

Tools and Methods Developed to Maintain Oral Hygiene in Ancient India

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Abstract: Hygiene is a set of practices performed for the promotion and preservation of health or a cleanliness that prompts health and well being, especially of a personal nature. Oral hygiene is essential for general health maintenance. This paper proves that Indians had adopted methods and developed tools to maintain oral hygiene during ancient days. **Methodology:** To write this research paper information is borrowed from primary sources of Ayurveda, Smṛtis - Purāṇas and from Ayurvedic and modern books written by scholars, and also from tertiary sources from encyclopedias and dictionaries. **Objective:** To prove that ancient Indians had developed healthy hygienic methods and tools to maintain oral hygiene.

Keywords: Oral hygiene, Tools, Methods, ancient India

1. Introduction

The mouth is the area of the body, which is most prone to collecting harmful bacteria and generating infections. Mouth mechanically breaks food into pieces. This process leaves food particles (food debris) that stick to the surface of our gums, teeth and also in between the teeth and gums. These food particles, if not removed from there, become a source for bacterial growth. The decaying process that takes place on the surface of the teeth eventually produces a build-up called plaque (a sticky deposit on which bacteria grow), which is further converted into tartar (a hard, yellowish, calcified deposit on the teeth, consisting of organic secretions and food particles). The result is tooth decay, unpleasant smelling breath (halitosis) or stinking odour. Mouth is at the optimum temperature (37°C) and is often rich in food particles; both these factors support bacterial growth. Thus oral cavity is full of bacteria and is a good environment for bacterial growth. Teeth and gum infections is the result of poor oral hygiene. To avoid these oral ailments ancient Indians had developed certain methods and tools, which were beneficial to maintain oral hygiene. Modern science of hygiene started giving importance to such basic hygienic methods in last centuries, but Indians have given importance to it, at least two millenniums back. Those hygienic methods and tools adopted by Indians, especially during Ayurvedic and Smṛtic-Purāṇic period, are presented here.

Subject

Hygiene is a set of practices performed for the promotion and preservation of health or a cleanliness that prompts health and well being, especially of a personal nature.¹ In general, hygiene mostly means practices that prevent spread of disease-causing organisms, which involves such practices that are needed to keep your body hygienically clean and healthy. Tools and methods adopted to maintain oral hygiene in ancient India, especially during Smṛtic -Purāṇic and Ayurvedic period are presented here.

¹ Stedman's medical dictionary, p 845
Webster's comprehensive dictionary, p 619

Dental cleaning

It is essential that teeth should be thoroughly and regularly cleaned to maintain oral hygiene.² We find many references stating importance of dental cleaning in ancient texts. *Manu Smṛti* guides that dental cleaning must be done in early morning.³ *Skanda Purāṇa* too has stated that dental cleaning should be done in early morning before bathing.⁴ *Agni Purāṇa* has considered 'dental cleaning' as a daily duty not only for a common man, but also for the king.⁵ Even in *Kāmasūtra*, a renowned text written by *Vātsyāyana*, dental cleaning is advised as a daily duty after waking up.⁶ These references indicate that importance of dental cleaning in daily schedule was well established in ancient India.

Prohibition of finger to be used as a toothbrush

Using a finger as a tool to clean teeth and gums was prohibited in India, so much so that it was considered a sin equivalent to eating cow flesh.⁷ This advice must have been given to avoid direct contact of external skin with internal skin. External skin comes in direct contact of environment. Hence there are more chances of contamination. Moreover nails contain impurities, which may be swallowed while massaging teeth. Washing activities during defecation and child bottom-washing are additional opportunities for the contamination of the fingers that facilitate the transmission of infections. This is the reason one should avoid using finger to rub teeth and gums. Hence this advice of not using finger for cleaning gums and teeth indicates that during Smṛtic period Indians had well understood health hazards which may arise by it. It is also a proof that they were definitely using some tool for dental cleaning other than finger.

² Elemental Hygiene and Public Health, p 253

³मैत्रप्रसाधनस्नानदन्तधावनमञ्जनम्।पूर्वाह्नैवकुर्वीत्। *Manu Smṛiti* 4.152

⁴प्रातःस्नानंततःकुर्याद्दन्तधावनपूर्वकम्॥ *Skanda Purāṇa* 2.4.11.4,5

प्रातःस्नात्वात्रयोदश्यांकृत्वावैदंतधावनम्। *Skanda Purāṇa* 2.4.9.18

⁵स्नानंकुर्यान्नृपःपश्चाद्दन्तधावनपूर्वकम्। कृत्वासन्ध्या....। प्रात्यह्निकराजकर्म, *Agni Purāṇa* 235.3,4

⁶*Kāmasūtra* by *Srī Vātsyāyana Muni*, 1.4.18

⁷अंगुल्यादन्तकाष्ठं.....तुल्यगोमांसभक्षणम्॥ *Atrī Smṛiti* 1.313

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Various names of tool used for dental cleaning

In ancient texts many words are used for a tool which was used for dental cleaning like a modern toothbrush. *Aṣṭāṅga Saṅgraha* and *Suśruta Samhitā* have used the word *dantapavana*⁸; *Hārīt Samhitā* and *Atrī Smṛti* have used *dantakāṣṭha*⁹, whereas *Manu Smṛti*, *Atrī Smṛti* and *Gautama Smṛti* have also used *dantadhāvana*¹⁰. Reference of *dantadhāvana* is also found in *Pāṇini's Aṣṭādhyāyī*¹¹.

Tooth cleaning: tool Selection and Method

The ancient Hindus used twigs of small branches of trees as a tooth and gums cleaning tool. *Suśruta* has illustrated this method in these words, "A man after leaving his bed should brush his teeth. For this purpose a fresh twig (of selected plant or a tree) twelve fingers in length, having thickness equal to little finger, straight, without any knot or break in the surface, grown in healthy land should be used, also considering the season, *doṣa*, *rasa*, *vīrya*¹². Further it is advised that such tender twig should be chewed and used for the cleansing the teeth and gums. *Vāgbhata* suggests that one should chew the twig before using it as a tooth brush and then use it for gentle massage, without hurting gums.¹³ Each teeth should be rubbed gently with a soft twig and also by teeth cleansing powder without injuring the gums."¹⁴ According to modern book of hygiene teeth should be cleaned in the morning after waking up and a second time before going to bed.¹⁵, *Caraka* too has advised to use the tooth brush twice a day. *Suśruta* says that dental cleaning should be done till teeth are properly clean¹⁶. All these references are indicative that importance of dental cleaning was well understood during *Suśruta's* period i.e. 1000 to 1500 BC.¹⁷

Herbs to be used and avoided for dental cleaning

The twig should have either a bitter, astringent or sweet taste.¹⁸ In his text *Aṣṭāṅga Hr̥daya*; *Vāgbhata* has given guidance of using a twig of such trees which have an astringent, pungent or bitter taste.¹⁹ He has given names of the trees which should be used²⁰ and also of which should

not be used for oral hygiene.²¹ These references are indicative that during the period of *Aṣṭāṅga Saṅgraha* i.e. 550 AD²²; study of herbs useful and not useful in oral hygiene was well established.

Tongue Cleaning tool: *Jivhānirlekhani* (tongue cleaner)

Cleanliness of tongue has important role in maintaining oral hygiene. Tongue cleaner is the tool developed for cleaning the tongue, which was used in ancient India. We find description of a tongue cleaner in *Suśruta Samhitā*. *Suśruta* says "to scrape the tongue, a golden, or silver, or wooden scraper is to be used. It should be ten *āṅguli* long and must be soft and polished"²³. *Caraka* too has advised to use tongue-scraper, which is non sharp and soft.²⁴ *Bhāvamiśra* has suggested to use soft twig, to be used as a tongue cleaner to clean tongue. This tongue cleaner should be used for scraping the unwanted deposits on the tongue, which will remove heaviness of tongue and foul smell of mouth.²⁵ *Suśruta's* advice of three types of tongue cleaner indicates that tongue cleaner was used by three economical tiers of community; golden for rich people, silver for middle class people and wooden for poor people. This is illustrative enough that tongue cleaner was routinely used in ancient India during *Suśruta's* period.

***Gaṇḍūṣa* and its benefits**

To maintain oral hygiene *Gaṇḍūṣa* should be done regularly, as directed by *Caraka*²⁶ and *Vāgbhata*.²⁷ It is a treatment wherein medicated oil is used for gargling. Benefits of doing *Gaṇḍūṣa* are as follows : strengthens joints of the mouth, clears and strengthens the voice, gives a nice rounded shape to the mouth, improves the taste recognizing capacity, gives a relish to the intake of food, prevents occurrence of dryness of mouth and throat, leanness of the neck and cracking of the lips, teeth get a string-hold in the gums and last longer in the mouth, teeth do not ache, teeth do not get sour in contact with sour things and are in a position to grind the hardest type of food.²⁸ Thus *Gaṇḍūṣa* treatment is very

⁸ *Aṣṭāṅga Hr̥daya* 1.2.2

⁹ *Hārīt Samhitā* 4.6, *Atrī Smṛti* 1.31

¹⁰ *Manu Smṛti* 4.152, *Atrī Smṛti* 390, *Gautama Smṛti* 9.3

¹¹ *Aṣṭādhyāyī of Pāṇini*, 6.2.150

¹² तत्रादौ दंतपवनं द्वादशाङ्गुलमायतम् अवेश्यन्तु च दोषं च रसं वीर्यं च

योजयेत् ॥ *Suśruta Samhitā* 4.24.4,5

Aṣṭāṅga Saṅgraha 1.3.15

¹³ प्रातर्भुक्त्वा च मृद्वग्रं कपायकटुतिक्तकं भक्षयेद्दन्तपवनं दन्तमांसान्यबाधयन् ॥

Aṣṭāṅga Hr̥daya 1.2.2,3

¹⁴ एकैकं घर्षयेद्दन्तं मृदुना कूर्चकेन च ॥....दंतमांसान्यबाधयन् ॥ *Suśruta*

Samhitā 4.24.8,9

¹⁵ *Elemental Hygiene and Public Health*, p253

¹⁶ दन्तधावनं यावत् शुद्धिरिति ॥ *Suśruta Samhitā* 4.22.42

¹⁷ *Ayurvedakā Vaijñānika Itihāsa* (Scientific history of Ayurveda), p 60

¹⁸ निम्बश्च तिक्तके श्रेष्ठः कपाये खदिरस्तथा। मधूको मधुरे श्रेष्ठः करजः कटुके

तथा ॥ *Suśruta Samhitā* 4.24.6,7

¹⁹ प्रातर्भुक्त्वा च मृद्वग्रं कपायकटुतिक्तकं भक्षयेद्दन्तपवनं दन्तमांसान्यबाधयन् ॥

Aṣṭāṅga Hr̥daya 1.2.2

²⁰ वटासनार्कखदिरकरंजकरवीरजम। सर्जीरिमेदापार्गमालईकुकुभोद्भवम।

कपायतिक्तकटुकंमूलमन्यदपीदृशम। *Aṣṭāṅga Saṅgraha* 1.313

²¹ नैवक्षेष्मातकारिष्टविभितध्वन्वजान। बिल्वबबुलनिर्गुण्डीशिमुतिल्वकतिन्दु

कान ॥

कोविदारशमीपीलुपिप्पलेङ्गुदुग्गुलून। पारिभद्रकमन्लीकामोचक्योशाल्मली

शनम् ॥ *Aṣṭāṅga Saṅgraha* 1.2

²² *Ayurvedakā Vaijñānika Itihāsa* (Scientific history of Ayurveda), p

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²³ जिह्वानिलेखनं रौप्यं सौवर्णं वार्क्षमेव च। तन्मलापहरं शस्तं मृदुक्ष्णं दशाङ्गुलम्

॥ *Suśruta Samhitā* 4.24

²⁴ सुवर्णरूप्यताम्राणि त्रपुरीति मयानि च। जिह्वानिलेखनानि स्युरतीक्ष्णान्यनृजृनि च

॥

जिह्वामूलगतं यच्च मलमुच्छ्र

वासरोधि च। सौगन्ध्यं भजते तेन तस्माज्जिह्वा विनिलिखेत् ॥ *Caraka Samhitā*

1.5???

²⁵ जिह्वानिलेखनं हैमं राजतं ताम्रं जंत्रथा। पाटितं मृदुतत्काष्ठे मृदुपत्रमयं तथा।

तत्काष्ठं दन्तशोधनयोग्यं काष्ठम्। दशाङ्गुलं मृदुस्निग्धं तेन जिह्वानिलिखेत्

मुखम्। तज्जिह्वामलवैरस्य दुर्गन्धजडता हरम् ॥ *Bhāva Prakāśa* 1.4.40,41

²⁶ C.S.1.5.78-80

²⁷ अणुतैलं ततो नस्यं ततो गण्डूषधारणम् ॥ *Aṣṭāṅga Saṅgraha* 1.2.27

²⁸ मुखवैरस्य दौर्गन्ध्यशोफ्रजाज्वहरं सुखम्। दन्तदारुकरं रुच्यं

स्नेहगण्डूषधारणम् ॥ *Suśruta Samhitā* 4.24.14

beneficial for oral hygiene. Based on these references we can say that *Gaṇḍūṣa*, a method to maintain oral hygiene was developed in India during the period of *Caraka Samhitā* i.e. 1000 B.C.²⁹

Rinsing: a method of mouth cleaning

Rinsing after eating food is an elementary hygienic method essential to clean the mouth, which has been followed in India from the period of *Suśruta*. *Suśruta* recommends that after eating one should repeatedly rinse the mouth.³⁰ After food consumption, mouth should be cleaned with water also advises Manu.³¹ Same advice is given by *Bhāvamiśra* too. In his text *Bhāvaprakāśa* written in 1600 AD³², he advises that after eating food one should rinse mouth properly and remove food particles trapped in between the teeth.³³, which is beneficial to remove mucous, stickiness in the mouth, clears throat and controls thirst.³⁴ *Suśruta* too has said that gargling is effective to remove tartar on the teeth and coating of the tongue.³⁵

Tool to remove food particles in mouth - Tooth Pick or floss

The teeth should be well cleansed after every meal. Food particles are liable to remain lodged between them and so they should be removed by a tooth-pick or by a piece of string passed between two teeth³⁶, is the advice given by modern book of hygiene. This method is routinely followed by modern society in 21st century. It would be surprising to know that this method was followed during *Suśruta*'s period in India i.e. 1500 to 1000 BC.

*Suśruta*³⁷ has guided to use grass as a tool to remove particles of food lodged between the teeth. He warns that this method if not followed, food particles will decompose and the mouth would be smelling badly. It seems that dry grass may be used as a tooth pick, whereas tender grass may be used for flossing. *Bhāvamiśra* gives similar directions but explains method by advising that if any particles of food cannot be easily extracted by the tooth-pick, one must not use any force to extract them,³⁸ this advice is given to avoid injury to gums.

- ओष्ठस्फुटनपारुष्यमुखशोषद्विजामयाः।।न स्युः स्वरोपघाताश्च
स्नेहगण्डूषधारणात्। *Aṣṭāṅga Saṅgraha* 1.3.29,30

²⁹ *Ayurvedakā Vaijñānika Itihāsa* (Scientific history of Ayurveda), p100

³⁰ प्रक्षालयेद्विरास्यं भुञ्जानस्य मुहुर्मुहुः।³⁰ *Suśruta Samhitā* 1.46.52

³¹ कृत्वा मूत्रं पुरीषं वा खान्याचान्त उपस्पृशेत् / वेदमध्येप्यमाणश्च अन्नमश्रंश्च सर्वदा // *Manu Smṛiti* 5.138

³² *Ayurvedakā Vaijñānika Itihāsa* (Scientific history of Ayurveda), p 206

³³ एवं भुक्त्वा ममाचामेदृक्षग्रहणं पूर्वकम्। भोजने दन्तलग्नानि निर्हृत्याचमनं चरेत्॥ *Bhāva Prakāśa* 1.1.167

³⁴ गण्डुषमपि कुर्वीत शितेन पयसा मुहुः। कफतृष्णामलहरं मुखान्तः शुद्धिकारकम्॥ *Bhāva Prakāśa* 1.1.42

³⁵ जिह्वादन्तसमुत्थस्यहरणार्थमलस्यच।

.....उष्णोवायदिवाशीतःकवलग्रहइष्यते॥ *Suśruta Samhitā* 4.1.127

³⁶ General hygiene page 253

³⁷ दन्तान्तरगतं चान्नं शोधनेनाहरेच्छनैः। कुर्यादनाहृतं तद्धिदं मुखस्यानिष्टगन्धतां॥ *Suśruta Samhitā* 4.24.4.

³⁸ दन्तान्तरगतं चान्नं शोधनेनाहरेत् शनैः। कुर्यादनिर्हृतं तद्धिदं मुखस्यानिष्ट गन्धताम्॥

2. Interpretation and Conclusion

- Tools developed in ancient India, were practically capable to fulfill motto of maintaining oral hygiene.
- Methods adopted in ancient India, were efficient enough to fulfill motto of oral hygiene and health maintenance.
- Considering *Suśruta Samhitā*'s timeline i.e. 1500 to 1000 B.C., we can state that tool to clean teeth and gums to be used like a tooth brush, tool to clean tongue viz tongue cleaner and tool to remove lodged food particles viz tooth pick was developed in ancient India.
- Though there is some difference, tools and methods used in ancient India for oral hygiene are equivalent to modern tools and methods.
- When modern science of oral hygiene was in a primitive stage, Indians had well developed their skills of Hygiene.

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दन्तलग्ननिहार्यं लेपं मन्येत दन्तवत्। न तत्र बहुशः कुर्याद्यत्नं निर्हरणं प्रति॥ *Bhāva Prakāśa* 1.1.168-169