplate on the safe, economical and effective remedies and practices for the oral care. Considering the importance of ahara(diet), vihara(activity) and aushadha(drug) in maintaining and promoting good health, acharya Kaiyyadeva, came out with his writing known as Kaiyyadeva nighantu- a unique lexicon in 15<sup>th</sup> century A.D. Keeping this fact as a core component, an attempt has been made to explore the plants and practices mentioned for oral care in Kaiyyadeva nighantu. This study directed towards 52 plants and 7 important practices that are useful for the oral care.

Key words: Plants, Botanicals, Practices, Asya shodhana, Gandoosha, Kaiyyadeva nighantu

# INTRODUCTION

Oral diseases are one of the most important problems in public health and are on the rise in developing countries<sup>1</sup> Most of the oral diseases are caused due to the lack of oral hygiene. According to FDI Dental World Federation's new definition of oral health: "Oral health is multifaceted and includes the ability to speak, smile, taste, touch, chew, swallow and convey a range of emotions through facial expression with confidence and without pain, discomfort and disease of the craniofacial complex <sup>2</sup>.

The concept of oral health dates back to Vedic literature. Traditional medicine is the sum total of knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures that are used to maintain health as well as to prevent, diagnose, improve or treat physical and mental illness<sup>3</sup>. Almost all the seers of Ayurveda have given guidelines to maintain the oral health. The botanicals used in Ayurvedic materia medica have been proven to be safe and effective through several hundred to several thousand years of use <sup>4</sup>.

Protecting and promoting the health of a healthy person is as important as preventing and curing the diseases. Hence, Ayurveda advocates certain measures such as proper ahara (diet) and vihara (activity) to promote and protect the health of an individual. Meanwhile, it focuses on the prevention and curing the diseases by describing various aushadha(drug). Thus, ahara (diet), vihara (activity) and aushadha(drug) are the three important components of Ayurveda. Considering these three factors as important, a lexicon was written by Acharya Kaiyyadeva in 15<sup>th</sup> century A.D. He has planned his work as aushadhi dravya, anna dravya and vihara dravya<sup>5</sup>.

Over the past few decades, smoking and chewing of Tobacco is so common that a lot of people have been under its influence. This is, perhaps the greatest irony of modern generation. This scenario demands certain measures and safe drugs to promote, protect the oral health and to cure the diseases. It appears that Kaiyyadeva nighantu promises with best approaches and remedies. Thus, this article is an earnest attempt to find out the plants and practices explained in Kaiyyadeva nighantu for the oral care.

S.no	Sanskrit name	Botanical source	Family	Useful part
01	Brihati	Solanum indicum L.	Solanaceae	Root
02	Beeja pooraka	Citrus medica L.	Rutaceae	Fruit
03	Draksha	Vitis vinifera L.	Vitaceae	Fruit
04	Dadima	Punica granatum L.	Lythraceae	Fruit
05	Jambira	Citrus limon (L.) Osbeck	Rutaceae	Fruit, Leaf
06	Nimbuka	Citrus aurantiifolia(Christm.)Swingle	Rutaceae	Fruit
07	Bhavya	Dillenia indica L.	Dilleniaceae	Fruit
08	Panasa	Artocarpus integer(Thunb.)Merr	Moraceae	Flower
09	Nagavalli	Piper betle L.	Piperaceae	Leaf
10	Pooga	Areca catechu L.	Arecaceae	Nut
11	Khadira	Acacia catechu(L.f.)Willd	Leguminosae	Heartwood
12	Shweta khadira	Acacia polyacantha Willd	Leguminosae	Bark
13	Irimedha	Acacia farnesiana (L.)Willd	Leguminosae	Bark
14	Daru haridra	Berberis aristata DC.	Berberidaceae	Bark

#### Table 1: Botanical source, family and useful part of plants for oral care

15	Bhustrina	Cymbopogon citratus (DC.) Stapf	Poaceae	Whole plant
16	Karpoora	Cinnamomum camphora (L.)J.Presl	Lauraceae	Resin
17	Lata kasturi	Abelmoschus moschatus Medik	Malvaceae	Seeds
18	Jatiphal	Myristica fragrans Houtt.	Myristicaceae	Seed
19	Kankola	Piper cubeba L.f.	Piperaceae	Fruit
20	Kunduru	Resin of Boswellia serrata Roxb.ex Colebr.	Burseraceae	Resin
21	Shati	Hedychium spicatum Sm.	Zingiberaceae	Root
22	Malati	Jasminum grandiflorum L.	Oleaceae	Leaf
23	Yuthika	Jasminum auriculatum Vahl	Oleaceae	Leaf
24	Tilaka	Wendlandia heynei (Schult.) Santapau & Merchant	Rubiaceae	Bark
25	Bakula	Mimusops elengi L.	Sapotaceae	Leaf, Fruit
26	Nepali	Jasminum arborescens Roxb	Oleaceae	Leaf
27	Bhringa raja	Eclipta prostrata (L.)L.	Compositae	Whole plant

# Table 2: Properties and doshaghnata(action on dosha) of the plants

Name of the plant	Rasa	Vipaka	Veerya	Guna	Doshaghnata
Brihati	Katu,Tikta	-	Ushna	-	Vata kapha hara
Beeja pooraka	Amla	-	Ushna	Laghu	Vata kapha hara
Draksha	Madhura,Kashaya	Madhura	Sheeta	Snigdha,Guru	Vata pittahara
Dadima	Kashaya anurasa	-	-	Laghu,Snigdha	Vata kapha hara
Jambira	Amla	-	Ushna	Guru	Vata kaphahara
Nimbuka	Madhura, Kashaya,	-	Sheeta	Ruksha,Guru,	Kapha pitta hara
	Amla			Vishada	* *
Bhavya	Amla	-	Sheeta	Picchila	Vatahara
Panasa	Tikta	-	-	Guru	Pitta kaphahara
Nagavalli	Tikta,Kashaya, Katu	Katu	Ushna	Teekshna,	Kapha Vata hara
•				Kshara Vishada	*
Pooga	KincitKashaya, Madhura	-	Ushna	Ruksha,Guru	Kapha Pitta hara
Khadira	Tikta, Kashaya	-	Sheeta	-	Kapha pitta hara
Shweta khadira	-	-	-	Vishada	Kaphahara
Irimedha	Katu, Kashaya	-	Ushna	Teekshna	Kaphahara
Daru haridra	Tikta,Katu	-	Ushna	Ruksha	Kaphapittahara
Bhustrina	Katu, Tikta	-	Ushna	Teekshna,Laghu,Ruksha	Kapha hara
Karpoora	Madhura, Tikta	-	Sheeta	Laghu	Kaphahara
Lata kasturi	Tikta,Madhura	-	Sheeta	Laghu	Kaphahara
Jatiphal	Tikta, Katu	-	Ushna	Teekshna,Laghu	Kapha vata hara
Kankola	Tikta	Katu	Ushna	Laghu,Teekshna	Kapha vatahara
Kunduru	Madhura, Tikta,Katu	-	Ushna	Teekshna	Kapha vatahara
Shati	Tikta,Katu,Kashaya	-	Anushna	Tekshna,Laghu	Tridosha hara
Malati	Kashaya, Tikta, Katu		Ushna	-	Tridosha hara
Yuthika	Tikta,Katu,Madhura	Katu	Sheeta	Laghu	Pittahara
	Kashaya			-	
Tilaka	Katu	Katu	Ati ushna	-	Kapha hara
Bakula	Kashaya,Katu	Katu	Anushna	Guru	Kapha pittahara
Nepali	Katu, Tikta		Anushna	Laghu	Tridoshahara
Bhringa raja	Katu, Tikta	-	Ushna	Ruksha	Kapha vata hara

# Table 3: Drugs and Actions related to oral care

S.no	Drugs	Action related to oral care	
01	Brihati	Mukha vairasya jit	
02	Beeja pooraka	Jihva asya shodhanam	
03	Draksha	Tiktasyata hanta	
04	Dadima	Asya rogaghna	
05	Jambira	Asya vairasya hrit	
06	Jambira patra	Mukha vaishadya karam	
07	Nimbuka	Asya shodhanam	
08	Bhavya	Asya shodhanam	
09	Panasa pushpa	Vaktra shodhanam	
10	Nagavalli	Asya dayrgandhya kandu kleda malapaham	
11	Pooga	Vaktra vairasya mala daurgandhya nashanam	
12	Khadira	Dantya	
13	Shweta khadira	Mukha rogajit	
14	Irimedha	Hanti mukha dantagadanamapi	
15	Daru haridra	Asya rogajit	
16	Bhustrina	Vaktra shodhana	
17	Karpoora	Asya vairasya mala daurgandhya nashana	
18	Lata kasturi	Asya rogajit	
19	Jatiphal	Mukha vairasya mala daurgandhya nihanti	
20	Kankola	Asyadaurgandhyajit	
21	Kunduru	Mukha rogajit	
22	Shati	Mukha vairasya mala daurgandhya nashini	
23	Malati	Mukha dantartijit	
24	Yuthika	Danta rogapaha	

25	Tilaka	Mukhadantagadan jayet
26	Bakula	Dantagadapaha
27	Bakula phala	Dantyam
28	Nepali	Asya rogaghna
29	Bhringa raia	Dantva

# Table 4: Plants for dental care (Dentifrice)

S.no	Sanskrit name	Action related to dental care	Interpretation
01	Khadira	Dantya	Beneficial to tooth
02	Irimedha	Hanti dantagadanam	Cures dental diseases
03	Yuthika	Danta rogapaha	Cures dental diseases
04	Tilaka	Dantagadan jayet	Cures dental diseases
05	Bakula	Dantagadapaha	Cures dental diseases
06	Bakula phala	Dantyam	Beneficial to tooth
07	Bhringa raja	Dantya	Beneficial to tooth

# Table 5: Plants that fight Daurgandhya (Halitosis)

S.no	Sanskrit name	Action related to oral care	Interpretation
01	Nagavalli	Asya daurgandhya kleda malapaham	Cures halitosis and cleanses the oral cavity
02	Pooga	Daurgandhya nashanam	Cures halitosis
03	Karpoora	Daurgandhya nashana	Cures halitosis
04	Jatiphal	Mala daurgandhya nihanti	Cures halitosis
05	Kankola	Asyadaurgandhyajit	Cures halitosis
06	Shati	Daurgandhya nashini	Cures halitosis

# Table 6: Plants that fight Mukha vairasyata (bad taste)

S.no	Sanskrit name	Action related to oral care	Interpretation	
01	Brihati	Mukha vairasya jit	eliminates bad taste	
02	Draksha	Tiktasyata hanta	eliminates bitter taste in mouth	
03	Jambira	Asya vairasya hrit	eliminates bad taste	
04	Pooga	Vaktra vairasya mala nashanam	eliminates bad taste and coating	
05	Karpoora	Asya vairasya mala nashana	eliminates bad taste and coating	
06	Jatiphal	Mukha vairasyanihanti	eliminates bad taste	
07	Shati	Mukha vairasya mala nashini	eliminates bad taste and coating	

## Table 7: Plants that act as Jihva asya (Vaktra) shodhana (Mouth fresheners)

S.no	Sanskrit name	Action related to oral care	Interpretation
01	Beeja pooraka	Jihva asya shodhanam	Rinses out the oral cavity
02	Jambira patra	Mukha vaishadyakaram	Cleanses the oral cavity
03	Nimbuka	Asya shodhanam	Rinses out the oral cavity
04	Bhavya	Asya shodhanam	Rinses out the oral cavity
05	Panasa pushpa	Vaktra shodhanam	Rinses out the oral cavity
06	Bhustrina	Vaktra shodhana	Rinses out the oral cavity

# Table 8: Plants that cure oral diseases

S.no	Sanskrit name	Action related to oral care	Interpretation
01	Dadima	Asya rogaghna	Cures oral diseases
02	Shweta khadira	Mukha rogajit	Cures oral diseases
03	Irimedha	Hanti mukha gadanam	Cures oral diseases
04	Daru haridra	Asya rogajit	Cures oral diseases
05	Lata kasturi	Asya rogajit	Cures oral diseases
06	Kunduru	Mukha rogajit	Cures oral diseases
07	Malati	Mukha dantartijit	Cures oral diseases
08	Tilaka	Mukha gadan jayet	Cures oral diseases
09	Nepali	Asva rogaghna	Cures oral diseases

## Table 9: Practices for oral care

S.no	Practices	Interpretation
01	Danta dhavana	Tooth brushing
02	Jihva lekhana	Tongue scraping
03	Saindhava and ardraka bhakshana (Bhojanagre)	Consuming rock salt and ginger before food
04	Nimburasa and ardraka sevana	Consuming lemon juice and ginger
05	Ostha sikthakabhyasa	Regular application of wax to the lips
06	Gandoosha	Holding liquid in mouth
07	Tamboola sevana	Chewing paan

## Table 10: plants and botanicals mentioned for tooth paste/powder

S.no	Sanskrit name	Botanical source	Botanical
01	Kustha	Saussurea costus (Falc.)Lipsch.	Root
02	Haritaki	Terminalia chebula Retz	Fruit
03	Bibhitaki	Terminalia bellirica (Gaertn.)Roxb.	Fruit
04	Amalaki	Phyllanthus emblica L.	Fruit
05	Shunti	Zingiber officinale Roscoe	Rhizome
06	Pippali	Piper longum L.	Fruit
07	Maricha	Piper nigrum L.	Fruit
08	Twak	Cinnamomum verum J.Pearl	Bark
09	Ela	Elettaria cardamomum (L.)Maton	Fruit
10	Teja patra	Cinnamomum tamala (Buch-Ham) T.Nees & Eberm	Leaf
11	Tejovati	Zanthoxylum armatum DC.	Leaf

# Table 11: Plants for preparing Danta kastha (tooth brush) for Danta dhavana

S.no	Sanskrit name	<b>Botanical source</b>	Family
01	Vata	Ficus benghalensis L.	Moraceae
02	Asana	Pterocarpus marsupium Roxb	Leguminosae
03	Arka	Calotropis procera (Aiton)Dryand	Apocynaceae
04	Khadira	Acacia catechu (L.f.)Willd	Leguminosae
05	Karanja	Pongamia pinnata (L.)Pierre	Leguminosae
06	Karaveera	Nerium oleander L.	Apocynaceae
07	Sarja	Veteria indica L.	Dipterocarpaceae
08	Irimedha	Acacia farnesiana (L.) Willd	Leguminosae
09	Apamarga	Achyranthes aspera L.	Amaranthaceae
10	Malati	Jasminum grandiflorum L.	Oleaceae
11	Kakubha	Terminalia alata Roth	Combretaceae

# Table 12: Plants prohibited for preparing Danta kastha(tooth brush) for Danta dhavana

S.no	Sanskrit name	Botanical source	Family
01	Shleshmataka	Cordia dichotoma G.Forst	Boraginaceae
02	Aristaka	Sapindus trifoliatus L.	Sapindaceae
03	Bibhitak	Terminalia bellirica(Gaertn.)Roxb	Combretaceae
04	Dhava	Anogeissus latifolia (Roxb.ex DC.) Wall.ex Guillem.& Perr	Combretaceae
05	Dhanvana	Grewia tiliifolia Vahl	Malvaceae
06	Bilva	Aegle marmelos(L.)Corrêa	Rutaceae
07	Vacchula	Mimosa hamata Willd.	Leguminosae
08	Nirgundi	Vitex negundo L.	Lamiaceae
09	Shigru	Moringa oleifera Lam.	Moringaceae
10	Tilvaka	Symplocos racemosa Roxb.	Symplocaceae
11	Tinduka	Diospyros chloroxylon Roxb.	Ebenaceae
12	Kovidara	Bauhinia purpurea L.	Leguminosae
13	Shami	Prosopis cineraria(L.)Druce	Leguminosae
14	Peelu	Salvadora persica L.	Salvadoraceae
15	Ashwatha	Ficus religiosa L.	Moraceae
16	Ingudi	Balanites aegyptiaca (L.)Delile	Zygophyllaceae
17	Guggulu	Commiphora mukul(Hook. Ex Stocks)Engl.	Burseraceae
18	Paribhadra	Erythrina variegata L.	Leguminosae
19	Chincha	Tamarindus indica L.	Leguminosae
20	Kadali	Musa <sup>x</sup> paradisiaca L.	Musaceae
21	Shalmali	Bombax ceiba L.	Malvaceae
22	Shana	Crotalaria juncea L.	Leguminosae
23	Palasha	Butea monosperma (Lam.)Taub	Leguminosae

## Table 13: Best tooth brushes on the basis of rasa and doshaghnata

S.no	Sanskrit name	Botanical source	Rasa	Doshaghnata
01	Yastimadhu	Glycyrrhiza glabra L.	Madhura	Vata-pittahara
02	Nimba	Azadirachta indica A. Juss	Tikta	Kapha- pittahara
03	Karanja	Pongamia pinnata (L.)Pierre	Katu	Kapha- vata hara
04	Khadira	Acacia catechu (L.f.) Willd	Kashaya	Pitta -kapha hara

# Table 14: Benefits of different types of Gandoosha (holding liquid in mouth)

S.no	Name of Gandoosha	Benefits	
01	Sneha gandoosha	Prevents Ostha sphutana(lip cracks), Ostha parushya (rough lips), Mukha shosha(mouth	
		dryness), danta roga(dental disease)	
02	Mukha shoshaghna gandoosha	Cures mukha shosha(mouth dryness),	

S.no	Name of Gandoosha	Indications
01	Ghrita /ksheera gandoosha	Daha(burning), Paka(stomatitis)), Agantuja kshata (Traumatic wound),
	_	Visha, kshara, agnidagdha vrana (stomatitis due to chemicals)
02	Tilakalkodaka (cold/ lukewarm)	Danta chala(loose tooth), Dantaharsha(sensitive tooth), Vatika mukha roga
03	Taila gandoosha/Mamsa rasa	Danta chala (loose tooth), Dantaharsha (sensitive tooth), Vatika mukha roga
04	Madhu gandoosha	Mukha vrana(aphthous ulcer), Daha(burning), Trishna(thirst)

#### Table 15: Types of Sneha gandoosha(Oil pulling) and their indication

#### Table 16: Types of Mukha shoshaghna gandoosha and their indication

S.no	Name of Gandoosha	Indications
01	Dhanyamla gandoosha	Mukha vairasya(bad taste), Mala (coating) daurgandhya (halitosis)
02	Sheetala Dhanyamla gandoosha without lavana	Mukha shosha (Mouth dryness)
03	Ksharambu gandoosha	Kapha sanchaya (coating)
04	Ushnodaka gandoosha	Mukha gaurava(heaviness)
05	Khadiradi gandoosha	Mukha vairasya,(bad taste) mala (coating) daurgandhya (halitosis),
	-	Praseka (excessive salivation)

#### Table 17: Plants and their botanicals for best Tambula (Paan)

S.no	Sanskrit name	Botanical name	Botanical
01	Karpoora	Cinnamomum camphora (L.)J.Presl	Resin
02	Jatiphala	Myristica fragrans Houtt.	Seed
03	Kankola	Piper cubeba L.	Flower bud
04	Lavanga	Syzygium aromaticum (L.)Merry &L.M.Perry	Flower bud
05	Lata kasturi	Abelmoschus moschatus Medik	Seed
06	Pooga	Areca catechu L.	Nut
07	Naga valli	Piper betle L.	Leaf

### DISCUSSION

The content of Kaiyyadeva nighantu has been distributed in eight classes. These classes are devoted for aushadhi (drugs) ahara (diet) and vihara (activities) in the following way. The first two classes viz. Oshadhi varga and Dhatu varga are specially designed for Aushadhi dravyas (drugs) of different origin (plants, minerals and animal products). The classes from 3 to 6 viz. Dhanya varga, Drava varga, Kritanna varga and Mamsa varga describe ahara dravyas(food substances). The 7<sup>th</sup> varga viz. Vihara varga deals with the activities and daily regimens. While, the last class - Mishraka varga deals with the mixed classification mainly.

#### Plants for oral care

Oshadhi varga mentioned in Kaiyyadeva nighantu, is a large class and comprises of 422 plants (excluding the varieties/ types/different form of useful part of a same plant), Among them, 27 plants are found to be useful for oral care. Their activity is diverse and deals with various aspects of the oral care.

#### Plants for Dental care (Dentifrice)

The plants viz. Khadira (*Acacia catechu* (L.f.) Willd, Irimedha (*Acacia farnesiana* (L.) Willd, Yuthika (*Jasminum auriculatum* Vahl,) Tilaka (*Wendlandia heynei* (Schult.) Santapau & Mercha nt) Bakula (*Mimusops elengi* L.) and Bhringaraja (*Eclipta prostrata* (L.)L.) are useful for dental care. In addition to the leaf, fruit of Bakula has also been mentioned for dental care. The fruit possesses madhura-Kashaya rasa, snigdha, vishada guna and sheeta virya. It acts as kapha pitta shamaka. All of them have predominantly apatarpaka rasas which prove the fact that Katu, tikta and kashaya rasa are helpful for maintaining the dental and gum health.

#### Plants that fight mukhadaurgandhya (halitosis)

Six plants viz. Nagavalli, (*Piper betle* L.) Pooga, (*Areca catechu* L.) Karpoora (*Cinnamomum camphora* L. J.Presl), Jatiphal (*Myristica fragrans* Houtt.) Kankola (Piper cubeba L.) and Shati (*Hedychium spicatum* Sm.) fight halitosis. All are aromatic in nature except Pooga, (*Areca catechu* L.).

#### Plants that fight Mukha vairasya (bad taste)

7 plants viz Brihati (*Solanum indicum* L.) Draksha (*Vitis vinifera* L.), Jambira, (*Citrus limon* (L.)) Osbeck) Pooga,(*Areca catechu* L.), Karpoora (*Cinnamomum camphora* L. J.Presl), Jatiphal (*Myristica fragrans* Houtt.) and Shati(*Hedychium spicatum* Sm.) eliminate the bad taste of the mouth. Leaf of Jambira (*Citrus limon* L.) Osbeck) is also considered for treating mukhavairasyata in addition to the fruit. The leaf possesses teekshna and sugandhi guna.

# Plants that act as Jihva asya (Vaktra)shodhana (Mouth fresheners)

The plants such as Beeja pooraka Jambira *Citrus limon* (L.)) Osbeck) Nimbuka (*Citrus aurantiifolia* Christm. Swingle) Bhavya, (*Dillenia indica* L.) Panasa (*Artocarpus integer* Thunb.) Merr) and Bhustrina (*Cymbopogon citratus* DC. Stapf) act as vaktra shodhaka (mouth freshener) Interestingly, Panasa pushpa is considered as Mukkha vishodhaka.

#### The plants that cure oral diseases

The plants viz. Dadima (*Punica granatum* L.), Shweta khadira (*Acacia polyacantha* Willd), Iri medha (*Acacia farnesiana* L. Willd), Daru haridra (*Berberis aristata* DC), Lata kasturi, *Abelmoschus moschatus* Medik) Shallaki (Kunduru) *Resin of Boswellia serrata* Roxb.ex Colebr.), Malati (*Jasminum grandiflorum* L)., Tilaka (*Wendlandia heynei* (Schult.) Santapau &Merchant) and Nepali (*Jasminum arborescens* Roxb )cure oral diseases.

Among these plants, Irimedha Acacia farnesiana (L.) Willd, Tilaka (Wendlandia heynei Schult., Santapau & Merchant), Pooga, (Areca catechu L.), Karpoora (Cinnamomum camphora (L.) J. Presl, Jatiphal (Myristica fragrans Houtt.) and Shati (Hedychium spicatum Sm.) have multiple actions.

# Practices for oral care

## Danta dhavana (Tooth brushing)

11 plants are mentioned to prepare the paste to brush the teeth. The paste prepared by mixing triphala, trikatu, trijataka, kustha, taila, Saindhava and madhu. Triphala is predominant in kashaya rasa and cleanses the oral cavity. Recent research on triphala has reported the anti–caries activity, anti–collagense activity, anti microbial and anti-oxidant activity<sup>6</sup>.

Trikatu with its katu rasa increases secretion of saliva and helps in purifying the oral cavity. While, trijataka group includes aromatic drugs and fight bad odour. The taila (oil), saindhava and madhu promote the oral health. Madhu(honey) possesses yogavahi guna and considered as the best vehicle, the ingredients of honey have been reported to exert anti-oxidant, antimicrobial, anti-inflammatory, anti-proliferative, anti-cancer and antimetastatic effects<sup>7</sup>.

While saindhava lavana (rock salt) possesses the properties such as vishyandi, sookshma (minute), teekshna (sharpness), chedana (cutting) and vilayana (liquefying) which help to break the viscid kapha present in the oral cavity. As far as taila is concerned, it brings about mridutwa (softness), snigdhata (unctuousness) and removes the mala sanga.

Thus, the combination of drugs in the mixture is in such a way that their action is not only beneficial to oral cavity but also to the whole body. Apart from these drugs, Kaiyyadeva recommends Tejovati powder also.

11 twigs are mentioned for danta kastha. Interestingly, 2 more plants are mentioned while describing the selection of a best twig based on the rasa and dosha. Thus, the total number of twigs mentioned for danta kastha is 13. While, 23 twigs are prohibited for the usage.

## Jihva lekhana (Tongue scraping)

Most common cause of a white tongue is the poor oral hygiene. Act of tongue scraping helps in removing the coating of the tongue. Tongue scraping stimulates the reflex points of the tongue. Clinical evidences also show that use of tongue scrapers on a regular basis, has a significant improvement on eliminating anaerobic bacteria and decreases odour<sup>8</sup>

# Saindhava and ardraka bhakshana (Consuming rock salt and ginger before food)

Eating a small piece of ginger along with a pinch of saindhava (rock salt) before consuming the food will increase the secretion of saliva, cleanses the oral cavity and increases the appetite.

# Nimburasa and ardraka sevana (Consuming lemon juice and ginger

Consuming nimbuka rasa (lemon juice) mixed with ardraka (ginger) will increase the secretion of saliva and cleanses the oral cavity.

## Ostha sikthakabhyasa (Regular application of wax to the lips)

Siktha (bee wax) chemically consists mainly of esters of fatty acids and various long chain alcohols. It acts as a glazing agent and possesses anti inflammatory and anti microbial activities.

# Gandoosha (Holding liquid in mouth)

It will exert the effect locally as well as systemically. In addition, it gives strength to the facial muscles. Gandoosha increases the salivary output by stimulating the stretch reflex. The drugs present in various types of gandoosha will heal the wounds, stabilize the teeth and gum, cleanse the oral cavity and also act as anti septic medicaments.

### Tamboola sevana (Chewing paan)

7 botanicals are mentioned along with lime as the ingredients of tamboola (paan). Karpoora, Jatiphala, Kankola, Lavanga and Lata kasturi are used as additional substances in tamboola. While, tambula patra (Betel leaf), Pooga phala (Areca nut), Choorna (Lime) and Khadira (Katha) are the main substances. Though, there is a notion that chewing paan is directly linked with oral sub mucous fibrosis and cancer, yet, Ayurveda recommends tamboola sevana as one of the important daily regimens for oral and overall health. Meanwhile, It also warns that excessive chewing of paan leads to danta daurbalya (loose tooth), pandu roga (Anaemia), balakshaya (weakness) and mukha vikara (oral diseases).

Acharya Kaiyyadeva recommends high quantity of Khadira in tamboola for the beneficial effect. In addition, he advises to spit the paan liquid twice before start swallowing.

# CONCLUSION

On analyzing the plants for oral care in Kaiyyadeva nighantu, 27 plants for oral care are described in oshadhi varga, while, 34 plants are described in vihara varga in the context of different practices. Among them, 9 plants are common to both classes. Thus, a total of 52 plants are found useful for oral care. As far as the practices are concerned, 7 important practices are explained for maintaining and improving the oral health. With this, it can be concluded that Kaiyyadeva nighantu directs towards 52 plants and 7 practices that can be very much useful for oral care.

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