Shalmali (*Bombax Malabaricum* DC.): Aphrodisiac drug of Ayurveda

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Abstract

Ayurveda, the Indian system of medicine uses drugs obtained from plant, animal and mineral sources for the maintenance of health and also for the treatment of various diseases. *Shalmali* (*Bombax malabaricum* DC.) is one such important medicinal plant used in Ayurveda. All parts of this plant like flowers, exudates, thorn, leaves and root are useful in treatment of various ailments. The roots of *Shalmali* are having aphrodisiac property. Numerous Vajikarana yogas containing *Shalmali* are mentioned in *Ayurvedic* classics. The present paper is an attempt to review few such formulations of *Shalmali*, best Vajikarana dravya of Ayurveda.

Keywords

Ayurveda, Shalmali, Vajikarana yoga, Aphrodisiac

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INTRODUCTION

Shalmali (Bombax malabaricum D.C.) is commonly known as Silk-cotton tree or Indian kapok tree belonging to the family Bombacaceae\(^1\). It is commonly found in India, Burma and Sri Lanka. Plant grows throughout hotter parts of India; up to elevation of about 1500 meters. In Peninsular India, the tree is very common in dry as well as moist deciduous forests and near rivers, also cultivated in gardens\(^2\). On the basis of flower color there are two kinds of Shalmali viz., rakta pushpa and shveta pushpa and they are specifically known as Shalmali (Bombax malabaricum DC.) and Kutashalmali (Ceiba pentandra Linn.) respectively\(^3\). Various parts of the plant are used in diarrhea, dysentery, acne, menorrhagia and impotency. The roots of Bombax malabaricum have stimulant, tonic, and aphrodisiac properties and are useful in impotency, sexual weakness and seminal disorder\(^4\).

LITERATURE REVIEW

The literary review of the Shalmali was started right from the Vedas up to recent research works to obtain through knowledge of drug. In Rigveda, it is mentioned that Shalmali wood is used to prepare a chariot during marriage rituals. Shalmali is also described in Grahya sutra, Vishnudharma sutra and Atharva parishishta\(^5\). In Charaka Samhita, Shalmali is described in Purishaviranjaniya, Shonitasthapaniya and Vednasthapana mahakashaya (Ca.Sa.Su.4) and Kashayaskandha (Ca.Sa.Vi 8). In Sushruta Samhita Shalmali is described in Priyangvadigana (Su.Sa.Su.38).

According to Vaghbhatta Shalmali has been used in bodyache and stiffness and recommended its use through nasal route (Nasya) for administration (A.H.Ut.40). Shalmali is mentioned in Nighantus also. In Bhavaprakasha nighantu and Madanpaala nighantu described it under Vatadivarga. Raj nighantu and Nighantu adharsha included it under Shalmalyadi varga. Nighantu ratnakar and Shodhal nighantu mentioned it in Aamradivarga. Kaiyadeva nighantu mentioned it in Aushadhi varga.

Taxonomical Classification\(^6\)

Kingdom : Plantae
Division : Magnoliophyta
Class : Magnoliopsida
Order : Malvales
Family : Malvaceae
(Bombacaceae)
Genus : Bombax
Species : ceiba

Vernacular names¹
Classical Name : Shalmali
Sanskrit Name : Shalmali, Mocha, Picchila, Raktapushpa
Hindi : Semal, Semar, Semul, Shembal, Pagun
English : Silk-cotton tree, Red silk cotton tree
Bengali : Shimul
Punjabi : Simble
Gujarati : Shemalo, Sawar
Marathi : Sanvar, Simalo
Telugu : Buruga
Malayalam : Mullilavu
Tamil : Elavam

Synonyms of Shalmali⁷
Shalmali - It blossoms with beautiful red flowers.
Manadruma, Dirgadruma - It is a tall.
Chirajivika, Purani, Dirghaayu, Sthirjivika - It is a long lived.
Kantakadhya, Kantakdruma - It is thorny.

Raktapushpaka, Kukkuti, Ramyapushpa - It has beautiful red flowers.
Tulaphala, Tulavriksha, Tulini - Cotton yielding fruit.
Mocha - Releases exudates

Botanical Description of Shalmali¹
Bombax malabaricum Linn. is a lofty, deciduous tree buttressed at the base. The tree grows 25-35 meters in height with old tree upto 60 meters. It is known as King of the forest due to their massive size and showy flowers. It has pale ashy to silvery grey colored bark, 1.8-2.5 cm thick, covered with hard, sharp and conical prickles but these prickles get eroded when tree get older. The roots of young Shalmali is called Semulmusli. Semulmusli is having tonic and aphrodisiac property.

Distribution & Habitat⁸
It is widely distributed throughout India, including the Andamans, up to 1500 m or even higher. In peninsular India, the tree is very common in the dry as well as moist, mixed deciduous forests. It is found in the mixed evergreen forests of West Bengal and Assam. The tree also grows sporadically in the mixed deciduous forests in the Sub-
Himalayan region and lower valleys, also in bhabar tracts of Uttar Pradesh and Bihar.

**Phytochemical Constituents of Shalmali**

**Roots** – The root contain glycosides, sesquiterpene lactone, polysaccharide, cadinane sesquiterpenoids. *Semulmusli* contain starch 71.2%, sugar 8.2%, protein 1.2%, minerals 2.1%, some fat, tannin and cellulose.

**Root bark** – Aromatic sesquiterpenoid like lupeol, β-sitosterol and naphthaquinone was isolated from root bark of *B. ceiba*.

**Flowers** – Flowers contain β-D-glucoside of β-sitosterol, free β-sitosterol, hetriacontane, hetriacontanol, kaempferol, quercetin and traces of essential oil.

**Stem bark** – Stem bark contain lupeol, β-sitosterol, naphthaquinone. It also contains various amino acids like lysine, arginine, alanine, glutamic acid, glycocol, leucine and sugars like fructose, glucose, galactose, sucrose, lactose and arabinose.

**Seeds** – The seed oil contains phytosterol, palmitic acid, stearic acid, oleic acid, linoleic acid and lipase like enzyme. Seeds contain essential amino acids like threonine, valine, methionine, isoleucine etc.

**Gums** – Hydrolysis of gum yields arabinose, galactose, galacturonic acid and rhamnose.

**Pharmacological Properties**

**Rasa** : Madhura, Kashaya
**Guna** : Laghu, Snigdha, Pichchhila
**Virya** : Sheeta
**Vipaka** : Madhura
**Doshagnata** : Vata-Pitta shamaka

Part used
Root, gum, bark, leaf, flower, young fruit, seed

Dosage Form
- **Moola churna**: 5-10 gm
- **Pushpa swarasa**: 10-20 gm
- **Phala churna**: 3-6 gm
- **Niryasa**: 1-3 gm

Action and Uses
- **The gum** is astringent, cooling, stimulant, aphrodisiac, tonic, styptic and demulcent. It is useful in diarrhea, dysentery, haemoptysis of pulmonary tuberculosis, influenza, menorrhagia, burning sensation, strangury and haemorrhoids.
- **The bark** is mucilaginous, demulcent, diuretic, tonic, slightly astringent and emetic. It is used for fomenting and healing wounds and skin eruptions.
- **Leaves** are used in strangury and skin eruptions.
- **Flowers** are laxative, diuretic, astringent and are good for skin troubles, intrinsic haemorrhage, conjunctivitis, splenomegaly and haemorrhoids.
- **Young fruits** are useful in calculus affections, chronic inflammations and ulcerations of the bladder and kidney.
- **Seeds** are useful in gonorrhea, chronic cystitis and consumption. A paste made out of the prickles is used for restoring skin colour, especially on the face.
- **The root** is stimulant, tonic, aphrodisiac, slightly diuretic and demulcent. It is used in gonorrhea, impotence and dysentery.

A review of *Vajikarana yogas* mentioned in *Chikitsa granthas* of *Ayurveda* reveals the presence of *Shalmali* in most of the *yogas* either as a chief constituent or as a *bhavana dravya*. This aphrodisiac property is present mainly in the roots of *Shalmali*. Few such *Vajikarana yogas* are shown in the tables given below.

Table 1 *Vajikarana yogas* in which *Shalmali* is one of the constituent
<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of Formulation</th>
<th>Reference</th>
<th>Ingredients</th>
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<td></td>
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<td>(Shloka: 1082-84)</td>
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<td>2.</td>
<td>Kamanganayaka Rasa</td>
<td>Rasa Yoga Sagara</td>
<td>Abhraka Bhasma, Shalmali moola churna, Bringaraja moola churna</td>
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<td></td>
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<td>Kakaradirasa (Shloka: 811)</td>
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<td>3.</td>
<td>Kameshwara Modaka</td>
<td>Rasa Yoga Sagara</td>
<td>Shalmali and other Kasthaaushadhi Churna</td>
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<td>Kakaradirasa (Shloka: 824-828)</td>
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<td>4.</td>
<td>Kushmanda Paka</td>
<td>Rasa Yoga Sagara</td>
<td>Shalmali and other Kasthaaushadhi Churna</td>
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<td>Kakaradirasa (Shloka: 1350)</td>
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<td>5.</td>
<td>Madana sandipana churna</td>
<td>Rasa Yoga Sagara</td>
<td>Loha Bhasma, Abhraka Bhasma, Shalmali, Gokhuru, Satavari, Guduchi, etc.</td>
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<td>Makaradirasa (Shloka: 2293-2302)</td>
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<td>6.</td>
<td>Yuvatileela Rasa</td>
<td>Rasa Yoga Sagara</td>
<td>Suddha Parada, Suddha Gandhaka, Makshika, Shalmali, etc.</td>
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<td>Yakaradirasa (Shloka: 29-46)</td>
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<td>7.</td>
<td>Vangeshwaradi Vati</td>
<td>Rasa Yoga Sagara</td>
<td>Vanga, Loha Bhasma, Abhraka Bhasma, Parada, Hingula Bhasma, Suddha Gandhaka, Kasturi, Kesar, Shalmali, etc.</td>
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<td>Vakaradirasa (Shloka: 1693-1703)</td>
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<td>8.</td>
<td>Sri Madnananda modaka</td>
<td>Bhaishajya Ratnavali</td>
<td>Suddha Parada, Suddha Gandhaka, Loha Bhasma, Abhraka Bhasma, Suddha Tankan, Shalmali churna, Vijaya churna etc.</td>
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<td>Vajikaranadhikara (Shloka: 242-266)</td>
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Table 2  *Vajikarana yogas* in which *bhavana* is given with *Shalmali moola rasa*

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<tr>
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<tr>
<td>1.</td>
<td>Kandarpjivan Rasa</td>
<td>Rasa Yoga Sagara Kakaradirasa (Shloka: 178-180)</td>
<td><em>Parada Bhasma, Swarna Bhasma, Rasa sindura, Hiraka Bhasma, Vanga Bhasma, Shilajit, Jayaphala, Javitri, Kesar, Karpura, etc.</em>&lt;br&gt;<strong>Bhavana dravya - Shalmali, Satavari, Vidari, Talamakhana and Dhanva (7-7 Bhavana each)</strong></td>
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<tr>
<td>2.</td>
<td>Kamadeva Rasa (III)</td>
<td>Rasa Yoga Sagara Kakaradirasa (Shloka: 723-727)</td>
<td><em>Parada Bhasma, Swarna Bhasma</em>&lt;br&gt;<strong>Bhavana dravya – Shalmali, Kadalikanda, Godugdha (1-1 Bhavana each)</strong></td>
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<td>4.</td>
<td>Kamanayaka Rasa</td>
<td>Rasa Yoga Sagara Kakaradirasa (Shloka: 774-778)</td>
<td><em>Suddha Parada, Suddha Gandhaka</em>&lt;br&gt;<strong>Bhavana dravya – Shalmali swarasasa</strong></td>
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<tr>
<td>No.</td>
<td>Rasa Name</td>
<td>Rasa Yoga Sagara Pakaradirasa</td>
<td>Bhavana Dravya</td>
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<td>6.</td>
<td><strong>Purnendu Rasa</strong></td>
<td><em>Shloka: 945-949</em></td>
<td><em>Shalmali swarasa (15 Bhavana)</em></td>
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<td>7.</td>
<td><strong>Makardhwaja Rasa (III)</strong></td>
<td><em>Shloka: 2076-2080</em></td>
<td><em>Shalmali and Kumari swarasa (each 3-3 Bhavana)</em></td>
</tr>
</tbody>
</table>
| 8.  | **Madana Kamadeva Rasa (III)**                                           | *Shloka: 2199-2204*                                                                        | *Shuddha Parada, Suddha Gandhaka Rajata and Swarna Bhasma Bhavana*
<p>| 9.  | <strong>Madana Golaka</strong>                                                        | <em>Shloka: 2240-2261</em>                                                                        | <em>Shuddha Parada, Suddha Gandhaka, Makshika Bhavana – Shalmali, Satavari (each 1-1 Bhavana)</em> |
| 10. | <strong>Madanajanaka Rasa</strong>                                                    | <em>Shloka: 2262-2263</em>                                                                        | <em>Shuddha Parada, Suddha Gandhaka, Makshika Bhasma Bhavana – Shalmali, Manjishtha (each 1-1 Bhavana)</em> |</p>
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<tr>
<th>No.</th>
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<th>Bhavana Dravya</th>
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<td>11</td>
<td>Madanodaya Rasa (II)</td>
<td>Vaikranta Bhasma, Kantaloha, Abhraka, Parada, Swarna, Naga and Hiraka Bhasma Bhavana dravya – Shalmali, Satavari, Musali, Amalaki (each 1-1 Bhavana)</td>
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<td>12</td>
<td>Chandalini Yoga</td>
<td>Suddha Gandhaka, Sweta Punarnava churna Bhavana dravya – Shalmali swarasa</td>
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<td>13</td>
<td>Kamadhenu Rasa</td>
<td>Suddha Gandhaka, Amalaki churna Bhavana dravya – Shalmali swarasa, Amalaki swarasa (each 7-7 Bhavana)</td>
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<tr>
<td>14</td>
<td>Harshashanka Rasa</td>
<td>Suddha Gandhaka, Shalmali moola churna Bhavana dravya – Shalmali swarasa</td>
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<td>15</td>
<td>Siddha Shalmali Kalpa</td>
<td>Suddha Parada, Sudha Gandhaka, Musali, Amalaki, Vidarikanda, Punarnava Bhavana dravya – Shalmali moola swarasa, Mahishi dugdha (each 7-7 Bhavana)</td>
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<td>16</td>
<td>Panchshara Rasa</td>
<td>Suddha Parada, Sudha Gandhaka Bhavana dravya – Shalmali</td>
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### References
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Pharmacological studies on root of *Bombax malabaricum* have proved the aphrodisiac property. *Bombax malabaricum* root extract was investigated for Mount latency (ML), intromission latency (IL), ejaculation latency (EL), mounting frequency (MF), intromission frequency (IF), ejaculation frequency (EF) and post-ejaculatory interval (PEI) parameters for a month study. The extract reduced significantly ML, IL, EL and PEI ($p < 0.05$). The extract also increased significantly MF, IF and EF ($p < 0.05$). These effects were observed in sexually active and inactive male mice$^{10}$.

**CONCLUSION**

A comprehensive review of *Ayurvedic* classics depicts that *Shalmali* is described in *Vedas*, *Charaka Samhita*, *Sushruta Samhita*, *Ashtangahriddaya*. Synonyms of *Shalmali* like *Pichchhila*, *Mocha*, *Kantakadhya*, *Raktapushpaka* etc. are described in various *Nighantu*. *Shalmali moola* is having *shukravardaka*, *rasayana*, *vrishya* and *balya* properties$^3$. It has *madhura rasa*, *laghu*, *snighdha guna*, *sheeta virya*, *madhura vipaka* and *vatapitta shamaka* properties. Mineral drug used in *Ayurveda* like *Parada* (Mercury), *Gandhaka* (Sulphur), *Swarna* (Gold), *Abhraka* (Mica) etc. have best aphrodisiac and rejuvenating properties. Most of herbo-mineral *vajikarana yogas* mentioned in *Ayurvedic* classics contain...
Shalmali either as a constituent or as a bhavana dravya.
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