



## ROLE OF *TAMBULA SEVANA* IN THE PREVENTION OF ORAL DISORDERS

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### ABSTRACT

Chewing the mixture of *areca nut*, lime paste and betel leaf (paan) is a tradition, custom or ritual which dates back thousands of years from the Eastern hemisphere to the Western hemisphere. Ayurvedic classics mentioned *tambula sevana* in the context of *Dinacharya* for the maintenance of perfect oral hygiene, for good taste perception and as a preventive modality to avoid diseases of the oral cavity. In the present situation, many people are habituated to paan chewing along with harmful substances like tobacco, which has given rise to several problems like bleeding gums, bad odour of mouth and breath, mouth ulcers, adverse dental conditions and dreadful disorders like cancer of the oral cavity. *Tambula* has positive effects on health if taken in an appropriate way as explained in our classics. Different concepts related to *tambula sevana* are relevant even for the current lifestyle, where primary prevention comes into action. The present paper highlights the facts and myths related to *tambula sevana* and its role in the prevention of oral disorders.

**Keywords:** *Tambula dravya, sevana krama*, oral hygiene, *mukharoga*.

**INTRODUCTION:** Oral health is the window of overall health. A healthy mouth can help to ward off medical disorders. Ayurveda focuses on the maintenance of oral hygiene by the practice of daily regimens like *danta dhavana* and *jihwa nirlekhana*. Ayurvedic classics mentioned *tambulasevana* in the context of *Dinacharya*<sup>1</sup> for the maintenance of perfect oral hygiene, for good taste perception and as a preventive modality to avoid diseases of the oral cavity. Chewing the mixture of areca nut, lime paste and betel leaf (paan) is a tradition, custom or ritual which dates back thousands of years from the Eastern hemisphere to the Western hemisphere. In the present situation, many people are habituated to paan chewing along with harmful substances like tobacco, which has given rise to several problems like bleeding gums, bad odour of mouth and breath, mouth ulcers, adverse dental conditions and dreadful disorders like

cancer of the oral cavity. A study report reveals that oral and pharyngeal cancers are the sixth most common cancer in the world<sup>2</sup>. Oral cancer is sometimes preceded by clinically visible lesions which are noncancerous initially, therefore been termed as precancerous. The study reinforces the association of tobacco and areca nut chewing will increase the risk of malignant disorders of oral cavity.

*Tambula* has positive effects on health if taken in an appropriate way as explained in our classics. Different concepts related to *tambula sevana* are relevant even for the current lifestyle, where primary prevention comes into action. Not only it maintains the oral health by its antimicrobial action, but also *tambula sevana* improves the quality of systemic health by enhancing the metabolism.

***Tambula sevana:*** *Tambula sevana* is a *Dinacharya* procedure preceded by *Nasya*, *Gandusha* and *Dhoomapana*. *Tambula*

*sevana* is indicated after sleep, bath, and intake of food, vomiting and coitus. On special occasions like *rajasabha* and *yuddha tambula sevana* is ideal<sup>3</sup>.

Therapeutic importance of *tambula* comes from its synergistic action. Apart from *tambulapatra* (*Piper betel*) other drugs used along with it are: *Pooga phala* (*Areca catechu*), *Choorna* (Calcium carbonate), *Khadira* (*Acacia catechu*), *Jatiphala* (*Myristica fragrans*), *Karpura* (*Cinnamomum camphora*), *Lavanga* (*Syzygium aromaticum*), *Ela* (*Elettaria cardamomum*), *Kankola* (*Piper cubeba*)<sup>4</sup>. *Tambula* has *katu kashaya rasa*, *teekshna guna*, *kaphahara*, *krimighna* properties. It eliminates foul odours from the mouth, decreases excessive salivation and thus cleanses the oral cavity. Apart from that it has a tonic effect on facial muscles as well. It prevents tooth decay and strengthens jaw and mandible.

*Pooga* has *Kashaya rasa*, *guru guna* and does *mukha-mala shamana*, *kantha*

*shodhana*, *aama-paachana* and *rechana*. It is having *kaphavatahara* property and prevents *mukharoga*, *kantharoga* and *udararoga*. *Choorna* has *katu rasa*, *ushna* and *laghu guna*, *vatakaphahara* effect. It is *krimighna*, *kledahara* and does *mukhashodhana*. *Khadira* has *Kashaya rasa*, *laghu guna*, it is *kaphapittghna*, *ropana* and does *mukha shoshana*.

Other ingredients such as *Jatiphala*, *Ela*, *Lavanga* and *Karpura* are the *sugandha dravyas* which remove bad odour of the mouth. They increase taste perception and cause *agni deepana* and *vatanulomana*. They have *katu*, *ushna* properties which check microbial growth, thereby maintaining the oral hygiene.

**Nutritive value:** Betel leaf contains a substantial amount of vitamins and minerals. It also contains the enzymes like diastase and catalase. It is rich in the composition of essential amino acids. The nutritive details are given in the table below<sup>5</sup>:

| Constituents   | Composition      |
|----------------|------------------|
| Water          | 85-90%           |
| Protein        | 3-3.5%           |
| Fat            | 0.4-1.0%         |
| Minerals       | 2.3-3.3%         |
| Fibre          | 2.3%             |
| Carbohydrate   | 0.5-6.10%        |
| Energy         | 44kCal/100g      |
| Nicotinic acid | 0.63-0.89mg/100g |
| Vitamin A      | 1.9-2.9mg/100g   |
| Potassium      | 1.1-4.6%         |
| Calcium        | 0.2-0.5%         |
| Iron           | 0.005-0.007%     |
| Nitrogen       | 2.0-7.0%         |

**Sevana vidhi:** *Ayurveda Shastra* describes *Tambula sevana karma* in detail. One should consume *Tambula* after washing the mouth with water<sup>6</sup>. Two betel leaves, 1 piece of areca nut with small amount of

lime paste and *Khadira* is ideal for consumption<sup>7</sup>. The tip of the leaf, its base and midrib should not be eaten. If the tip is consumed it is considered as a sin, if the base is taken it leads to disease

manifestation and the midrib if eaten it reduces the lifespan of the person<sup>8</sup>. The *tambula* should be chewed slowly, silently and thoroughly until inner surface of the mouth gets red colour by the juice of the mixture<sup>9</sup>. This juice is to be spitted. The first formed betel quid is having properties similar as that of poison and the one formed for the second time can vitiate *Doshas*. Hence it should not be consumed. Third time onwards the quid will have medicinal properties which are beneficiary to health. This mixture is ideal for consumption<sup>10</sup>. It is recommended that morning *Pooga* should be taken in larger proportion, afternoon *Khadira* and at night *Choorna*, along with *Tambula patra*<sup>11</sup>. *Pooga* is *Tridosahara*, *Khadira* is *Kaphapittahara* and *Choorna* is *Kaphahara*. Thus, consuming their combination in varied proportion is helpful in balancing the *Doshas*.

**Sevana niyama:** While selecting betel leaf, one should choose fully ripened leaf well preserved in water, after a certain period of its plucking which is considered the best<sup>12</sup>. *Shubhra parna* is the ideal one for *tambula bhakshana*. It improves appetite, complexion and pacifies *tridosha*. One should avoid tip, base, torn, bileaved, dried, rotten leaves. Leaf stalk of the betel leaf produces laxity and weakness; its juice vitiates *Rakta*. If rotten leaves are consumed it produces *twakdosha* and *karshya roga*<sup>13</sup>.

The mixture of the *tambula* should be taken in prescribed quantity only. A person who eats *pooga phala* or *choorna* without the betel leaf, loses his intellect, becomes poor and fails to remember God at the end<sup>14</sup>. If betel leaf is taken in appropriate method, it improves the colour of the skin and lips. If *Pooga* is more than leaf, it produces *Rookshata* and *mootrakrichra*. If

*Khadira* is more, it causes *shosha*. If *Choorna* is taken in excess amount, it aggravates *pitta* and produces halitosis<sup>15</sup>.

It is advised to avoid *tambula sevana* at least for one hour after consuming *Ksheera*, *Kapittha*, *Panasa*, *Aamra*, *Kadaliphala*, *Ikshu*, *Madya*, *Yusha*, *Kashaya rasa*, *Ghritapana*, *Madhu* and *Narikela*<sup>16</sup>. If *tambula* is eaten after having these articles it will have poisonous effect on the system.

**Tambula nishedha:** *Tambula sevana* is contraindicated in certain conditions like injury, *Pitta vikara*, *Netraroga*, intoxicated by poison, *Mada*, *Murcha* and *Shosha*<sup>17</sup>. As *tambula* is having *Ushna* and *Teekshna* qualities it may aggravate *pitta* and *raktadosha* in those who are already prone to such diseases. As it is *kaphahara* it is not advised in *dhatukshaya* conditions as well.

*Tambula sevana* is not advised for widows, sages, *yogis*, *brahmachari* and for those who have undertaken penance. As *tambula* has *rajoguna*, it is to be avoided by those people who are indulged in *satvika karma*.

**Tambula ati-sevana:** *Tambula* should not be eaten too much. It shouldn't be taken after purgation or when a person is hungry. If one consumes it in larger quantity, body is emaciated, vision is affected, there will be *bala kshaya* of hair, teeth, digestive capacity, hearing capacity and complexion will be reduced. He may suffer from wasting disease, *vatavyadhi*, *pitta* and *rakta vikara*<sup>18</sup>.

**Controversies related with Tambula sevana:** The habit of chewing pan masala (*gutkha*) is hazardous to health, as it contains tobacco, flavouring materials and perfumed chemicals. It may consequently lead to oral cancer. Several carcinogens like nitrosornicotine (NNN) and

4(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK) are formed during processing of tobacco. Studies have proved that oral swabbing of a low concentration of a mixture of NNN plus NNK in water induces oral tumours in rats<sup>19</sup>. With long run use of tobacco, there is a possibility of developing tachycardia and hypertension because of its nicotine content. Apart from physical complications tobacco has negative impacts on mental health as it is addictive. In Ayurveda *Tamraparna*<sup>20</sup> (*Nicotiana tabacum*) is mentioned in later texts, where it is used externally in the treatment of joint pain, dental problems, snake poisoning etc. When used judiciously with all necessary precautions it can be therapeutically beneficial. But its regular and increased use is contraindicated.

Nowadays people are accustomed to sweet pan chewing followed by heavy meal. Apart from betel leaf and areca, the pan contains sweeteners like sugar syrup, gulkand, cherry etc. Sweet pan is not good for oral health as its regular consumption causes rotting of teeth and degradation of gums. As per Ayurvedic understanding, sweet pan is *kapha vardhaka* and *mukha malakaraka*. It is having *guru* and *madhura* qualities which hamper digestion. It is harmful to consume sweet pan in certain life style induced disorders like diabetes mellitus and obesity.

**Research reports:** A research report says that the aqueous extract of betel leaves inhibits different acid-producing pathogens like *Streptococcus mutans*, *Lactobacilli*, *Porphyromonas gingivalis* and *Treponema denticola*. Experimental findings revealed that the ethanol extract of betel leaves potentially inhibit the growth of food borne pathogens like *Vibrio cholera*, *E. coli* and *Shigella dysenteriae-1*. The leaf

extracts have also proven for their bactericidal action against urinary tract pathogenic bacteria such as *C. koseri*, *Klebsiella pneumoniae* etc. The essential oil contained in the leaves possesses antibacterial, antiprotozoan and antifungal properties<sup>21</sup>.

**DISCUSSION:** Excess use of betel leaves along with other ingredients like tobacco and the ones added for increasing palatability is harmful. Even though the leaves contain a good amount of Safrole, a carcinogen, it is quickly metabolized in the human body into hydroxychavicol and eugenol, which are excreted along with urine. The betel leaves are also reported to possess antioxidant activity, antimutagenic and anti-cancerous properties. It is cheap, easily available, good appetizer, digestive stimulant and aphrodisiac. Along with local action of maintaining oral hygiene, it is beneficial even systemically by its unique properties.

**CONCLUSION:** *Tambula sevana* which is a traditional practice is very much safe and good for health when taken as per the guidelines mentioned in Ayurvedic classics. Thus it is a scientifically validated procedure which has been advised as a *Dinacharya* regimen by our *Acharyas*. It is a preventive modality for maintaining oral health. Its regular and judicious use is having a prime role in the control of oral disorders.

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