



Dantakasthas (Chewing Sticks) in Ayurveda: A Review



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Submission: 📅: April 02, 2018; Published: 📅: April 13, 2018

Abstract

The importance of dental health and oral hygiene has been identified through centuries. Traditionally various kinds of *Dantakasthas* (Chewing Sticks) and herbal leaves are being used for tooth cleansing and mouthwash. Ayurveda, the system of Indic traditional medicine, is having a rich plant economy, whereas the list of chewing sticks so less. Since *Charaka* to *Bhavamishara*, the list is not even crossed 50 in number. Similarly, in current times, various kinds of toothpaste products are being appeared in the market on the brand Ayurvedic herbals and became commercialized. Due to various products, it became a bit challenging for customers to identify which one is suitable. So, there is an urgent need to show the exhaust list of chewing sticks mentioned in Ayurveda and correlation with current products regarding the ingredients. In the same way, a method is identified to extend the list, which can be helpful to formulate new kinds of products at cost-effective.

Keywords: *Dantakasthas* (chewing sticks); Mouthwash; Traditional medicine; Ayurvedic herbals; Toothpaste

Introduction

Ayurveda is designed for the maintenance of equilibrium of three *doshas*. Emphasis is basically given to the prevention rather than cure. To maintain good health, an ideal lifestyle (*dinacharya*) is described in Ayurveda, wherein *danthadhavana* (tooth cleansing) is one of the aspects. In this aspect, certain *dantakasthas* are described for tooth cleansing. Similarly, some medicated oils and active salt (*saindhavalavana*) are also suggested, while mentioning the gold, silver and copper leaves as tongue scrapers [1]. Generally, in rural areas, people use various kinds of chewing sticks and herbal leaves for cleansing teeth and mouthwash without knowing their name and medicinal properties. Sometimes charcoal is also in use if toothpaste is not available these usages are not documented well. By taking this as a clue, in the present day market, different types of toothpaste products are being appeared on the brand of Ayurvedic herbals and became commercialized for commercial purpose, active slate, charcoal etc are being added in some of the contemporary products.

Ayurveda have rich plant economy in the form of *meteriamedica* whereas the list of *dantakasthas* limited. Since *Charaka* to *Bhavamishara*, the list is not even crossed 50 in number. Similarly, because of various products, customers are also confused to identify which one is suitable. Thus, in this present study an attempt is made to show the exhaust list of *dantakasthas* mentioned in Ayurveda along with chronological textual differences on this concept. In the

same way, a hidden clue is also brought out to make as a method to identify other plants to extend the list which may help further to formulate new natural products at cost-effective.

Materials and Methods

Various Ayurvedic texts are utilized for this study such as *Charaka Samhita*, *Susruta Samhita*, *Astanga Samgrah*, *Astanga Hridaya* and *Bhava Prakasha* with available commentaries. Similarly, the text *Ananda Kanda* is also referred to, which is pertaining to *Rasashastra*. Apart this relevant articles and websites like ENVIS, ZIP code ZOO etc., have also been used to include botanical names to each plant. All volumes of Ayurveda Pharmacopeia of India are also referred to the collected plant data is consolidated and distinctions are also shown chronologically in a structured manner.

A Method to Identify *Dantakastha*

In the context of *dantadhavana*, a clue is given to identify a *dantakastha*. The clue is that, one should use the tooth-cleaning stick in the morning, which is either *kashaya* (astringent), *katu* (pungent) or *tikta* (bitter) in taste [2]. This removes the bad smell, tastelessness. This clue can be taken as a method to identify other plants based on the prescribed taste in *meteriamedica* of Ayurveda. This kind of method will help to extend the list. The Dabur red, one of the recent products, is formulated with the extraction of *sunthi*, *maricha*, *Pippali*, *karpoora*, *tomarseeds*, *lavanga*, *puudina*, *kashni* and

haritaki. This list is extremely different from the given dantakastha list. The dantakanti of Patanjali is also formulated with the extraction of *vjradanti*, *pilu*, *bakul*, *babool*, *akarakara*, *manjuphal*, *karpur*, *vidanga*, *nimba* and *lavanga*. This list is also different from the given list. According to the ingredients of these contemporary Ayurveda products, it is known that the above said method is purely applied.

Dantakasthas (chewing sticks) in Ayurveda

Though, Ayurveda having a rich meteriamedica, the amount of *dantakasthas* is so less. To find out the actual amount of *kasthas*, available Ayurvedic literature is reviewed. A few texts are found,

Table 1: List of consolidated *dantakasthas* depicted from different Ayurvedic texts.

| S.No. | Consolidated Dantakasthas | Botanical Name | Charaka Samhita (800BC) | Sushruta Samhita (700BC) | Asthanga Hridaya (500BC) | Asthanga Sangraha | Ananda Kanda (13 th C) | Bhava Prakasha (16 th C) |
|-------|---------------------------|------------------------|-------------------------|--------------------------|--------------------------|-------------------|-----------------------------------|-------------------------------------|
| 1 | Amra | Mangifera indica | - | - | - | - | + | + |
| 2 | Amrataka | Spondias mangifera | - | - | - | - | + | - |
| 3 | Ankola | Alangium salvifolium | - | - | - | - | + | - |
| 4 | Apamarga | Achyranthes aspera | - | - | - | + | + | + |
| 5 | Arimeda | Acacia farnesiana | - | - | - | + | + | - |
| 6 | Arjuna | Terminalia arjuna | - | - | - | - | + | - |
| 7 | Arka | Calotropis gigantea | + | - | + | + | + | + |
| 8 | Asana | Pterocarpus marsupium | + | - | - | + | + | + |
| 9 | Ashoka | Saraca indica | - | - | - | - | + | - |
| 10 | Badari | Ziziphus mauritiana | - | - | - | - | + | - |
| 11 | Bilva | Aegle marmelos | - | - | - | - | - | + |
| 12 | Champaka | Michelia champaka | - | - | - | - | + | + |
| 13 | Dadima | Punicagranatum | - | - | - | - | + | + |
| 14 | Daruni | Cedrus deodara | - | - | - | - | + | - |
| 15 | Hayamaraka | Thevetia peruviana | - | - | - | - | + | - |
| 16 | Jamaba | Syzygium cumini | - | - | - | - | + | - |
| 17 | Jati | Jasminum officinale L. | - | - | - | - | + | + |
| 18 | Kadamba | Anthocephalus cadamba | - | - | - | - | + | + |
| 19 | Kakubha | Baliospermum montanum | + | - | + | - | - | + |
| 20 | Karanja | Derris indica | + | + | + | + | + | + |
| 21 | Karavira | Nerium indicum | + | - | - | + | - | - |
| 22 | Kutaja | Cleistanthus collinus | - | - | - | - | - | + |
| 23 | Khadira | Acacia catechu | - | + | + | + | + | + |
| 24 | Madhuka | Madhuca longifolia | - | + | - | - | + | + |
| 25 | Mandara | Erythrina indica | - | - | - | - | - | + |
| 26 | Malati | Cissampelos pareira L. | + | - | - | + | + | - |
| 27 | Nibma | Azadirachta indica | - | + | - | - | + | + |
| 28 | Nyagrodha | Ficus bengalensis | - | - | + | - | + | - |
| 29 | Palasa | Butea monosperma | - | - | - | - | + | - |
| 30 | Plaksha | Ficus lacor | - | - | - | - | + | + |
| 31 | Sarala | Pinus longifolia | - | - | - | - | + | - |
| 32 | Sarja | Shorea robusta | - | - | - | + | + | - |
| 33 | Shirisha | Albizia lebbek | - | - | - | - | + | + |

where the list is mentioned. In *Caraka Samhita* only 6 plants are mentioned [3], whereas the list is 5 in *Sushruta Samhita* [4]. The amount of *dantakasthas* is in *Asthanga Hridaya* of *Vagbhata* and *Asthanga Sangraha* of *Vridha Vagbhata* 5 and 10 respectively [5,6]. In *Bhava Prakasha*, written by *Bhavamishra*, the amount is 23 in number [7].

In *Ananda Kanda* of *Manthana Bhairava*, which purely dedicated to *Rasashastra*, mentioned 33 *kasthas* [8], which is a huge amount than previous texts. Totally, 50 unique plants are come into picture by consolidating the collected plant data. Regarding *kasthas*, periodical distinctions are also shown in below by arranging the referred to texts chronologically Table 1.

| | | | | | | | | |
|----|-------------------------|------------------------------------|---|---|---|---|---|---|
| 34 | <i>Shriparni</i> | <i>Sesbaniaaegyptiaca</i> | - | - | - | - | + | - |
| 35 | <i>Tagara</i> | <i>Ervatamiacoronaria</i> | - | - | - | - | - | + |
| 36 | <i>Tejovati</i> | <i>Cardiospermumhalicacabum L.</i> | - | + | - | - | - | + |
| 37 | <i>Udumbura</i> | <i>Ficusracemose</i> | - | - | - | - | + | + |
| 38 | <i>Vata</i> | <i>Ficusbengalensis L.</i> | - | - | - | + | - | + |
| 39 | <i>Vasanti</i> | <i>Horaparkiejora</i> | - | - | - | - | + | - |
| 40 | <i>Vidari</i> | <i>Adeniahondala</i> | - | - | - | - | - | + |
| 41 | <i>Vrishama (vacha)</i> | <i>Acoruscalamus</i> | - | - | - | - | + | - |
| 42 | <i>Vyaghri</i> | <i>Solanumsurattense</i> | - | - | - | - | + | - |

Discussion

In Ideal lifestyle (*dinacharya*) of Ayurveda, tooth cleansing is one of the important activities to prevent diseases. Though the list of chewing sticks is so limited, one can enlarge the list, based on the prescribed tastes, such as *kashaya* (astringent), *katu* (pungent) and *tikta* (bitter). In Susrutha Samhita, *madhura* (sweet) is also added [9] to the list of prescribed tastes. In Ayurveda, majorly, stem part of a plant is used for tooth cleansing and size of the stem should be 12 inches. For mouthwash, some selected leaves and medicated oils are prescribed. In given data, *karanja* (*derris indica*) is the one and only plant, which is presented in all stated texts, whereas, *arka* (*calotropis gigantean*) is presented in five texts except *Sushruta Samhita*. *Khadira* (*Acacia catechu*) has also appeared in five texts except for *Caraka Samhita*. *Asana* (*Pterocarpus marsupium*) is appeared in four places except for *Sushruta Samhita* and *AstangaHrudaya*, whereas, *Vyaghri* (*Solanumsurattense*) is presented only in *Ananda Kanda*.

The list of *dantakastha* plants is more in *Ananda Kanda* and less in *Sushruta Samhita*. The list is 80 percent similar to *Ananda Kanda* and *Bhava Prakasha*. Some of the plants are used not only for tooth cleansing but also for memory enhancement and sweet voice. This kind of usage is appeared in '*YajnavalkyaShiksha*' which is a non-ayurvedic text. In this text, *amra*, *palasa*, *bilva*, *apamarga*, *shirisha*, *khadira*, *kadamba*, *karavira* and *karanja* plants are prescribed for tooth cleansing. Similarly, described a usage of *triphala* (*myrobalan plums*) along with salt is prescribed for tooth cleansing, enhancing memory and getting the sweet voice [10]. The recent study is also suggesting *triphala* (*myrobalan plums*) is one of the active ingredients for tooth cleansing [11] whereas, *nimba* (*Azadirachta indica*) is the common active ingredient in all contemporary products. According to the available information, in the given list, the effectiveness of *nimba*, *shirisha*, *amra*, *pippali*, and *karanja* is already proved. The extract of these plants are being used in contemporary formulations. For other plants, scientific verification is very much essential.

Conclusion

An attempt has been made to picture out the whole *dantakastha* (chewing sticks) list, described in Ayurveda. Consolidated the

collected plant data and shown distinctions chronologically. Similarly, a method has been introduced to find out other similar plants in Ayurvedic meteriamedica. This will help to improve plant list in this regard. Some relevant data has been found in non-ayurvedic literature and discussed thoroughly. In Ayurveda, not only prescribed *dantakasthas* but also described their medicinal benefits. But, the present study is restricted to focus only on listing out the plants and correlating with ingredients of contemporary products. Through this kind of study, one can get a clear cut idea related to *dandakasthas* at one place. Similarly, it may help to revalidate the use of traditional therapeutic strategies in the dental field. By documenting this kind of traditional information at one place, we can restrict the commercialization regarding natural dental products. This work can be continued further by examining the medicinal benefits of given plant list, which will help to prove the effectiveness and safety of natural dental products.

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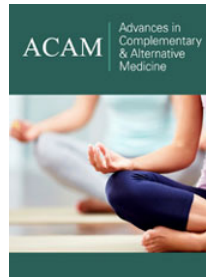
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