



Review Article

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ROLE OF TAMBULA SEVANA AS A PART OF DINACARYA FOR PRESERVATION AND PROMOTION OF HEALTH: A REVIEW

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ABSTRACT

Consumption of Tambula (betel leaf), which is popularly known as Paan is an ancient custom and also existent at present day. It is consumed by about 15-20 million people in India at present. Being a part of daily life vivid description regarding rule of consumption, its effects on health etc. are available in various ayurveda classics under the heading of dinacarya (healthy lifestyle). Like other modules of dinacarya, tambula sevana also predominantly helps in disease prevention and health maintenance although its curative aspect can't be overlooked. Tambula leaf is rich source of vitamins, minerals, essential oil along with some other phytochemicals e.g. allylpyrocatechol, 4-hydroxycatechol, β -caryophyllene, methyl eugenol, carotenes etc. Consumption of tambula following proper rule mentioned in classics helps to maintain oral health, pacifies tridosha and also indicated in numerous diseases like upajihvik, galaganda, arbuda etc. its improper use causes prameha whereas proper use is beneficial diabetes (which is compared with prameha). Tender leaves are beneficial for heart, besides these tambula poses anti-inflammatory, immune-modulatory, anti-ulcer, hepato-protective etc. effects. Despite numerous benefits some people opine that tambula sevana is deleterious to health but it seems that its injurious effects mainly due to consumption with tobacco product, altered chewing habit, use of improper betel nut either in the form of quality or quantity etc. Exploration of all these according to Ayurveda and also according to modern medical science is the main aim of this article.

Keywords: Tambula, Dinacarya, Prevention, Ayurveda.

INTRODUCTION

The main aim of health is to lead a socially and economically productive life and optimal health is required to achieve this goal. Diseases or ill health is not only obstructing to achieve this goal, even a large number of hospitalized Indians borrow heavily to cover expenses and falls below poverty line, so prevention of diseases and promotion of health is desirable. Lifestyle has huge influence on health as healthy lifestyle helps to achieve earlier mentioned objective whereas unhealthy lifestyle is associated predominantly with non communicable diseases. These disease preventive and health promotive measures are mentioned under the heading of swasthavritta in various ayurveda classics and it includes dinacarya (daily regimen), raticarya (night regimen), ritucarya (seasonal regimen), sadvritta (code of conduct) etc. Although disease prevention and health promotion is the main focus, but the curative aspect of swasthavritta specially dinacharya can't be overlooked. Among the various modules of dinacharya, tambula sevana poses an important role to serve the above mention objectives. Besides the role on maintenance of oral health it has great influence on general health also. Exploration of the uses of tambula scientifically according to ayurveda and modern medical science is the main aim of this article;

For carrying out of this explorative research classical text namely Carakasamhita, Astangahridayasamhita, Astangsamgraha, Yogaratnakara, various research journals are considered as source material. Details of tambula sevana and the probable impacts on the body in maintaining and restoring the health are categorically explained and justified in the preview of principle of ayurveda and up to date modern (allopathic) research.

Tambula (leaves of Piper betel) which is popularly known as Paan, was used by people of India since ancient times. It was used as mouth fresheners, to annihilate kapha dosha and as a symbol of social status and even as gesture of showing respect to elders and gods. The custom of consumption of tambula is still present in India. At present tambula is consumed by about 15-20 million people in India. It is cultivated following the traditional methods in India on about 55,000 hectares of land area with an annual production worth about Rs 9000 million¹.

Procedure of Consumption and Benefits

Two betel leaves along with one betel nut, little quantity lime and khadira (*Acacia catechu*) is ideal for consumption². Alternately the fruit of jati (*Myristica fragrans*), katuka (*Hibiscus abelmoschus*), puga (*Areca catechu*), kankola (*Piper cubeba*), sukshmaela (*Elettariacardamomum*), flower stalk of lavanga (*Syzygium aromaticum*) and karpura (*Cinnamomum camphora*) along with tambula also can be consumed³. The amount of lime, betel nut and khadira varies according to the various part of the day, the amount of betel nut in morning, khadira at midday and lime at night should be added more. Khadira pacifies kapha-pitta and lime pacifies vata-kapha and hence mixture of both pacifies tridosha. The tip, middle part and stalk of the leaf are not suitable for consumption hence should be discarded. Consumption of tip, middle part and stalk causes sin, reduction of lifespan and disease respectively. After chewing, extracted juice should spit out twice at the beginning as it is not suitable for consumption; the initially extracted juice is like poison and causes prameha. After spitting twice, the next extracted juice is beneficial and is similar to nectar⁴.

Tambula is of tikta, katu, kshaya rasa, tikshna, ushna, pacifies vata-kapha⁵, although the property depends upon the age of the leaf. The tender leaf poses madhura and kashaya anurasa, is guru and increases kapha whereas old leaf is not much katu. The leaf which is small in size, thinner, whitish or yellow coloured should be ideal for consumption⁶. Some acarya opined that tender leaf should be consumed, as it is especially beneficial for hridaya⁷. Tambula of Bengal is slightly different; it is excessive katu, ushna and hence aggravates pitta and annihilates kapha, saraka in nature and is helpful for digestion.

Tambula removes bad taste, excessive salivation and foul smell of breath, brings freshness in mouth, removes tiredness, improves lustre and charm of face and alleviates diseases of throat. Consumption of this leaf is wholesome after arising from sleep, eating, bath and emission. In addition to these, tambula is indicated to cure many diseases. It is indicated to pacify laziness, in vidradhi (abscess), upajihvika (swelling on the dorsum of tongue), talu and dantaroga (diseases of palate and tooth), galaganda (swelling of thyroid gland), apaci (lymphadenitis) and arbuda, (tumor) i.e. besides its role over general health it is specially indicated in the diseases of throat and oral cavity⁸. Numerous research has been carried out on Betel Leaf in recent year, where the leaf extract, fractions, and purified compounds are found to play a role in oral hygiene, and to have various properties including anti-diabetic, cardiovascular, anti-inflammatory, immune-modulatory, anti-ulcer, hepato-protective, anti-infective, etc.⁹.

Contraindication

Consumption of tambula is not suitable for the person, suffering from kshataja kasha (cough associated with chest ulcer), raktapitta (blood disorders), abhisandya (conjunctivitis) like eye disorder, visha (intoxication), unconsciousness, madatyaya (alcoholism), mukhasosha (dryness of mouth) and rajayakshma¹⁰.

DISCUSSION

Tambula leaf is rich source of vitamins and mineral including calcium, vitamin C, niacin, thiamine, carotene, and riboflavin. Other leading betel phytochemicals are allylpyrocatechol, 4-hydroxycatechol, β -caryophyllene, methyl eugenol, carotenes, starch, diastases, and an essential oil containing hydroxychavicol¹¹. Tambula removes bad taste, excessive salivation and foul smell of breath, bring freshness in mouth, removes tiredness, improves lustre and charm of face and alleviates diseases of throat. Consumption of this leaf is wholesome after arising from sleep, eating, bath and emission. In addition of these, tambula is indicated to cures many diseases. It is indicated to pacify laziness, in vidradhi, upajihvika, talu and dantaroga, galaganda, apaci and arbuda. It is also indicated in the disease of throat and oral cavity¹². Although combination of lime, khadira and tambula acts as tridosha nashaka but from its indication and contraindication it is clear that it acts mainly as kapha nashaka. Hydroxychavicol is a phenolic compound which is responsible for anti-proliferative activity in prostate cancer and also been shown to impede cell-cycle progression of prostate cancer and oral carcinoma cells¹³. Further it alleviates indomethacin-induced stomach ulceration leading to gastric cancer. Hydroxychavicol also inhibits some factors which enhance tumour growth. Chavibetol, along with hydroxychavicol, acts as a radio protectant, and exhibits substantial immunomodulatory and free radical scavenging activities. Chlorogenic acid is another active ingredient of betel leaves, which helps to eliminate cancerous cells without harming normal cells¹⁴. Further Shetty *et al.* demonstrated the advantage of betel leaf in maintaining salivary ascorbic acid levels in

humans. Salivary ascorbic acid may help prevent carcinogenesis in the oral cavity¹⁵.

The leaf which is small in size, thinner, whitish or yellow coloured is ideal for consumption¹⁶; tender leaf is especially beneficial for hridaya¹⁷. The tip, middle part and stalk of the leaf are not suitable for consumption hence should be discarded. After chewing, extracted juice should spit out twice at the beginning as it is not suitable for consumption; the initially extracted juice is like poison and causes prameha. After spitting twice, the next extracted juice is beneficial and similar to nectar¹⁸. Studies has shown that, high doses hydroxychavicol led to apoptosis induction by increasing ROS levels (reactive oxygen species) whereas lower dose hydroxychavicolis found to be a potent antioxidant¹⁹. Tambula of Bengal is slightly different, it is excessive katu, ushna and hence aggravated pitta and annihilate kapha, is saraka and helpful for digestion. Despite of so many beneficial effects, use of tambula is being criticized by many people nowadays and termed it as injurious to health, but it is mainly due to improper use of betel leaf, like unauthorised uses of tobacco, improper use of betel nut, placing it within mouth cavity instead of chewing etc.

CONCLUSION

Consumption of betel leaf is an ancient custom and also present at present day. Its proper use not only prevents diseases or helps in health maintenance it is also beneficial for so many local or systemic diseases. The adverse effects related to tambula sevana are basically due to unauthorised use of tobacco product, betel nut or altered chewing habit etc. really it can do wonder if used abide the rule as mentioned in ayurveda classics.

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