



Title of Article

Shankhapushpi from the view of Samhita: A literary review**Ajaya D. Yerne,**

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ABSTRACT:

Shankhapushpi is one of the significant Ayurvedic medicine which helps in enhancing memory. According to *Ayurveda*, *Shankhapushpi* is indicated as *Medhya* (brain tonic), digestive, appetite stimulant and carminative for digestive system. It has cardio-protective properties and it controls hypertension. It is also a natural tonic for mental development of children. This Review particularly deals with the *Ayurvedic* importance along with the pharmacological aspects of *Convolvulus Pluricaulis* Choisy. Though various indications are in use, controlled trials are needed to determine its real efficacy. The *shankhapushpi* plant, its properties, mechanism of action and clinical uses are briefly reviewed in this article.

KEYWORD: *Shankhapushpi, Medhya, Convolvulus pluricaulis,*

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INTRODUCTION:

Shankhapushpi is pungent, alternative tonic, bitter, brightens intellect, improves complexion, increases appetite, useful in bronchitis, biliousness, epilepsy and teething troubles of infants etc. It is also a natural tonic for mental development of children. Only scattered information exploring the curative potential of CP is available, and there is a need to assemble it. Therefore, to revalidate the Ayurvedic therapeutic claims of *Shankhapushpi* in light of contemporary experimental and clinical studies, this study was carried out. Information was extracted from various Ayurvedic literature viz. *Brihatrayi* (*Charaka Samhita*, *Sushruta Samhita* and *Ashtanga Hridaya*) and *Nighantu*. Online studies available on *Convolvulus pluricaulis* Choisy published in Pubmed, Scopemed, also rationally reviewed and documented in this review. The current work appears to be the first of its kind and can be considered a reference standard for future studies.

MATERIALS AND METHODS

Search Criteria

Information collected from various *Nighantu*, *Brihatrayi* (*Charaka Samhita*, *Sushruta Samhita* and *Ashtanga Hridaya*) and published articles, of which few review articles and references thereof were collected.

Shankhapushpi in *Brihatrayi*

All *Brihatrayees* i.e. *Charaka*, *Sushruta* and *Vagbhatta Samhitas* mentioned *Shankhapushpi* as a vital ingredient in various memory enhancer formulations along with other therapeutic attributes. Moreover, *Charaka* has expounded

The *Medhya Guna* of *Shankhapushpi* as '*Medhya Visheshena cha Shankhapushpi*,

Sushruta has considered *Vegavati* herb similar to *Shankhapushpi*. Commentators of *Vagbhatta*, *Indu* has attributed the synonym *Supushpi*. *Chandra* has also named *Shankhapushpi* as *Shankhakusuma*.

Shankhapushpi in *Nighantu*

Dhanvantari Nighantu describes

Rasa Katu (pungent), *Kashya* (astringent)

Guna Guru (heavy), *Sara* (unstable),

Snigdha (oily), *Pichchila* (sticky)

Virya Ushna (hot)

Vipaka Madhura (sweet)

Doshakarma Tridosahara

Bio-energetic Properties

Rasa Katu (pungent), *Kashya* (astringent)

Guna Guru (heavy), *Sara* (unstable), *Snigdha* (oily), *Pichchila* (sticky)

Virya Ushna (hot)

Vipaka Madhura (sweet)

Doshakarma Tridosahara

SCIENTIFIC CLASSIFICATION:

Kingdom	Plantae
Division	Magnoliophyta
Class	Magnoliopsida
Order	Solanales
Family	Gentianaceae
Genus	<i>Convolvulus</i>
Species	<i>Pluricaulis</i>

Habitat

Shankhapushpi is found in regions of Southern India, Sri Lanka, Tropical Africa and South-Eastern Asia. It is a horizontal-spreading, perennial wild herb commonly found on sandy or rocky land under xerophytic conditions and extensively grows on the wasteland in the plains of Punjab, Bihar and Chhota Nagpur in India. Flowering begins during September and October, and flowers vary from white to light pink in colour.

Morphology

Shankhapushpi is a perennial herb and detailed morphology is as following:

Branch: prostrate and can be more than 30 cm long

Stem: ascending or prostrate, 10-40 cm long, densely velvety

with spreading hairs, Leaves: Elliptic in shape (2 cm), linear to oblong, small and sub-sessile, nearly stalkless,

Description of Shankhapushpi in Nighantu

Kaiyadeva Nighantu

Shyamadi Gana, Aushadhi

Rasa -Katutikta,

Guna -sara, Virya -anushna

Properties - *Swarya , rasayan, Varnya , medhya , balya* etc.

Indications - *Luta, kushtha, bhuta, visha, krimi Misharaka Varga*

Dhanvantari Nighantu *Rasa -Katu, tikta, virya -ushna*

Indications - *Kasa, visha, apasmara, medhya, rasayana*

Paryayaratnamala: *Synonyms -Santanika, mechaka, medhya, ashu*

Bhavaprakasha Nighantu

Mishravarga/Guduchyadi Varga

Rasa -Kashaya, guna -sara, virya -ushna

Properties - *Medhya, vrishya, smriti, kanti, bala, agni*

Indications - *Manasaroga, kushtha, krimi, visha*

Raja Nighantu

Guduchyadivarga

Rasa -Tikta, guna -hima

Properties - *Medhya, swarakaraini*

Indications - *Grahabhutadidoshagna, vashikarana*

Rajavallabha Nighantu

Shankhapushpi Gana

Krimivishapaha, properties or indications are mentioned

Phytochemistry

The extract of this botanical contains the alkaloids convolvine, convolamine, phyllabine, convolidine, confoline, convoline, subhirsine, convosine and convolidine along with scopolin and β -sitosterol as major phyto constituents. Ethanol, extracted from *Shankhapushpi*, helps in reducing total serum cholesterol, phospholipids and some types of harmful fatty acids from body. The specific pharmacological action of convolvine has been found to block M2 and M4 cholinergic muscarinic receptors. It was also found that muscarinic memory enhancer that ameliorates cognitive deficits in Alzheimer's disease.

Chemical Constituents

Research into the chemical constituents in Shankhpushpi had found presence carbohydrate-D-glucose, maltose, rhamnose, sucrose and starch, and certain other bio-chemicals which include glacial acetic acid, scopoletin, three coumarins, β -sitosterol, tropane alkaloids, kaempferol, convoline, convolidine, convolvine, confoline, convosine, palmitic acid (66.8%), linoleic acid (2.3%), and straight chain hydrocarbonhextriacontane, 20-oxodotriacontanol, tetratriacontanoic acid and 29-oxodotriacontanol6.

Health Benefits

Reduces gastric ulcers: Gastric ulcers are generally caused when the stomach produces more acid than required and in cases where the eating habits are irregular. In such cases, excess acid can rupture the stomach lining from the inside causing lesions or ulcers. Studies have shown that Shankhpushpi is a very good herb that can reduce gastric ulcers by healing the lesions faster and also by strengthening the mucus membranes and mucosal cells.

Reduces stress: Classically, Shankhpushpi was one of the few drugs that were used to reduce stress levels and put the brain in a relaxed state. Studies on animals with induced stress showed that Shankhpushpi possesses stress and depression reducing properties. Further investigations into the process of stress reduction have to be done.

Neurotoxicity levels: Shankhpushpi is not only a stress reliever and an anti-depressant, but

it can also reduce the effect of toxins in the brain. Studies on lab animals administered with aluminium chloride showed an increased level of neurotoxicity. But administering Shankhpushpi extracts reduced neurotoxicity to a significant extent. Further investigation into the neurotoxicity reducing effects has to be taken up.

Improves memory: Simple memory tests such as pole-climbing apparatus, passive avoidance paradigm and active avoidance paradigm tests were conducted on lab animals which showed an improvement in memory after administering with shankhpushpi extracts.

Analgesic properties: Pain killing or analgesic is one of the important properties of shankhpushpi plant. These pain killer properties are very much useful in dealing with rheumatic pains, arthritis, osteoarthritis, etc. The pain killer effects produced by Shankhpushpi were very similar to a morphine induced ones.

Hyperthyroidism: Excess of thyroid hormones can lead to hyperthyroidism disease. Hyperthyroidism can be reduced by taking shankhpushpi extracts on a regular basis.

Antidiabetic It is an effective remedy for treatment of diabetes synthetic drug requirement was also reduced by the herb.

Main classical uses

Shankhpushpi is used in many formulations in Ayurveda: Shankhpushpipanaka, Medhyakashay.

Mainly, shankhpushpi is used as a brain tonic. It is one of the best in improving

memory. The whole plant of shankhapushpi is used in medical treatment. Its use also prevents memory loss.

It is also beneficial in rejuvenation therapy and works as psycho-stimulant and tranquilizer.

It is also used as one of the most important ingredients in the treatment of hypertension, hypotension, anxiety, stresses e

Shankhapushpi has an effect on overall health and promotes health and weight gain.

It is also one of the best herbs that are used for enhancing beauty and helps in nourishing all the layers of skin.

It also helps in removing certain types of fatty acids that are harmful for the body.

It also helps in reducing the level of cholesterol in blood, including triglycerides, phospholipids and fatty acids.

Shankhpushpi is helpful in improving the nerve tissues and bone marrow quality.

The studies on shankhapushpi have also put forward that it is beneficial in remedying hypothyroidism.

The herb serves to induce a feeling of calm and peace, promotes good sleep and brings relief in anxiety and mental fatigue. It brings a significant reduction in anxiety levels

DISCUSSION

From the classics of *Brihatrayi* and *Nighantu*, it is clear that *Shankhapushpi* has been used to treat a wide range of diseases. CP is an astringent, hot aphrodisiac

and a nervine tonic; it improves strength, digestive power, complexion, voice, and it also cures intestinal worms, animal poisoning, skin disease, cough, dyspnea, diabetes, dysuria

and uterine disorder. It is also helpful in epilepsy, insomnia,

heart disease and haemetemesis. CP must be analyzed clinically in

wake of ethnomedicinal usage. Since no negative CP-drug interaction is reported till date,

more studies in this area remain yet to be accomplished. To summarise the scattered knowledge in ancient and contemporary literature, it is needed to highlight the entities which are worthy of further investigation leading to the drug developments.

CONCLUSION

Shankhapushpi has antioxidant and laxative activities and is also used as brain and nervine tonic. It is also indicated to be used in anxiety, neurosis, epilepsy, insomnia, burning sensation, oedema and urinary disorders. The drug possesses multiple-target actions and several therapeutic claims by virtue of its various active phytomolecules. Thus, though *shankapushpi* has wide spectrum of the properties and uses, some of them could be myths and some of them could be real magic. In future, controlled studies are required to prove more effectiveness of *shankapushpi* under various conditions.

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