



Review Article

DANTASWASTHYA IN AYURVEDA W.S.R. TO DANTADHAVAN

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ABSTRACT

In modern life, faulty lifestyles and poor dietary habits have led to a significant rise in oral diseases. Where Ayurveda science's *Prayojana*- "*Swasthasya Swasthya Rakshanam*" emphasizing the importance of maintaining health. The Ayurvedic daily regimen or *Dinacharya*, provides detailed guidelines for promoting oro-dental health, including the practice of *Dantadhavan* (tooth cleaning). Various herbs recommended by different *Acharyas* play a crucial role in *Dantadhavan*, while some *Acharyas* also list herbs that should be avoided. This paper aims to explore various Ayurvedic herbs to promote orodental health and prevent various common orodental problems. Various tooth brushing and flossing techniques are mentioned separately in today's practice, but these methods only emphasize on cleaning of teeth, on the contrary *Danta dhawan dravyas* don't clean not only the oral cavity but also aids their medicinal properties to prevent diseases.

INTRODUCTION

Acharyas described various *Karmas* in *Dinacharya* (daily regimen). *Dantadhavan* is one of the *Upakrama*, which is mentioned by *Acharyas* in *Dinacharya* (daily regimen). *Dantadhavan* will be beneficial in *Mukha Daurgandhya* (foul smelling from mouth), *Updeha* and *Shleshma Apakarshna* (eliminate food particles, dental tartar and stickiness from mouth), *Vaishadhya* (cleanliness), *Anna Ruchikara* (increase appetite), *Saumanasya* (cheerfulness).^[1] Some *Acharyas* mentioned "*Dantadhavan*", *Dantadhavan* means "*Dantan Dhavayati Shodhayati*" (which do wash and clean). Some called as "*Dantapavan*"- *Danta* means teeth, *Pavan* means purifying. *Dantapavan* is derived from *Prakrit* word "*Dantavanna*".

Acharya Sushruta has mentioned different type of *Kastha* (stems) for *Dantadhavana* as per *Rasa* (taste). Also gave ideal *Dantadhavan Kastha* (tooth brush) quality and method for *Dantadhavan*.

Contraindication for *Dantadhavan Karama* (tooth brushing) had given by *Acharya Sushruta*. Same as *Acharya Vagbhatta* also given herbs with its qualities. In edition *Acharya Vagbhatta* and *Acharya Charak* had given *Kala* (appropriate time) for this *Karma* (procedure). In *Astanga Samgraha* also detailed description of *Dantadhavan* has been mentioned. In *Astanga Samgraha*, *Acharya* mentioned *Varjya Vrukshas* (contraindicated trees) for *Dantadhavan*. In *Charak Samhita*, *Acharya* mentioned *Rasa* which *Rasa Dravya* can use for this, benefits and *Kala* (appropriate time) for *Dantadhavan*.

Along with *Dantadhavan* for oral hygiene *Acharya* has given *Pratisarana* (rubbing), *Jihva Nirlekhana* (tongue scraping), *Kavala* (gargles), *Gandush* like *Upkramas* (procedures). All these procedures mentioned in daily regimens for maintain *Swasthya* of healthy individual, balance of *Dosha* and excretion of *Mala Swaroopa*.

On other hand, nowadays due to faulty food habits like excessive eating of chocolates, ice-cream, gems cold drinks, junk foods lead to unhealthy teeth at early age.

Due to these dental problems like, dental caries, dental tartar, dental calculus, dental fistula are increasing gradually. To prevent all these issues, one should maintain oral hygiene routinely.

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MATERIALS AND METHODS

Acharya Sushruta had given Aushadh for Dantadhavan as per Rasa of Dravya. Acharya gave Shreshtha Dravya (best drug) according to Rasa as per below,^[2]

Rasa	Dravya
<i>Katu Rasa</i>	<i>Karanja (Pongamia pinnata)</i>
<i>Tikta Rasa</i>	<i>Nimba (Azadirachta indica)</i>
<i>Kashaya Rasa</i>	<i>Khadira (Acacia catechu)</i>
<i>Madhura Rasa</i>	<i>Madhuka (Madhuca longifolia)</i>

Drugs Used for Dantadhavan

Samhita	Dravyas
SU. Sa.	<i>Karanja, Nimba, Khadira, Madhuka</i>
CH. Sa. ^[3]	<i>Karanja, Karvira, Arka, Malati, Kakubha, Asan</i>
AS. ^[4]	<i>Vata, Asan, Arka, Khadira, Karanja, Karvira, Sarja, Arimeda, Apamarga, Malati, Kakubha</i>
AH. ^[5]	<i>Arka, Nyagrodh, Khadira, Karanja, Kakubha</i>

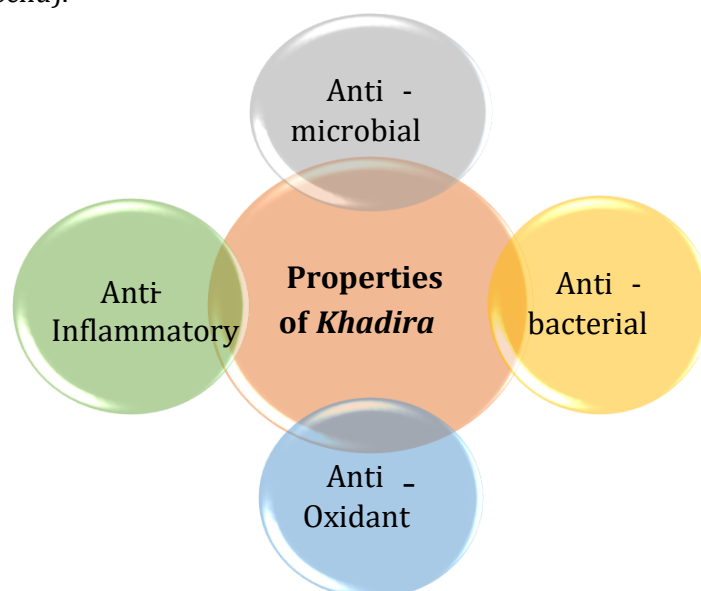
Various Acharyas mentioned various Rasa for Dantadhavan Dravyas:

Name of Acharya	Rasa of Dravya
<i>Sushruta^[6]</i>	<i>Kashaya (astringent), Madhura (sweet), Tikta (bitter), Katu (pungent)</i>
<i>Charak^[7]</i>	<i>Kashaya (astringent), Katu (pungent), Tikta (bitter)</i>
<i>Astang Hridaya^[8], Astang Samgrah</i>	<i>Kashaya (astringent), Tikta (bitter), Katu (pungent)</i>

Karma of various Rasa Dantadhavan are as below:

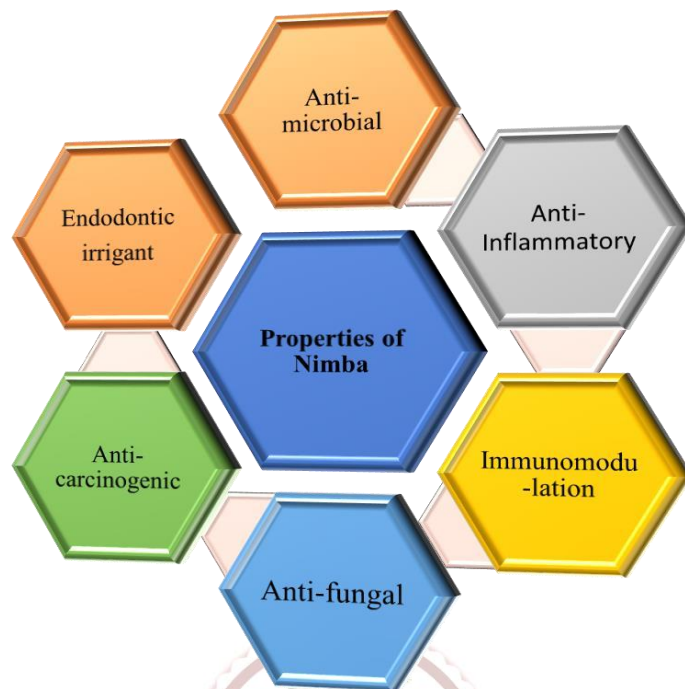
Name of Rasa	Karma
<i>Katu</i>	<i>Vakra Shodhana (mouth cleansing), Sweda-Kleda-Mala Upahanti, Rochana, Agnideepana, Vranan Avasadayati, Shleshmahara</i>
<i>Tikta</i>	<i>Krimighna, Vishaghna, Deepana, Pachana, Lekhana, Kleda-meda Upashoshayati</i>
<i>Kashaya</i>	<i>Sangrahi, Ropana, Shoshana, Stambhana</i>
<i>Madhura</i>	<i>Balakrut, Sandhana</i>

Most commonly used Dravyas (drugs) for Dantadhavan are *Karanja* (Pongamia pinnata), *Nimba* (Azadirachta indica), *Khadira* (Acacia catechu).



Khadira Kastha shows better result in *Dantamala* (plaque over tooth), *Dantamalinata* (dirty teeth), *Mukhadaurgandhya* (foul smelling mouth) due to *Tikta* (bitter), *Kashaya* (astringent) *Rasa* of *Khadira*. It also has antimicrobial, antibacterial, antioxidant and anti-inflammatory properties which helps in oral health maintenance.^[9]

- *Madhuka Kastha* shows better result in *Mukhaasyavairasya* (bad taste in mouth) which may due to *Madhura Rasa* (sweet taste), *Madhura Vipaka*. It has antibacterial, antimicrobial, antiulcer and antifungal activities.



Nimba extracts are incorporated in present day oral and dental care product as well as in treatment of various oral premalignant and malignant lesions.

- *Nimba Dantakastha* has been found very effective as an anti-plaque agent. *Nimba Kastha* does not have any ill effects such as discoloration or enamel disintegration.
- Phytochemicals of *Nimba* has been shown to tumour cell growth and proliferation by affecting p53 gene and its protein product that regulates large number of genes involved in tumorigenesis. Not only this it has also shown to effect mechanisms involved in procarcinogen activation and oxidative DNA damage, upregulating antioxidant and carcinogen detoxification enzymes, inhibition of tumour invasion and angiogenesis.^[10]

Contraindicated *Dravya* for *Dantadhavan*

<i>Astanga Samgraha</i> ^[11]	<i>Shleshmatak, Arishta, Vibhitak, Dhav, Dhanvaja, Bilva, Vanjula, Nirgundi, Shigru, Tilvak, Tinduka, Kovidar, Shali, Pilu, Pippal, Ingud, Guggulu, Paribhadrak, Amlika, Mocha, Shalmali, Shan</i>
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In *Astanga Samgraha*, *Acharya* also given contraindicated *Rasa* for *Dantadhavan* are *Swadu* (sweet), *Amla* (sour), *Lavana* (salt) *Rasa*. *Dantadhavan* which have quality like *Shushka* (dry), *Sushira* (hollow), *Puti* (dirty), *Pichhila* (slimy) are contraindicated.

Length of *Danta Kastha*

All *Acharyas* have mentioned 12 *Angula* length for *Dantadhavan Kastha*.

Ideal *Dantadhavan Dravya*

Acharya Sushruta has mentioned qualities of ideal *Dantadhavan Dravya* as, it should be 12 *Angula* long, *Kanisthika Parigraha* (little finger like circumference), *Rujya* (straight), *Agranthi* (without any

nodules), *Avrana* (unbroken), *Shasta Bhumija* (collected from auspicious place).^[12]

In addition, *Acharya Sushruta* mentioned *Nitya Danta Vishodhana Yoga* as *Madhu, Vyosha, Twak, Ela, Patra, Taila, Saindhav* and *Tejovati Churna* mixture.^[13]

Kala for *Dantadhavan*

^[14]

Acharya Vagbhatta and *Acharya Charak* mentioned two *Kala* for this,

- Pratah* (morning)
- Bhuktva* (after food intake)

Method of *Dantadhavan*

^[15]

“*Ekaikam Gharshayet Dantam Mruduna Kurchken Cha*” means the tip of twig should be chewed to prepare soft bristle and every tooth should be cleaned one after another. In *Astanga Samgraha*,

Acharya mentioned “*Dantan Purvam Adho Gharshayet*” means one should first rub the twig against lower teeth.

Acharyas also mentioned about precautions during the procedure of *Dantadhavan* as, “*Dantamamsani Avabadhayan*” means be sure not to harm the gums during this procedure.

Benefits of *Dantadhavan*

Name of <i>Acharya</i>	Benefits
<i>Acharya Sushruta</i> ^[16]	<i>Daurgandhya Apakarsh</i> (eliminate foul smell), <i>Upadeha Apakarsh</i> (eliminate food particles and dental tartar), <i>Shleshma Apakarsh</i> (eliminate), <i>Vaishadhya</i> (cleanliness), <i>Annabhi Ruchi</i> (increase appetite), <i>Saumanasya</i> (cheerfulness)
<i>Acharya Charak</i> ^[17]	<i>Nihanti Gandh Vairasya</i> (eliminate foul smell and bad taste), <i>Nishkrushya Jihvadantaasya mala</i> (eliminate dirt from tongue, teeth and mouth), <i>Ruchimadhyate Sadhya</i> (increase appetite immediately)

Contraindications for *Dantadhavan*

Name of <i>Acharya</i>	Contraindications
<i>Acharya Sushruta</i> ^[18]	<i>Gala-Talu-Aushth-Jihva Roga</i> (throat-palate-lips-tongue diseases), <i>Aasyapaka</i> (stomatitis), <i>Shwas</i> (dyspnoea), <i>Kasa</i> (cough), <i>Hikka</i> (hiccough), <i>Vaman</i> (vomiting), <i>Durbala</i> (weak), <i>Ajeerna Bhuktah</i> (immediate after eating), <i>Murchhaarta</i> (stupor), <i>Mada Pidita</i> (intoxicated person), <i>Shiroruja</i> (headache), <i>Trushit</i> (thirsty), <i>Shrant</i> (fatigue), <i>Panah Klamavit</i> (exhausted after drinking), <i>Ardita</i> (facial palsy), <i>Karnashula</i> (earache), <i>Dantarogi</i> (disease of teeth).
AH/AS ^[19]	<i>Ajeerna</i> (indigestion), <i>Vamathu</i> (vomiting), <i>Shwas</i> (dyspnoea), <i>Kasa</i> (cough), <i>Jwar</i> (fever), <i>Ardita</i> (facial palsy), <i>Trushna</i> (thirsty), <i>Aasyapaka</i> (stomatitis). <i>Hruda-Netra-shira-Karna Aamayi</i> (diseases of heart, eye, head, ear).

DISCUSSION

Tooth brushing is most commonly recommended and performed for oral hygiene. There are different types of toothbrushes are discovered as per requirements like, electric toothbrush, interdental toothbrush, end-tuft toothbrush, chewable toothbrush, musical toothbrush etc. There are many methods of tooth brushing discovered like, horizontal tooth brushing, vertical tooth brushing, round tooth brushing etc. Majority of toothbrush are made with nylon bristles and plastic handle, both of which could take over 400 years to decompose. It is major concern for soil, when the toothbrushes do start to biodegrade, they leave peace of microplastics, which is more dangerous for our soil. Whereas *Dantakasthas* are biodegradable, so there are beneficial as per environment point of view. *Dantakastha* has natural antibacterial and wound healing properties, which helps in relieving symptoms as well as maintaining oral hygiene. *Dantadhavan Dravya* are advised to use freshly, it will help to avoid micro-organisms growth and oral infections due to long usage of same toothbrush. *Dantadhavan* improves strength of buccal cavity in compare to currently available brushes.

Dantadhavan Dravya is rich in *Katu*, *Tikta*, *Kashaya Rasa* that is results in *Mukha Sodhana*, *Krimighna*, *Vishaghna*, *Kusthaghna* properties.

Khadira has *Kashaya* and *Tikta Rasa*, *Katu Vipaka* and *Kaphanashana* properties and also the antibacterial, antifungal, anti-inflammatory, anti-oxidant activity probably helps in reliving *Mukha-daurgandhya*, *Dantamala* and *Dantamalinata*. Also helps in maintaining oral hygiene at daily routine. While *Madhuka* has *Madhura* and *Kashaya rasa*, *Madhura Vipaka* and *Kaphanissaraka Karma* and proven antimicrobial, antiulcer, antifungal activities help in relieving *Mukhavairasya*. *Nimba Dantakastha* have *Putihara*, *Krimighna*, *Kandughna*, *Varnasodhana*, and *Varnaropana* properties. *Neem Dantakastha* has been found very effective as an anti-plaque agent.^[20] *Neem Dantakastha* does not have any ill effects such as discoloration or enamel disintegration.

CONCLUSION

Acharya has mentioned to use freshly collected *Dantakastha*, which is less prone to grow micro-organisms. By classical method of *Dantadhavan*, strength of buccal cavity will improve with comparison to use of currently available toothbrush. *Dantadhavan* is one of the *Upkrama* mentioned in *Dincharya*, which plays an important role in oral hygiene.

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