

SHIRISH – A VISHAGHNA AUSHADH

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ABSTRACT

Shirish is a medicinal plant described in various *Ayurved samhitas*. Botanical name of *shirish* is *Albizia lebbek* (L.) Benth & commonly known as *Siris*, *Shiris* in Hindi. In English *shirish* known as *Lebbeck Tree*. *Shirish* is widely suggested for removing toxins from the body. *shirish* (*Albizia Lebbeck*) is one of the major herbs with a wide spectrum of therapeutic effects besides this, it is stated in the classical textbook as a *vishaghna*. *Agadtantra* (Toxicology) is an *Ayurveda* branch specialized in highlighting the various mode of toxicity and its management. *Agada* (Antidote) is one of the methods prepared by combining various anti-poisonous herbs. Many *agadas* contain *shirish*, which is mostly used in cases of poisonous bite. Recent research has also reported anti-inflammatory, anti-histamine, anti-anaphylactic, anti-asthmatic, anti-microbial properties of the plant. Some of the uses given in API vol III are: *Pama*, *Kushtha*, *kandu*, *visarapa*, *kasa*, *vrana*, *shotha*, *svaas*, *mushak vishak*, *shit pitta*, *raktadushti*, *vishamjwara*, *sarpdansh*, *vishadushti*, *suryavart*, *ardhaavbhedak*, *netrabhishyanda*.

KEYWORDS: *Shirish*, *vishaghna*, *Agad*, Anti-poisonous herb, anti-microbial, anti asthamatic, medicinal uses.

INTRODUCTION

Albizia lebbek (L.) Benth. Benth. (Family-Mimosaceae), locally known as *Shirish*. Ancient toxicological aspect is well described in one branch of *Ayurveda*, known as *Agadtantra*. *Ayurveda's* ancient sage has described many herbs as characteristics of *Vishghna*. But *Shirish* (*Albizia Lebbeck*) is one of the most important & commonly used herbs in many *agadas*. *Agadas* is an anti-toxic formula prepared by combining several drugs. The properties and details of *shirish* are given below-

Botanical Classification^[1]

Kingdom - Plantae
Division -Magnoliophyta
Class- magnoliopsida
Order- fabales
Family- fabaceae
Genus- Albizia
Species -Albizia lebbek

Taxonomy and nomenclature^[2]

Family: Fabaceae - Mimosoideae

Synonyms

English: *Siris Tree*, *Lebbeck Tree*Hindi: *Siris*, *Shiris*Sanskrit: *Bhandi*, *sitapuspa*, *sukapriya*, *Mrdupuspa*Urdu: *Siris*Bengali: *Sirish*, *Siris*Gujrati: *Shirish*

Kannad: Bagey, Bage Mara, Hombage

Common names^[3]

Fry wood, koko, lebbek, lebbek tree, siris tree, women's tongue tree, ebano oriental, East Indian walnut, coraço de negro, lingua de sogra, lingua de mulher, lebbekboom.

Classical description

1. *Charaka Samhita*

Acharya charak has described *shirish* as *Vishaghna* [Anti-poisonous herbs group], *Vedanasthapana* [Analgesic group of herbs], *Shirovirechana* [group of herbs that are used to cleanse and detoxify sense organs and brain], *Kashaya skanda*[astringent group of herbs].^[4]

2. *Sushruta – Salsaradi Gana*.^[5]3. *Vagbhata – Asanadi Gana*.^[6]4. *Bhavprakash*

Achrya bhavprakash has described 2 types of *shirish* is *Shweta* & *Krishna*. The variety *Krishna* (*Albizia lebbek*) is easily found, but *Shweta Shirish* (*Albizia proccera*) is very rare.^[7]

5. *Sharangdhra Samhita*

In *sharangdhra samhita shirish* has described in *Vaatrakta, Dadru, Vatrakta, shotha, vataroga, Prameha Pittaja vatrakta*, etc.^[8]

6. *Vangasena Samhita*

In *vangasena samhita shirish* has described in *Pittaj (hasti) prameha, Updhansha, Sarvanga pidha, vrana, daha, Arbuda, Vatarakta, Pittaj Visarpa*, etc.^[9]

NIGHANTU

In different types of *nighantus* Acharya has described *shirish* in different *varga*'s.

1. *Dhanvantari nighantu* - *Aamradi varga*.^[10]

2. *Kaidev nighantu* - *Aushadi varga*.^[11]

3. *Bhavprakash nighantu* - *Vatyadi varga*.^[12]

4. *Raj nighantu* - *Prabhadraadi varga*.^[13]

5. *Nighantu adarsh* - *Babulaadi varga*.^[14]

6. *Priya nighantu* - *Haritkyaadi varga*.^[15]

Distribution and Habitat

The species is native to India, the Andaman Island, Myanmar, tropical Africa, Asia and northern Australia and is also found in tropical and subtropical regions.^[16]

Also discovered in tropical and subtropical Asian thick deciduous woodlands such as Laos, Cambodia, Malaysia, Indonesia, Vietnam, Africa, Australia, China, Thailand, Malaysia, Sri Lanka, and eastern Indonesia.^[17]

Pharmacological activity^[18]

Albizia lebeck is also used in traditional Indian system and folk medicine as well as to treat various inflammatory pathologies such as asthma, arthritis, antiseptic, burns, antidysenteric, allergic rhinitis, bronchitis, leprosy, paralysis and helminth infections as well as anti-tuberculosis and burns treatments.

Antimicrobial activity

The isolated glycosides from the stem bark showed antimicrobial activity against *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Trichophyton rubrum*.^[19]

Antiasthmatic activity

Clinical trials of stem bark decoction showed a significant decrease in WBC, eosinophilic count, ESR,

and marked improvement in bronchial asthma by 56 percent.^[20]

Decoction of the flowers in the 50mg / kg body weight dose has significant action against bronchospasm caused by histamine.^[21]

Anti-Ulcer activity

A.lebeck alcohol extract exhibits important anti-ulcer activity in rat ulceration caused by ethanol when it administered orally by defending the gastric cells. The plant's saponin fraction is regarded responsible for its anti-ulcerogenic activity.^[22]

Anti-anaphylactic Activity

The bark decoction had a substantial cromoglycate like action on albino rat's mast cells and also seemed to inhibit the early process of sensitizing and synthesizing reaginic type of humoral antibodies. Studies have shown that *A. lebeck*'s anti-anaphylactic activity, Because of the action of cromoglycates on the mast cells.^[23]

Impact on cardiovascular activity

It illustrates a strong ino-tropical impact on the heart of the frog, which is mediated by the adreno receptor.^[24]

Anti-diarrheal property

A. Lebeck shows antibacterial activity against infectious diarrhea. *A.Lebbeck's* aqueous, methanol & chloroform extracts shown activity against *E. Species of coli* & *salmonella*. It also demonstrates mild activity against *V. cholera*.^[25]

Chemical Constituent

The *Shirish* bark produces condensed type tannins viz. D -catechin, leucocyanidin and melacacidin isomers & a fresh leucoantho-cyanidine, lebecacidin. It also gives sitosterol to friedelin & β . Seeds of shirish contain crude protein, calcium, phosphorus, iron, niacin & ascorbic acid, amino acid & proteins composition, arginine, histidin, leucin & isoleucin, lysin, methionine, phenylalanine, threonine, tyrosine & valine. The flowers contain lupeol, α -and β -amyrin and a pigment similar to crocetin4.^[26]

Ayurvedic properties

Property	Pv Shrma ^[27]	API ^[28]
Rasa	Kashaya, Tikta, Madhur	Tikta, Kasaya, Madhura, Katu
Guna	Laghu, Ruksha, Tikshana	Laghu
Virya	Ishat ushana	Anusna
Vipaka	Katu	Katu

Karma

Shothhara, vednasthapan, varnya, vishaghan, shirovirechana, kushthaghana, vrishya & chakshusya.^[27]

Vishaghn, Tvagdosha, Tridosh-hara, shothahara, Varnya.^[28]

Medicinal Uses

The plant is used traditionally as an anti-asthmatic, anti-inflammatory, anti-fertility, anti-diarrhoeal, antiseptic, anti-dysenteric, anti-tubercular, leprosy, paralysis, helment infection.^[29]

Astringent, eye infection, psychoactive, flu, lung problems, pectoral problems, cough, gingivitis, abdominal tumors.^[30]

It is also used in ringworm and wound therapy by cleaning the impacted regions, gonorrhoea, leucorrhoea and other genital illnesses.^[31]

Plant also has cardio-protective effects.^[32]

Formulation

Mahashirish agad, shirisharisht,^[27] *Vajraka Taila, Dashanga Lepa, Ayaskrti, Devadarvarishra, Brahanmaricadya Taila.*^[28]

Dose

Churna- 3-6 gm

Swaras- 10-20 ml

Kwath- 50-100 ml^[27]

25- 50gm^[28]

CONCLUSION

In rural India, maximum population depends on the traditional medicinal system and the study of medicinal plants needs to be intensified. A. Lebeck is a widely known tree used by traditional practitioners to heal different diseases. Acharya Charaka mentioned Shirish in the the Antipoisonous herb [Vishaghana] division and many Acharyas mentioned Shirish in various Varga in different Nighantus. In all anti-poisonous formulation, Albezzia lebeck (Shirish) is one of the most important herbs. Several experimental model & clinical trials show that Shirish has multi-dimensional activity such as analgesic, anti-inflammatory, anti-allergic, antibacterial, antifungal, anti-protozoal, anticonvulsant, anti-anaphylactic, antioxidant.

Traditionally, Albizia lebeck has been used to cure different diseases. The plant seem to have a wide range of activities on several disorders. Because Shirish contains many alkaloids, flavonoids, tannin, saponin and many of its actions have been scientifically proven, it can be concluded that it is a very beneficial plant in various activities, hence it has been described by Acharyas as Vishaghna.

REFERENCES

- (www.ayurveda.com/herbs/albizia-lebeck.htm) Albezzia lebeck, Siris tree, siris, siris Herb, Benefits.
- The Ayurvedic Pharmacopoeia of India, 2001 Part- I volume – III, pp 201-202.
- Heuzé V., Sauvant D., Tran G. Feedipedia - Animal Feed Resources Information System - INRA CIRAD AFZ and FAO, 2012 <http://www.feedipedia.org/node/334>
- R.D.Shastri *Charak Samhita*- Vidyotini Hindi Comm. by, Part-I and Part-II, Chaukhamba Series, Varanasi, 1988.
- Sushrut Samhita* - Dr. A.D.Shastri, Choukhamba Publication.
- Ashtanga Hridya*- with Sarvanga Sunder and Ayurved Rasayana Comm. H.S.Paradakar, Choukhambha Sanskrit Sansthan, 1982.
- Bhavprakash*, edited by Shri Rupolalji Vaidhya- part I, 11th edition (2004). Chaukhamba Sanskrit sansthan, Varanasi, 518.
- Sharangdhar Samhita*- with Deepika and Ayurved Rasayana, com.P.R.Shastri, 1983.
- Vangsen Samhita*- Dr. Rajiv Kumar Rai, 1983].
- Dhanwantari Nighantu*- P.V.Sharma, 1982.
- Kaideva Nighantu with Vyakhya*- P.V.Sharma, 1979.
- Bhava Prakash Nighantu-Comm.* By Chunekar K.C- Edi.by G.S. Pandey Choukhambha Prakasana. Varanasi.
- Raj Nighantu with Dravyaguna Prakashika Vyakhya*- I.d. Tripathi. 1982.
- Nighantu Aadarsh*- Vd.Bapalal, Choukhambha Series.
- Priya Nighantu*- P.V.Sharma
- Albizia lebeck - A Promising Fodder Tree for Semi-Arid Regions, A quick guide to useful nitrogen fixing trees from around the world, NFTA 88-03, August 1988.
- A Review on Parts of Albizia lebeck (L.) Benth. Used as Ayurvedic Drugs S. C. Verma¹*, E. Vashishth¹, R. Singh¹, A. Kumari¹, A. K. Meena², P. Pant¹, G. C. Bhuyan¹ and M. M. Padhi ¹ Central Council for Research in Ayurvedic Sciences, 61-65, Institutional Area, Opp.-D-Block, Janakpuri, New Delhi-110058, India ²National Research Institute for Ayurveda- Siddha Human Resource Development, Gwalior].
- PHYTOPHARMACOLOGICAL PROPERTIES OF ALBIZIA SPECIES: A REVIEW KARUPPANNAN KOKILA, SUBRAMANIAN DEEPIKA PRIYADHARSHINI AND VENUGOPAL SUJATHA¹* ¹Department of Chemistry, Periyar University, Salem, Tamil Nadu, India. Email: chemsujatha@gmail.com
- Bhatnagar S. S., Santapau, H., Desa, J. D. H., Maniar, A. C., Ghadially, N. C., Soloman, M. J., Yellore, S. and Rao, T. N. S., Biological activity of Indian medicinal plants. Part I. Antibacterial, antitubercular and antifungal action. Indian J Med Res, 1961; 49: 799.
- Kumar S, Bansal P, Gupta V, Sannd R, Rao MM. Clinical efficacy of Albizia lebeck stem bark decoction on Bronchial asthma, International Journal of Pharmaceutical Science and Drug Research, 2010; 2(1): 48-50.
- Tripathi RM, Das PK, Studies on antiasthmatic and anti-anaphylectic activity of Albizia lebeck, Indian J Pharma, 1977; 9(3): 189-194.
- Faisal Mohammad, Sing PP, Iracchiya R., Review on Albizia lebeck – A potent Herb, IRJP, 2012; 3(5): 63-68.
- Johri, R.K., Zutshi, U., Kameshwaran, L., and Atal, C. K. Effect of quercetin and Albizzia saponins on rat mast cell. Indian J. Physiol Pharmacol, 1985; 29(1): 43-46.

24. Sharma P.C., Yelane M.B., Dennis T.J., Database of medicinal plants used in Ayurveda. Vol.I, Centra Council for research in Ayurveda & Siddha, reprint, 2002.
25. Uma B., Prabhakar S., Lakshmi Y, the Internet J. of Microbiology, 2009; 7(1): 31.
26. Gupta A. K. Tandon N, Sharma M., Quality standards of Indian Medicinal Plant, 1st Edition, (2005) Indian council of Medical research, New Delhi, 2005; 2: 2.
27. PV Shrma chaukhamba bharti academy.
28. Ayurvedic Pharmacopoeia of India, part I, Vol III, 2001 pg 293.
29. Folk Medicine at the H.E.J. Research Institute of Chemistry International Center for Chemical and Biological Sciences (<http://www.iccs.edu/folkmed/P11.php>) Allergic rhinitis, [Chulet R, Jhajharia M, Pradhan P, Sharma S. Analgesic Andantipyretic Activity of Albizzia Lebbeck Pharmacologyonline, 2010; 3: 737-749.
30. Sesoltani, A, Paulsen S. B, 2011; Ten Medicinal Plants from Burma A literature study Thesis in pharmacognosy, 147.
31. Hassan L. J. Umar K.G, and Atiku I. 2007; Nutritional Evaluation of Albizia lebbeck (L.) Pods as Source of Feeds for Livestock, American Journal of Food Technology, 2: 435-439.
32. Sasmal S, Kumar P. S, Bharathi K, 2013; Pharmacognostical, phytochemical and pharmacological evaluation of alcoholic leaf extract of albizia lebbeck benth International Journal of Pharmaceutical Research and life Sciences, 1(1): 94 -109 18.