

**Bhallataka: A Comprehensive Ayurveda Review****Dr. Deshmukh Sangeeta S.**

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**Abstract:**

*Semecarpus anacardium* commonly known as 'Bhallataka' or 'Bhilwa' has been used in various traditional system of medicines for various ailments since ancient times. Its nuts contain a variety of biologically active compounds such as biflavonoids, phenolic compounds, bhilwonals, minerals, vitamins & aminoacids, which show various medicinal properties. The fruit & nut extract shows various activities like antiatherogenic, anti inflammatory, anti oxidant, anti microbial, CNS stimulant, hypoglycemic, anti carcinogenic & hair growth promoter. The article reviews the various activities of the plant. Injudicious use of assuddha Bhallataka may result in several adverse effects.

Ayurved & modern literature related to this subject has been reviewed in this study.

**Keywords:** Bhallataka, Bhilwanol, Shodhan, Upavisha, Semicarpol, Rasayana.

**Introduction:**

Science is always progressive, human kind always invested maximum time in searching the latest modalities of science, so as to make human life more easy & happy than earlier. A search for betterment & cure in short span brought up the use of Vishadravyas in treatment after doing specific procedure called as shodhan procedure, so as to eliminate unwanted harmful effects & increase the expected medicinal properties. It also seems that different shodhan procedures & described for single poisonous drugs by using different shodhan dravyas, expecting a specific role to treat a particular disease. The Indian knowledge of herbal medicine is gaining widespread acceptance globally. In Ayurveda almost all preparations are derived from plants, whether in the simple form of raw plant material or in refined form of crude extracts. *Semecarpus anacardium* is a plant well known for its medicinal value in Ayurveda. The aim of this review is to further highlight recently discovered effects & application of *Semecarpus anacardium*.

**Review of Literature:**

**Latin Name:** *Semecarpus Anacardium*

**Vernaculars:**

- 1) Sanskrit
  - i) Bhallataka
  - ii) Arushkar
  - iii) Agnik

- iv) Agnimukh
- v) Arshoheet
- vi) Tailabeeja
- vii) Shopakrita
- viii) Varnakrita
- ix) Vatari
- x) Nabhovalli
- xi) Krimighna

- 2) Marathi – Biba
- 3) Hindi – Bhilava
- 4) English – Marking nut

Its juice is used by Dhobis as marking ink on clothes juice from seeds mixed with lime is used by dhobi to mark clothes o called as marking nut.

**Taxonomical Classification:**

- Kingdom – Plantae
- Subkingdom – Tracheobionta
- Super Division – Spermatophyta
- Division – Magnoliophyta
- Class – Magnoliopsida
- Subclass – Rosidae
- Order – Sapindales
- Family – Anacardiaceae
- Genus – *Semecarpus*
- Species – *Anacardium*

**Family:** Anacardiaceae

**Classification –**

- 1) Ayurved
  - Phalavisha (su.ka.2/5)
  - Upavisha (R.T. 24/163-164)
- 2) Modern – Irritant Organic Vegetable Poison

**References in Brihatrayee**

**Charak Samhita –**

Fifty mahakashaya contains are mentioned by Charaka. Each mahakashaya contains ten herbs. Out of these fifty mahakashayas, Charak mentioned Bhallataka in thee mahakashyas

- 1) Deepaneeya Mahakashaya (cha. Su. 4/9)  
Pimpali, Pimpalimula, Chavya, Chitraka, Sringavera, Amlavetasa, Maricha, Ajmoda, Bhallatakasthi& Hinguniryasa – Digestive Stimulant
- 2) Kushthaghna Mahakashaya (cha. s. 4/11)  
Khadira, Abhaya, Amalaki, Hadira, Arushkara, Saptaparna, Aragvadhya, Karveera, Vidanga, Jatipatra – cures skin diseases
- 3) Mutrasangrahaniya Mahakashaya (cha. s. 4/15)  
Jambu, Amra, Plaksha, Vata, Kapeetana, Udumbara, Ashwatha, Bhallataka, Ashmantaka & somvalka – antidiuretics

Bhallataka Kshira [cha. chi. 1:2/13]  
Bhallataka Kshoudra [cha. chi. 1:2/14]  
Bhallataka Taila [cha. chi. 1:2/15]  
Different 10 Bhallataka Recipes [cha. chi. 1:2/16]  
Bhallataka Ghrita [cha. chi. 5/143-146]  
Bhallataka Kshara [cha. chi. 15/177-178]

**Sushruta Samhita –**

- Properties of Bhallataka Taila – [su. s. 45/122]  
Krishna Karma – [Su. chi. 1/90-93]  
Bhallataka Prayoga – [su.chi. 6/17]  
Bhallataka oil – [su. chi. 6/18]  
Bhallataka Medicated oil [su. chi. 17/141]  
Bhallataka Pushpa Anjan [su. ka. 1/69-71]

**Astang Sangraha –**

Amrita Bhallataka Rasayana [A.S.U. 49/143-145]  
Bhallatakorishta [A.S.U. 49/451-455]  
Narshimha Ghrita [A.S.U. 19/47]

**Features:**

It is medium size deciduous tree, reaching up to height 7-10 meter.

Stem – is dark brown & rough

Leaves – They are large, crowded towards the extremities of the branches, obovate- oblong, rounded at apex, rounded cuneate at the base.

Flowers – small, greenish white, sub- sessile

Fruit – 1 inch in length, smooth shinning, heart shaped black when ripe, seated on a fleshy orange-red receptacle formed of the thickened disc & calyx base. The nut bears thick pericarp & contains brownish black acrid, oily juice.

Nut contains 32% oil.

**Uses:**

- 1) Laundry marker
- 2) Quack remedy for assorted ailments

**Toxic Part:** Nut (seed)

**Active Principle:**

- 1) A monohydroxyphenol, which forms 0.1 percent of the extract. This has been named ‘semecarpol’ B.P. (185-190° C).
- 2) An O-dihydroxy compound forming 46 percent of the extract (15 percent of nut). This has been named ‘Bhilwanol’.
- 3) A tarry, non volatile corrosive residue forming about 18 percent of the nut.

**According to Wealth of India:** (Volume –IX pg. 272-273)

The pericarp of semecarpus anacardium fruit abound in a black, oily, bitter & highly vesicant juice, which has been traditionally used for making linen. The vesicant juice known in trade as Bhilwan shell liquid (BSL) is a rich source of phenols. It is obtained from bhilwan nuts by extraction with a hydrocarbon or other solvent, by hot expression in hydraulic press or by roasting in a specially designed report.

The chemical constituents of the shell liquid have not been exhaustively investigated.

The major constituent is Bhilwanol C<sub>21</sub>H<sub>32</sub>O<sub>2</sub> which distills over at 225.26° /3mm. When the shell liquid is subjected to vaccum distillation; it is an o-dihydroxy compound with a catechol nucleus & an unsaturated C<sub>15</sub> – side chain; it has since been shown to be a mixture of cis & trans isomers off urushenol. A small quantity (C – 0.1%) of a monohydroxy phenol, semicarpol, C<sub>17</sub>H<sub>28</sub>O (distilling at 185° – 90° /2.5mm) is also present. The dark tarry residue left after distillation contains high boiling phenols & hydrocarbons.

**Mechanism of Action:**

Bhilwanol & semicarpol are irritant to mucus membrane & gastro intestinal tract, so cause irritation, blister etc.

**Fatal Dose:**

- 5-8 seeds
- 10 gm – marking nut juice
- 10 ml – oil

2) Internally –

- Tandulja swarasa + sugar
- Coconut oil, tila tail
- Use of Durvadi gan, sarivadi gan, etc.

**Fatal Period – 12-24 hrs**

**Signs & Symptoms:**

- 1) Dermal Exposure – When applied to skin, it causes irritation, inflammation, vesication formation, pain & itching. The blister contains acrid serum. The skin lesion resembles contusion. Later on the lesion turned into ulcer with sloughing of skin.
- 2) Ingestion – causes
  - i) Blister formation in & around oral cavity
  - ii) Vomiting
  - iii) Diarrhea
  - iv) Abdominal pain
  - v) Hypotension / shock
  - vi) Delirium
  - vii) Coma

**Differential Diagnosis –**

- 1) Calotropis Poisoning
- 2) Pulmbago Poisoning
- 3) Bruise

**Treatment –**

**A) Ayurved –**

1) Local

- i) Bhallatakashothara yoga – [Bhai. Rat 42/44-45]
  - Local application of tila rubbed with buffalo milk & mixed with navneeta
  - Local application of yashtimadhu & tila rubbed with milk
  - Local application of rubbed shalapatra
- ii) Arushakara Shothaghna [Sh. S. Uttarakhand 11/7]
  - Lep prepared from following combination are applied locally – [Brihada Rasaraj Sundaram – pg. 227]
  - Mixture of tandulja swarasa & navneeta
  - Mixture of Devadaru, sarshapa, nagarmotha & navneeta
  - Mixture of navneeta, tila, mishri & milk
  - Neem, tila, tila taila are boiled together.

**B) Modern**

1) Local –

- i) To wash the contaminated part skin with soap wash
- ii) Apply coconut oil on affected part

2) Internally

- i) Stomach wash
- ii) Use of demulcents
- iii) To relieve pain Inj. Morphine – 10mg
- iv) Symptomatic

**Postmortem Appearances:**

- i) Externally, bruise like lesion with surrounding small blisters may be noticed near the angle of the mouth or on the lips, if juice swallowed.
- ii) Internally inflammation & blister formation may be seen in pharynx & oesophagus.
- iii) The stomach may be highly congested.
- iv) Other internal viscera congested.
- v) Liver may show early degenerative change.

**Medicolegal Aspect:**

- i) The juice is used as an abortifacient by application to OS uteri by means of an abortion stick.
- ii) It is applied to genitals as punishment for adultery.
- iii) It is used by malingers to produce an artificial bruise to support a false charge.
- iv) The juice may be instilled into eyes to produce conjunctivitis (vitriolage)
- v) Accidental poisoning may occur from internal administration by quack.
- vi) The juice like vitriol has been thrown on the face with evil intentions.
- vii) Suicidal & Homicidal use is very uncommon.

**Formulations:**

- Bhallatakadi Modaka
- Bhallatakavaleha
- Bhallatka Rasayana
- Bhallatakarishta
- Amrita Bhallataka



- Narsimha Churna
- Sanjivani Vati

**Method of Purification:**

- Bhallataka fruits & brick powder (ishtika churna) are filled up in a pottali made up of 3-4 folds of cotton cloth this pottali is rubbed by hand by applying moderate pressure. When brick powder become wet with oil & the skin of Bhallataka fruit is peeled off, it is washed with hot water. In this process Bhallataka becomes Shuddha [R. T. 24/477-478].
- Bhallataka fruits are cut in two pieces & are placed in a pottali. This pottali is placed in Dolayantra filled up with coconut water. Dolayantra is heated for about 1-2 hours. In this process Bhallataka becomes Shuddha. [R. T. 24/479].

**Difference:** Between Bruise & lesion produced by semecarpus juice

Traits	Burise	Lesion due to Bhallataka juice
Shape	Regular	Irregular
Margin	Diffused	Sharp & clear
Swelling	Present	Absent in some cases
Colour Change	Occurs	Does not occur
Itching	Absent	Present
Blisters	Absent	Present on the margin
Cause	Rupture of cutaneous capillaries	Chemical damage of skin
Extravastation in the tissue	Present	Absent
Nail beds	Nothing significant	Similar lesion due to itching
Contents	Extravasated blood	Acrid serum

**Toxicity:**

Since Bhallataka is extremely hot & sharp in its attributes, it should be stop & avoid the usage of Bhallataka. It should not be used by small children, very old persons, pregnant women & individuals of predominant of Pitta constitution. The use of same

should be restricted in summer season. For its allergic reactions like rash, itching & swelling, the antidotes used externally are coconut oil, ghogruta, coriander leaves kalka or butter mixed with musta. The salt & spices should be strictly restricted during Bhallataka treatment, it is recommended to avoid exposure to sun, heat.

**Therapeutic Uses:**

- As Rasayana [cha. Chi. 1:/13]:  
In Charaka samhita Bhallataka is mainly used as rasayana. For this purpose Bhallataka kshira & different pharmacological preparation of Bhallataka are mentioned.
- As Vajikarana [Shodhala –Vajikaranadhikara ]:  
For Bhallataka fruits are taken. These are cut in pieces & boiled in one adhaka of cow milk. This Bhallataka yoga is good vajikara or vrishya.
- Arsha:
  - Bhallataka is prepared & given to patients suffering from Arsha, early in the morning. Before consuming this kwatha entire oral cavity is coated with ghee. During this period person should take milk & cooked rice added with ghee. [Su. Chi. :6/17]
  - Bhallataka is a good medicine in shuskarsha. [A. H. Chi. : 8/162]
- Kushtha [Su. Chi. 9]:  
Kwatha of Bhallataka, Abhyaya & Vidanga or only Bhallataka taila cures all types of kushtha.
- Krimi [Shodhala – Rogadhikara]:  
Add vidanga churna in Bhallataka swaras & keep it in sunlight. If this given to patient krimis are died.
- Indralupta [Shodhala - Shirorogadhikara]:  
Bhallataka rasa & madhu (honey) are mixed together to prepare a lepa which is applied locally to cure indralupta disease.
- Urustambha [Shodhala - Vatrogadhikara]:  
Bhallataka & Pippali mula are powered together & given with madhu (honey) to get relief from urustambha.
- Jwaragaman [A. H. Chi. 1/53]:  
If signs of ensuing jwara (fever) are observed, Bhallataka is given with guda.
- Kaphaja gulma [Shodhala – Gulmachikitsadhikara]:  
Ghrita prepared from Bhallataka kalka & kashya if consumed with sugar cures raktapitta & if consumed with madhu (honey) cures kaphaja gulma.
- Pleehavidhi, Pandu, Shwasa, Kasa [R. T. 24/483]:

Vati (tablets) prepared from equal quantities of Bhallataka churna, Haritaki churna, Tila churna & guda, cures pleehavidhi, pandu, jwara, shwasa, kasa.

11) Visha anjana chikitsa [Su. Ka. 1/69-71]:

If the collyrium is poisoned (Vishayukta anjana) then the flowers of Bhallataka are rubbed in milk & used as counter collyrium.

**Discussion & Conclusion:**

According to Charaka Samhita any poison with its proper administration act as excellent drug with its improper use can be a poison. Also according to Bhavaprakash, poisonous plants are subjected to shodhana sanskara are carried out, the poisonous plants are attributed with certain proper rasayana, yogvashi, brihana, etc. Nowadays, numbers of Ayurved pharmaceutical companies are preparing medicines from poisonous herbs. If these poisonous plants are not subjected to shodhan sanskara properly, they may act as poison. Therefore their preparation will also be poisonous. But it is the matter of discussion whether they are doing shodhan sanskara of these poisonous herbs properly as mentioned in Ayurved Samhita.

Bhallataka, when studied for its properties through Ayurveda & modern view was found to contain some toxic principles. It is accepted 'Upavisha' in various Rasagranthas. It is also used for various diseases like Arsna, Kushtha, Krimi, etc. Acharya Charaka mainly used as rasayan & vajikarana. It is advised to use only after shodhan sanskara. A detailed review of Bhallataka as well as semecarpus anacardium through Ayurved & modern literature was studied.

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