



A SHORT REVIEW ON PIPER BETEL (BETEL LEAFS)

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ABSTRACT

Betel leaf plays a vital role ever since primeval civilization. Betel leaves have immense medicinal properties it is commonly known as *Piper betel* is a vine which belong to Piperaceae family. Which is distributed in worldwide and this vine has heart shaped leaves known as betel leaves most generally used element for chewing routine and beneficial purpose. The habit of chew up betel leaves is good for health but it do not mix it betel quid it force source of any adverse effects.

Keywords : Betel leaves, betel quid, oral cancer.

1. INTRODUCTION

Piper betel is a tiny climbing plant which growing on the surface of large trees which is seen in worldwide with invaluable medicinal applications. Leaves are one of the parts have been used for many medicinal purposes. The vine in the betel leaf belonging to the family *Piperaceae* and the betel leaf generally recognized as Paan or Nagvalli. Betel leaf build a significant function seeing as ancient culture. Its use in Asian countries dates rear to 400 BC. According to the ancient books like Ayurveda, Charaka, Sushruta Samhitas, and Kashyapa Bhojanakalpa briefly describe the practice of chewing betel leaves after consumption of meals become universal in the 75 AD and 300 AD. Marco Polo the famous European traveller noticed and recorded that habit of chewing betel leaves between kings and noble. Impact of betel leaves makes a understanding to each globe of human life mutually with social, culture, religious and is very much pertinent yet in present days.

Betel leaf is one health style that may not be as well-known to as many people in as many ends of the globe. The betel plant leaves hold a unique position in Indian hearts. It is said to be a good plant. During ceremonies, marriages, and special deals, this plant's leaves are often use as a special figure of exchange. It has endured its ups and downs, reputation-wise. In the 1980s, it was said that the betel juice caused oral cancer. The Cancer Institute's in India attempt to show to be false this allegation, citing that it is not the betel but rather the betel quid with tobacco causing the cancer.



2. DISTRIBUTION

Betel is a native of central and eastern Malaysia. It spread at a very early date throughout tropical Asia and later to Madagascar and East Africa. In India, it is widely cultivated in Tamil Nadu, Madhya Pradesh, West Bengal, Orissa, Maharashtra and Uttar Pradesh. Offering betel morsel (*pan-supari*) to guests in Indian subcontinent is a common courtesy. Most of the places in Kerala, south India the peoples used betel leafs were cultivated for chewing and habitual purposes.

3. DESCRIPTION

A very eye-catching spice, fast growing, perennial, evergreen to 1 metre, with creeping stem branches, dark green, glossy, heart-shaped leaves to 15cm long. White catkin flowers turn a green/brown when mature. The slightly cordate leaves are 15-20 cm long, and a little unequal at the base. The 7-nerved smooth leaves are thick, bright green and shiny on both sides. The fruits are sparingly produced on fleshy spikes.

Propagation is easy by root division or cuttings, preferably taken in spring or summer. Betel leaf requires a rich soil and prefers a semi-shade position. It makes a good under storey plant. Regular feeding and watering will keep it growing very lush. Although betel leaf is considered a tropical to subtropical plant, it will adapt to cold conditions if given a warm spot in winter, and could be grown in a large pot, and shifted to a cosy position in the cold months of the year. In about 3–6 months time, vines grow to a height 150-180 cm. At this stage branching is noticed in the vines. Leaves are removed along with the petiole with the right thumb. Once harvesting is commenced, it is continued almost every day or week. The interval of harvesting varies from 15 days to about a month till the next lowering of vines. After each harvest, manuring has to be done. (Gupta and Ray 2004; Lin et al. 2006 : Zumbroich 2008; Singh et al. 2012; Al-Rmalli et al. 2011).

3.1 Phytochemical compounds

Piper betel contains a wide variety of biologically active compounds whose concentration depends on the variety of the plant, season and climate. The aroma of betel leaf is due to the presence of essential oils, consisting of phenols and terpenes. The various phytochemicals found in the betel plants are chavibetol, chavicol, hydroxychavicol, estragole, eugenol, methyl eugenol, hydroxycatechol, caryophyllene, eugenol methyl ether, cadinene, γ -lactone, allyl catechol, p-cymene, cepharadione A, dotriacontanoic acid, tritriacontane, p-cymene, terpinene, eucalyptol, carvacrol, sesquiterpenes, cadinene, caryophyllene, dotriacontanoic acid, hentriacontane, pentatriacontane, stearic acid, n-triacontanol, triotnacontane, piperlonguminine, allylpyrocatechol diacetate, isoeugenol, 1, 8-cineol, α -pinene, β -pinene, sitosterol, β -sitosteryl palmitate, γ -sitosterol, stigmasterol, ursolic acid, ursolic acid 3 β -acetate (Rao A.R, et al., 1985).

3.2 Medicinal application

Most of the Indians have the practice of eating paan. Paan is an Indian mouth sweetener which is ready with betel leaves. The betel leaves are used since the ancient times tracing back to 2000 years ago. It has been mentioned in the most ancient historic book of Sri Lanka, the Mahavasma. In India, betel leaves as well as nuts are offered to guests as courtesy. Since ancient times, betel leaves has been used as an aromatic stimulant and anti-flatulent.

Use of betel Leaves was known for centuries for its curative properties. In Chinese folk medicine betel leaves are used for the treatment of various disorders and claimed to have detoxification, antioxidation, and antimutation properties. There are number of research experiments on betel leaves 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/immunomodulatory, anti-ulcer, hepato-protective, anti-infective, etc., Patents were also awarded for some of the biological activities like anti-inflammatory, anti-cancer, and immunomodulatory associated with the leaf extracts and purified compounds (Kumar N, et al., 2010).

Chewing betel leaves takes a delivery of endeavour and moving parts to salivary gland. It stimulates the release of saliva which is the first step of digestion, as various enzymes in it break down food; create it easy to digest like ginger, figs, fennel etc. Betel leaves has too shown to prevent oral cancer by maintaining the levels of ascorbic acid in the saliva. Ascorbic acid is an excellent source of antioxidant, which helps decrease the free radicals in the body, accordingly preventing cancer. Betel leaves contain various compounds which have bactericidal property that facilitate in destroying bad breath causing bacteria. Betel leaf is recognized to have aphrodisiac properties and chewing paan right before having sex makes the process more enjoyable. Extracts from betel leaves are known to have gastro protective activity and help in



preventing gastric ulcers. Betel leaves are a major component in various Ayurvedic medicines used in treating warts. These medicines are known to not leave any scarring and remove the wart wholly without reappearance. Betel leaves are warmed till slightly softer and coated with a castor oil and placed over the boil. This treatment is known to rupture the boil and drain it. Betel leaves extracts have to control blood sugar levels and have an effective anti-diabetic property. Betel leaf extract mixed with honey is known to relieve cough and helps removing phlegm from the chest. Betel leaf is also known to have analgesic properties and hence applying it over the affected area is known to effectively reduce headache. The wounds are treated with Juice of betel leaves, when applied over a wound and bandaged with betel leaves is known to heal within two days. Stalk of betel leaves dipped in castor oil, when introduced in the rectum, effectively relieves constipation. Along with betel leaves, natural remedies like flaxseeds, *triphala*, lemon, etc. (Toprani R, Patel D,(2013) Sekhar Namburi, (2011) Arambewela et al., 2005).

Apart from being served as a mouth freshener, betel leaf has many health benefits which also make it good for pregnant women. If lactating mothers apply betel leaves, it increases the production of milk in breastfeeding mothers, it helps treat constipation by easing out the stool passage, Reduces Inflammation Painful pimples, arthritis etc can lead to inflammation, Massaging your back with betel leaves that is mixed with some oil will fight lower back pain, chewing fresh betel leaves helps them quit smoking and it treats acne and scars from the skin naturally. Betel leaves are also good for oral health. It reduces mouth odour, whitens teeth and reduces bleeding. Chewing of betel leafs in a healthy way, do not mix it with any flavourings and nut it will cause any adverse effects.

3.3 Parts used

The very popular Betel Leaf Plant is a sturdy climber, which climbs with the aid of its numerous and adventitious rootlets that are borne at the nodes. The leaves from the betel plant show off many medicinal value and therapeutic applications.

3.4 Side effects

Betel leaf extract alone has not been shown to cause significant side effects, but there are side effects associated with the use of betel quid (slices of areca nut). Health risks linked to the use of betel quid include increased heart rate, heart palpitations, possible cardiovascular disease, mouth tumors, and oral and brain cancers. As with any drug or dietary supplement, consult a physician before using it.

4. CONCLUSION

Betel (*Piper betle*) is a tropical shade-loving perennial evergreen vine. It is best known as a component of "betel nut" or "betel quid". Chewing betel quid is addictive and is reportedly done daily by as many as 200 to 600 million people globally. Western Pacific Region, there is proof that the regularity of betel quid use is greater than ever and that this use is increasingly connected with the chewing of tobacco. Betel leaves are also good for health with lot of medicinal application. Betel leaves are known to Indian culture from ages. They are specially included in all ritual performances. Offering *pansupari* (betel morsel) to honor guests is a common practice. Betel leaves are in black list of allopathic doctors as many people consume them with tobacco which is harmful to healthiness The routine of chew betel leafs in a well manner, **do not mix it with any flavourings and nut** commonly known as "betel quid" it will cause any adverse effects.

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