

## THE ROLE OF DANTADHAVANA (TOOTH BRUSHING) TO PROMOTE ORAL HEALTH

Nandita Paul<sup>1</sup>, Karab Ali<sup>2</sup>

<sup>1</sup>PG scholar, Department of Sanskrit Samhita & Siddhanta, Govt. Ayurvedic College, Guwahati, Assam, India.

<sup>2</sup>Assistant professor, Department of Sanskrit Samhita & Siddhanta, Govt. Ayurvedic College, Guwahati, Assam, India.

Corresponding Author: [nandita1995kyn@gmail.com](mailto:nandita1995kyn@gmail.com)

<https://doi.org/10.46607/iamj2911082023>

(Published Online: August 2023)

### Open Access

© International Ayurvedic Medical Journal, India 2023

Article Received: 03/07/2023 - Peer Reviewed: 25/07/2023 - Accepted for Publication: 10/08/2023.



### ABSTRACT

Ayurveda is the science of life. The knowledge of Ayurveda originated in India more than 5000 years ago. Ayurveda is considered to be a part of Atharva Veda. The goal of Ayurveda is to maintain health and cure diseases. To maintain positive health in healthy individual. Ayurveda has mentioned Dinacharya, it is one of the most important things in our daily life. It means 'The Daily Routine' one should follow the Dinacharya properly to lead a healthy and disease-free life. Acharya Charaka, Sushruta and Vagbhata have a separate chapter for Dantadhavana, it is the most important part of our daily routine in every morning and after food. In the modern era due to sedentary lifestyle, unhealthy eating habits, addiction of tobacco and alcohol, improper oral hygiene and other factors oral diseases are increasing progressively. People don't have time to clean their teeth's properly and do not maintain oral hygiene properly. Because of that various dental problems arise. In Ayurveda has mentioned Dantadhavan kashta (twigs for brushing like Arka, karanja, khadira, Arjuna etc) to prevent dental caries and plaque formation and other peri odontal diseases. Some herbs are promoting oral health as their anti-microbial, anti-viral, anti-fungal, anti-inflammatory properties. Oral hygiene protects us from many Mukha rogas, which leads to proper health management and a healthy immune system. Chemicals toothpastes like chlorhexidine, calcium carbonate, hydrated silica, magnesium aluminium silicate, silica, fluoride, potassium nitrate, sodium silicate, cellulose etc. are used in toothpaste. It prevents various dental diseases now a days.

**Keywords:** Dinacharya, Dantadhavana, Oral health, Dantadhavana kasha, Toothpaste, Daily routine, Mukha roga.

## INTRODUCTION

Ayurveda mentioned various procedures for maintaining oral hygiene. The Danta dhavana (tooth brushing) is a part of daily regimen which makes teeth and gums healthy. It is an important procedure for maintaining oral hygiene. Oral hygiene is very important for maintenance of health and prevention of diseases. Oral health is the state of the mouth and Good oral health denotes healthy teeth, healthy gum and healthy surrounding tissue. Ayurveda had mentioned various procedures for maintaining oral hygiene. Tooth brushing is the most commonly recommended and performed oral hygiene behaviour. It is considered removing amounts of dental plaque in order to prevent oral diseases. Accumulation of food debris between the unhealthy gum and teeth helps in the growth of pathogenic organisms leading to the development of pyorrhoea alveolaris, loosening of teeth's, premature fall of teeth, bad breath, Infective endocarditis and Aspiration pneumonia etc. Regular tooth brushing is the best way to maintain proper oral hygiene. In the modern era, a hectic and sedentary lifestyle is creating many health problems due to improper eating habits like junk food, addictions like tobacco, smoking and consumption of alcohol, lack of physical activity etc. Now a days oral unhygienic problems are arising progressively. To maintain good oral health Dantadhavana with various plants have been mentioned in classical texts.

### Dantadhawana

It is made up of two words: 'danta' and 'dhawana'. 'Danta' means teeth and 'dhawana' means cleansing. Dantadhawana is cleansing of the oral cavity, preventive and promotive health benefits of oral cavity. The procedure of Dantadhavana is clearly mentioned in Ayurvedic texts along with the beneficial twigs and timing of tooth brushing.

### Length of Danta dhavana

- The diameter of danta kasha (sticks) should be size of the tip of kanina angula (little finger) and

length twelve angulas, it should be sama sthula (straight) with its top made mridu (soft). The teeth should be cleaned twice, in the morning and after meals, without harming the danta mamsa (gums). (Ah. Su 2/3)

Acc to Todarmala, different lengths of danta kasha for people of different varna. Acc to this 12, 10, 8, 6 angula danta kasha should be used by brahman, kshatriya, bhaishjya, kshudra respectively. But the 12 angula length is standard for danta kasha.

### Length (in Angula)

Astanga Hridaya - 12 angula in length  
Astanga sangraha - 12 angula in length  
Charaka Samhita - not mentioned.  
Sushruta samhita - 12 Angula in length

### Dantadhavana kaala:

Dhantadhawana is used daily two times after waking up in the morning and at bedtime after intake of food with the help of trivarga tritiya (Trikatu, Triphala, Trijathaka) (A.sa. su 3/6)

### Dantadhavana kasha (Daatun or twigs) according to Astanga Hridaya sutrasthana, Astanga Sangraha sutra sthana, Sushruta samhita chikitsa sthana:

The better cleansing of the oral cavity the twig should be selected properly. It should not be hollow, bent, decayed, devoid of knots, The kasha (twig) -

- *Karanja* (Pongamia pinnata): kapha -vata hara, krimighna, kandughna.
- *Karaveera* (Nerium indicum): kapha- vata hara, dustha vranahara.
- *Arka* (Calotropis gigantea): vata hara, vishaghna, deepana, sophahara, vranahara, krimihara, kanduhara.
- *Malati* (Jasminum grandiflorum): Vranahara, Mukhapaka hara, Dant arati, vishahara.
- *Arjuna* (Terminalia arjuna): Trishnahara, sadyopranahara,

- Asana (Pterocarpus marsupium): Kapha pittaghna, galadoshaghna, Raktamandalta nashana.
- Nyagrodha (Ficus benghalensis): Kapha pittahara, stambhana, trishna chardi hara, Vranapaham.
- Khadira (Acacia catechu): Kapha pittahara, dantya, deepana, aruchi hara, krimihara, vranahara, Danta roghahara.
- Nimba (Azadirachta indica): Kapha pittahara, krimighna, deepana, vranahara, chardi hara, vishahara.
- Madhuka (Glycyrrhiza glabra): Tridoshaghna, rasayana, vrana sothahara, Chardi hara, Trishnahara, Dahahara.
- Madhu (honey): Kaphavatahara, sandhanakara, ropaka, vishahara.
- Trikatu (sunthi, maricha, pippali): Deepana, pachana.
- Trisugandha (tvaka, ela, patra)
- Tila (Sesamum indicum): vatarogahara
- Saindhava (rock salt): Tridoshahara, rochaka, deepana.
- Pippali (Piper longum): Tridosha hara

**Various karma of Rasa related to danta dhavana according to Sushruta Samhita Chikitsasthana: (Su. Chi 24/6,7)**

- Kashaya Rasa karma: Ropana, soshana, stambhana. Eg – Khadira
- Madhura rasa : sandhana karma eg - Madhuka
- Katu Rasa karma: Vaktra sodhana, Agni deepana, kleda mala uphanti, kandu vinashanam, Rochana, kaphanashak. Eg – Karanja
- Tikta Rasa karma: Krimighna, vishaghna. Eg – Neem
- Dantadhavana used daily with the help of madhu, sunthi, marich, pippali, Dalchini, ela, tejpatra, sarsapa taila, saindhava lavana.

**Benefits of Dantadhavana acc to Sushruta samhita chikitsa sthanam: (Su. Chi 24/9)**

It removes Dourgandhya (foul smell) from the mouth, helps in elimination of sleshma (coating/plaque) from the oral cavity, relieve form

anorexia and tastelessness (vaishadya anna and aruchi), Saumanasya kara (mental happiness), vairasya (tastelessness), danta sahaja mala (take out dirt from the oral cavity), danta vishodhana (cleanse teeth).

**Contraindicated twigs for danta dhavana according to Astanga Sangraha: (A.sa su 3/20,21)**

Shleshmataka (cordia mixa), Arishta (sapindus trifoliatu), Vibhitaka (Terminalia bellerica), Dhava (Anogeissus lalifolia), Bilva (Aegel marmelos), Nirgundi (Vitex nirgundo), Tinduka (Diospyros embryopteris), kovidara (Bauhinia variegata), Sami (Prosopsis spicigera), Guggulu (Commiphora mukul), Paribhadra (Erythrina indica), Amlika (Tamarandus indica), Salmali (salmalia malabarica), Sana (crotolaria verrucosa)

**Contraindication of Danta dhavana acc to Astanga Hridayam: (Ah. Su 2/4)**

- Ajirna (Indigestion)
- Kshavathu (Sneezing)
- Kasa (Cough)
- Jwara (Fever)
- Ardita (Facial paralysis)
- Trishna (Thirst)
- Mukhapaka (Ulcer in mouth)
- Hridaya roga (heart disease)
- Netra roga (Eye diseases)
- Shira roga (Head diseases)
- Karna roga (Ear diseases)

Acc to Sushruta samhita chikitsa sthana: (Su. Chi 24/11,12)

Diseases of Gala (throat), talu (palate), oostha (lip), jihwa roga (disease of tongue), asyapaka (ulcer of mouth), swasa (dyspnoea), kasa (cough), hikka (hiccup), vamithu (after vomit), durbala (weakness), ajirna (indigestion), murchita (fainting), madapidita (after intake alcohol), shiraruja (constant headache), trishna (thirsty people), shranta (exhausted after work), ardita (facial paralysis), karnashoola (earache), dantarogi (disease of teeth).

**Conditions can be linked to oral health:**

- Mouth is the entry point of our digestive tract and respiratory tracts. And some bacteria can cause the disease. Without proper oral hygiene, bacteria

can reach levels and lead to oral infections. The poor oral hygiene can lead to bacteria in the blood, causing inflammation in the body which increased risk of irregular heartbeat and heart failure.

- Improper dental hygiene risk the factor of Tooth decay and Gum diseases and other chronic health problems, including:
  - Infective Endocarditis
  - Heart disease
  - Stroke
  - Periodontitis
  - Dental caries (tooth decay)
  - Gum diseases
  - Edentulism (loosening of tooth)
  - Respiratory diseases
  - Halitosis (bad breath)
  - Oral cancer
  - NOMA (severe gangrenous diseases of the mouth and the face. It mostly affects children)
  - Aspiration pneumonia
  - Premature fall of teeth
  - Diabetes (high glucose in saliva could also break the teeth)

#### **Toothbrushing as per contemporary view:**

- Tooth brushing is the most commonly recommended and performed oral hygiene behaviour. It is considered removing amounts of dental plaque in order to prevent oral diseases. There are many types of toothbrushes as per requirements like – electric toothbrush, interdental toothbrush, end – tuft toothbrush, chewable toothbrush, etc.
- There are many methods of toothbrushing like – Horizontal, Vertical, circular technique, bass technique, the roll technique.
- In today's era those used in manufacturing toothbrushes are Polypropylene, Polyethylene, Nylon etc.
- A toothpaste is defined as a semisolid material. Toothpaste is combined of Calcium carbonate, Calcium phosphate, Dibasic, Dehydrate, Silica, Silica hydrate, Carbomers, Flavouring agent,

Foaming agent, Fluoride, Xylitol, Sodium bicarbonate, Triclosan, Choloheidine, Pottasium salts, Amino glycosides, Abrasives, Magnesium carbonate, Calcium hydrogen phosphates, antibacterial agents, zinc chloride etc are used for toothpaste.

#### **Care of oral health:**

- Brushing of the teeth at least twice a day for two minutes each time.
- Use mouthwash to remove food particles, after brushing and flossing.
- Eat a healthy diet.
- Limitation of intake sugary foods and acidic foods.
- Visit the dentist for regular dental check-up and cleanings.
- Replace the toothbrush every three or four months.
- Avoid tobacco consumption.
- Drink more water.

## **DISCUSSION**

Dantadhawana is advised in each and every healthy individual for the holistic benefit of oral cavity. The mukha (oral cavity) is the kapha sthana or seat of bodhaka kapha and during evening and morning and after food the prakopa of kapha will occur, so katu, tikta and kashaya rasa Dantadhawana should be used as these three rasas removes excess kapha. Madhura rasa is anabolic which helps in tissue growth and promotes teeth decay so madhura rasa is contraindicated for brushing. The twig used for Dantadhawana have danta dardhyakara (strengthening teeth), Kriminashaka (antimicrobial), jantughna, vrana ropana (healing of wound), and raktarodha (haemostasis) properties. For example, nimba has margosin as its chemical component which is antimicrobial property and the Sulphur present in it helps to strengthen the teeth. Similarly, Babool has tannin, calcium, magnesium which strengthens the teeth and the karanjin as active component present in karanja has antimicrobial property. One should brush in the morning with twigs of Arka, Bata, Khadira, Karanja, and Arjuna. Dantadhavana using herbal

twigs is an ancient time, but it is fact that it has been replaced by commercially produced chemical toothpaste at present. some bacteria which are present in oral cavity few bacteria cause teeth decay and periodontal diseases by producing acid from food debris present in mouth cavity. So, to prevent these serious consequences, control over this microorganism, the formation of acid and dental plaque is necessary. Healthy habits like Regular tooth brushing to achieve these goals. The twigs of Arka (*Calotropis procera*), khadira (*Acacia catechu*), karanja (*Pongamia pinnata*), Neem (*Azadiracta indica*), etc are used for Dantadhavana and anti-microbial, anti-fungal, anti-inflammatory, anti-bacterial, anti-viral activity of these herbs has been established in several studies.

Chemicals like triclosan, chlorhexidine, calcium carbonate, sorbitol, hydrated silica, magnesium aluminium silicate, potassium nitrate, benzyl alcohol, sodium silicate, cellulose, and sodium saccharin etc. are used in mouth rinses to prevent plaque and gingivitis now a days. Some specific fruits and vegetables should be incorporated in the daily diet, especially green leafy vegetables and fruits rich in minerals and vitamin c should be taken regularly. Intake of milk, egg, tomatoes, guava, gooseberry, apple, etc. should be taken daily, they reduce the chance of dental carries.

## CONCLUSION

The role of Dantadhavana is obviously helpful in maintaining oral health. It prevents dental carries by maintenance of salivary secretion and removal of food debris and control over acid formation. Dantadhavana helps to prevent dental plaque which in turn prevents periodontal diseases. Danta dhavana is an important part of daily routine. Some herbs are very helpful to prevent tooth decay and also promote oral health as their anti-microbial, anti-viral, anti-fungal, anti-inflammatory properties.

## REFERENCES

1. A textbook of Astanga Hridaya sutra sthana original text with Authentic English translations by Dr. Deepak Yadav Premachandran, edition 2018, chaukambha publications, 2<sup>nd</sup> chapter Dinacharya Adhyaya, sloke no 2,3, 4, page no 31,32.
2. A textbook of Astanga sangraha sutra sthana by Dr. R. Vidyanath, 1<sup>st</sup> edition, chaukambha publications, 3<sup>rd</sup> chapter, sloke no 13, 14, 15, 16, 20, page no 41, 42, 43.
3. Sushruta samhita by Dalhana Acharya Evum Sri Gayadas, Kevala Krishna Takaral hindi translations, sharir, chikitsa and kalpa sthana, chaukambha publications, chapter no – chikitsa 24/ 4- 12, page no 419.
4. Dravya Guna Vigyana study of the essentials medicinalis plants in Ayurveda by Dr. JLN Sastry, Vol – II, Chaukambha orientalia.
5. Vagbhata, Astanga Hridaya Sarvangasundara vyakhya of Arundutta & Ayurvedarasayana of Hemadri. Edited by pandit Bhaisag Acharya and Hari Sastry Paradkar vaidya, edition 2014, 2<sup>nd</sup> chapter page 4, chaukambha orientalia.
6. Sushruta samhita with Nibandha sangraha commentary by Sri Dalhana Acharya and Nyaya Chandrika commentary by Sri Gayadas acharya, edited by Vaidya Yadavji Trikamji and Narayan Ram Acharya Kavyatirtha, edition 2012, chikitsa 24<sup>th</sup> chapter, sloke 11, 12, page 487, chaukambha Sanskrit Pratisthana.
7. Terezhalmly GT, Bartizek RD, Biesbrock AR, Plauque removal toothbrushes in a nine-period crossover study, J. periodontal 2005, 76 (12), 2230- 2235.
8. By Vander Weijden F, Echevernia JJ snaz M, Linde J, mechanical supragingival plauque control, clinical periodontology and implant dentistry, edition 5, oxford, 2008.
9. Toothbrush in relation to toothbrushing effectiveness international journals of oral health hygiene, edition 2021, sep 12.
10. Formulation ingredients for toothpastes mouthwashes, edition 2021, sep 19.
11. Mayoclinic, <https://www.Mayoclinic.in> preventing periodontal diseases the American academy of periodontology, edition 2021, Oct 11.
12. World health organisation (WHO), <https://www.who.int/news-room/facts-sheets/detail/oral-health>, epidemiologic relationship between periodontitis and type 2 Diabetes mellitus, BMC oral health, edition 2020.
13. <https://www.edc.gov/oral-health/basics/adult-oral-health/tips.html>.

14. K. Park Essential of community health nursing, 6<sup>th</sup> edition by Banarasidas Bhanot 2012, page 41.

---

**Source of Support: Nil**

**Conflict of Interest: None Declared**

How to cite this URL: Nandita Paul & Karab Ali: The Role of Dantadhavana (Tooth brushing) to promote Oral Health. International Ayurvedic Medical Journal {online} 2023 {cited August 2023} Available from: [http://www.iamj.in/posts/images/upload/1989\\_1994.pdf](http://www.iamj.in/posts/images/upload/1989_1994.pdf)