ROLE OF TAMBUŁA SEVANA IN THE PREVENTION OF ORAL DISORDERS

1Bhat Sowmya *, 2Yogeesh Acharya
1PG Scholar, Department of Swasthavritta, S.D.M.C.A. Udupi
2Asso. Professor, Department of Swasthavritta, S.D.M.C.A. Udupi

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 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. 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. 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), Jatipaha (Myristica fragrans), Karpura (Cinnamomum camphora), Lavanga (Syzygium aromaticum), Kankola (Piper cubeba). 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 Jatipaha, Ela, Lavanga and Karpura are the sugandha dravyas which remove bad odour of the mouth. They increase taste perception and cause agni deepana and vathamulomana. 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:

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

Sevana vidхи: Ayurveda Shastra describes Tambula sevana karma in detail. One should consume Tambula after washing the mouth with water. Two betel leaves, 1 piece of areca nut with small amount of lime paste and Khadira is ideal for consumption. 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. The 
tambula should be chewed slowly, silently and thoroughly until inner surface of the 
mouth gets red colour by the juice of the mixture. 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. It is recommended that morning 
Pooga should be taken in larger proportion, afternoon Khadira and at night 
Choorna, along with Tambula patra. Pooga is Tridoshahara, 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. 
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. 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. 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. 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. 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. 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.

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 nitrosonornicotine (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\textsuperscript{19}. 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\textsuperscript{20} (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 \textit{kapha vardhaka} and \textit{mukha malakaraka}. It is having \textit{guru} and \textit{madhura} qualities which hamper digestion. It is harmful to consume sweet pan in certain life style induced disorders like diabetes mellitus and obesity.

\textbf{Research reports:} A research report says that the aqueous extract of betel leaves inhibits different acid-producing pathogens like \textit{Streptococcus mutans}, \textit{Lactobacilli}, \textit{Porphyromonas gingivalis} and \textit{Treponema denticola}. Experimental findings revealed that the ethanol extract of betel leaves potentially inhibit the growth of food borne pathogens like \textit{Vibrio cholera}, \textit{E. coli} and \textit{Shigella dysenteriae-1}. The leaf extracts have also proven for their bactericidal action against urinary tract pathogenic bacteria such as \textit{C. koseri}, \textit{Klebsiella pneumoniae} etc. The essential oil contained in the leaves possesses antibacterial, antiprotozoan and antifungal properties\textsuperscript{21}.

\textbf{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.

\textbf{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 \textit{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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Corresponding Author: Dr. Sowmya Bhat, PG Scholar, Department of Swasthavritta, S.D.M.C.A. Udupi
Email: sapre.soumya@gmail.com

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