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Traditional Indian Herbs *Convolvulus pluricaulis* and Its Medicinal Importance

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Convolvulus pluricaulis is an indigenous plant commonly mentioned in Ayurveda, as a rasayana which is mainly advocated for use in mental stimulation and rejuvenation therapy. *Convolvulus pluricaulis* is a prostrate, spreading, perennial, wild herb commonly found on sandy or rocky ground under xerophytic conditions in northern India. The drug is used as antiepileptic. It is used alone or is administered along with modern antiepileptic drugs. Little human research has been published in the Western medical literature regarding this plant. One study shows *Convolvulus pluricaulis* to have anti-ulcer effects due to augmentation of mucosal defensive factors like mucin secretion and glycoproteins. Another study showed that *Convolvulus pluricaulis* may be helpful in improving symptoms of hyperthyroidism by reducing the activity of a liver enzyme. *Convolvulus pluricaulis* is used as a brain tonic. Is used as a tonic, alterative and febrifuge. It is a sovereign remedy in bowel complaints especially dysentery. The plant is reported to be a prominent memory improving drug. It is used as a psychostimulant and tranquilizer. It is reported to reduce mental tension.

Keyword: *Convolvulus pluricaulis*, Memory Enhancer, Indigenous Plant, Anti-Ulcer Effects.

1. Introduction

Shankpushpi is used traditionally to treat nervous debility, insomnia, fatigue, low energy level. The whole herb is used medicinally in the form of decoction with cumin and milk in fever, nervous debility, and loss of memory. *Convolvulus pluricaulis* is used as a brain tonic. Is used as a tonic, alterative and febrifuge. It is a sovereign remedy in bowel complaints especially dysentery. The plant is reported to be a prominent memory improving drug. It is used as a psychostimulant and tranquilizer. It is reported to reduce mental tension. The ethanolic extract of the plant reduces total serum cholesterol, triglycerides, phospholipids and nonesterified fatty-acid. There is a pertinent reference in Ayurvedic literature about the use of the drug as

brain tonic in hypotensive syndromes. The pharmacological studies of the herb have shown varying degree of its hypotensive and tranquilizing effects. Clinical studies have exhibited demonstrable beneficial effects in the patients of anxiety neurosis. The herb induces a feeling of calm and peace, good sleep and a relief in anxiety, stresses, mental fatigue, producing a significant reduction in the level of anxiety, neuroticism arising due to various levels of stresses. The herb appears to produce its action by modulation of neuro-chemistry of the brain. Further, the herb is non-toxic and its use does not produce any side effects. On the other hand, there is invigorating effect in improvement of health and weight gain. The whole herb is used as an alternative, tonic, and febrifuge. It is used in the

form of decoction with milk and cumin. Regarding this herb, some medical research has been carried out. One study has shown that shankhpushpi includes anti-ulcer effects because of growth of mucosal defensive factors such as glycoproteins and mucin secretion. As per another study, may be helpful to treat the symptoms of the hyperthyroidism by decreasing the liver enzyme activity.

1.1 Biological Sources^[1-9]

Botanical Name(s): *Convolvulus pluricaulis*

Kingdom: Plantae

Division: Magnoliophyta

Class: Magnoliopsida

Order: Solanales

Family: Gentianaceae

Genus: Convolvulus

Species: Microphyllus

Popular Name(s): SankhPushpi, Shankhini, Kambumalini, Shankhpushpi, Sadaphuli.

Parts Used: Entire plant and juice

Habitat: Found in India and Burma

1.2 Description

Convolvulus pluricaulis is a perennial herb that seems like morning glory. Its branches are spread on the ground and can be more than 30 cm long. The flowers are blue in color (5 mm) and the leaves, which are elliptic in shape (2 mm), are located at alternate positions with branches or flowers. Known as Aloe weed in English, the herb is commonly found in India, especially in the state of Bihar. All the parts of the herb are known to possess therapeutic benefits. It is believed to be the only herb that is capable of enhancing all the aspects related to brain power, such as learning, memory and the ability to recall. However, its popularity stems from its ability to treat insomnia effectively.

1.3 Plant Chemicals

Various chemical compositions, such as glucose, sucrose, glycosides, alkaloids and various acids etc., are found in the plant.

Convolvulus pluricaulis is a twining perennial herb considered as the most wonderful gift of nature to the mankind. In Ayurveda (an ancient system of Indian medicine), it is mentioned as a

rasayana which is commonly used as brain stimulator and memory enhancer. The herb has appearance like morning glory with blue flowers situated at alternate positions with flowers or branches. In India, it is commonly found in the state of Bihar. This herb's all parts are used medicinally and have beneficial effect on the body. It is considered to be the only herb which has the ability to enhance all the aspects connected to brain power, for example memory, learning, and the ability to recall.



Fig 1: *Convolvulus pluricaulis*

BOTANICAL NAME » *Convolvulus pluricaulis*

- **SANSKRIT** » Laghuvishnukranta, Nail Pusher, Nilasankhapuspi, Sankhapuspi, *Convolvulus pluricaulis*, Vaishnava, Vishnugandhi, Vishnukranthi, Vishnukranthi, Vishnukanta
- **HINDI** » Shankhpushpi, Shyamakranta, Syamakranta, Vishnukanta, Shankhpushpi, Phooli, Shankaveli, Shankhpushpi, Shnkahuli
- **ENGLISH** » English speedwheel
- **URDU** » Sankhali
- **BENGALI** » Barabutra
- **KANNADA** » Vishnukranthi, Vishnukranthi, Vishnukranti, *Convolvulus pluricaulis*
- **MALAYALAM** » Krsna kranti, Vishnukranthi, Vishnukranthi, Vishnukranthi, Visnuklanti, Visnukranti, Vishnu clandi
- **MARATHI** » Shankavall, Vishnukranthi, Shankhaveli, Vishnukanta, Samkvel
- **ORIYA** » Krishna-enkranti
- **TAMIL** » Vishnu kanthi, Visnukiranti, Vittunukkiranti, Vittunumuli, Aparaci, Piracetam, Vishnukranthi, Vishnukranthi, Vishnukranthi
- **TELUGU** » Vishnukranthi, Vishnukranthi, Vishnukranthi, Visnukrantamu, Vishnukranthi, Erravishnukaraantha
- **TIBETAN** » Khalsa pus syi (d), Sa nkhapu spa Shankhpushpi or *Convolvulus pluricaulis*⁽⁶⁻⁹⁾

Taxonomic hierarchy	<i>E. alsinoides</i>	<i>C. pluricaulis</i>	<i>C. ternatea</i>	<i>C. decussata</i>
Kingdom	Plantae	Plantae	Plantae	Plantae
Sub-kingdom	Tracheobionta	Tracheobionta	Tracheobionta	Tracheobionta
Super-division	Spermatophyta	Spermatophyta	Spermatophyta	Spermatophyta
Division	Magnoliophyta	Magnoliophyta	Magnoliophyta	Magnoliophyta
Class	Magnoliopsida	Magnoliopsida	Magnoliopsida	Magnoliopsida
Sub-class	Asteridae	Asteridae	Rosidae	Asteridae
Order	Solanales	Solanales	Fabales	Gentianales
Family	Convolvulaceae	Convolvulaceae	Fabaceae	Gentianaceae
Genus	<i>Evolvulus</i>	<i>Convolvulus</i>	<i>Clitorea</i>	<i>Canscora</i>
Species	<i>alsinoides</i>	<i>pluricaulis</i>	<i>ternatea</i>	<i>decussata</i>

1.4 Chemical Constituents^[12]

Chemical studies of whole plant have shown the presence of glycosides, coumarins, flavonoids and alkaloids. Shankhpushpi, (the alkaloid) has been identified as active principle. B. sitosterol glycoside, Hydroxy Cinnamic acid, Octacosanol tetracosane along with glucose, sucrose also have been isolated from the plant drugs.

1.5 *Convolvulus pluricaulis*-Brain Tonic in India^[12-16]

Convolvulus pluricaulis is used to treat various disorders related to nervous weakness, problems like insomnia, mental as well as physical fatigue, loss of memory etc. Primarily *Convolvulus pluricaulis* is used as a brain tonic. *Convolvulus pluricaulis* is one of the best and prominent natural medicine which helps in improving memory. From ancient times in India, people of all age groups (especially students, teachers, philosophers, etc.) always have tried *Convolvulus pluricaulis*. *Convolvulus pluricaulis* works as a stimulant for brain in a way to improve its capacity, ability etc. Natural chemical composition in the *Convolvulus pluricaulis* helps brain to calm down and relieves the tension, which is why *Convolvulus pluricaulis* is also used as tranquilizer for those who suffer from insomnia. *Convolvulus pluricaulis* is also used as one of the most important ingredient in treatment of disorders/syndromes such as hypertension, hypotension, anxiety neurosis, stresses etc. Whole plant of *Convolvulus pluricaulis* is used in medical treatment. Various chemical compositions such as glucose, sucrose, glycosides, alkaloids and various acids etc. are

found in the plant which are abstracted and used in medication as they are natural they give best result. *Convolvulus pluricaulis* contains some chemicals which work best against ulcers which are formed as an effect of augmentation of the mucosal defensive factors like glycoproteins and mucin secretion. According to pharmaceutical study *Convolvulus pluricaulis* acts strongly on some of the liver enzymes and helps in improving symptoms of hyperthyroidism. Besides the use of *Convolvulus pluricaulis* as brain tonic, memory stimulant, it is also used as a tonic for those who want to achieve a healthy body. As *Convolvulus pluricaulis* contains natural stimulants/chemical compositions, it helps our body in controlling various factors which cause wear and tear of our body and weight loss. *Convolvulus pluricaulis* helps in treatment of bowel complaints such as dysentery. A chemical composition containing Ethanol formula, which is extracted from the plant helps in reducing total serum cholesterol, phospholipids and some types of fatty acids from our body which are considered harmful. *Convolvulus pluricaulis* is a perennial herb and consider as a most wonderful gift of nature to the mankind and looks like morning glory with blue flowers situated at alternate positions with flowers or branches. *Convolvulus pluricaulis* flowers are blue in color and about 5mm in size the leaves are located at alternate positions with branches or flowers they are elliptic in shape and about 2 mm in size. *Convolvulus pluricaulis* branches are spread around the ground and can be more than 30 cm long. *Convolvulus pluricaulis* herb is commonly found in India, especially in the state of Bihar. It is known as Aloe weed in

English and a botanical name, *Convolvulus pluricaulis*. All part of *Convolvulus pluricaulis* herb are known to possess therapeutic benefits. All parts of *Convolvulus pluricaulis* herb are used as medicine and are very beneficial to the body.

1.6 Medicinal Importance of *Convolvulus pluricaulis*^[13-18]

1. *Convolvulus pluricaulis* best for hypertension

Convolvulus pluricaulis herb is used as medicine for many diseases it is also the most important ingredients for treatment of syndromes- disorders, such as stresses, hypotension, hypertension, anxiety neurosis, etc. *Convolvulus pluricaulis* herbs control the production of body's stress hormones like adrenaline and cortisol in our body and helps in reducing anxiety and stress. *Convolvulus pluricaulis* works as Rejuvenation therapy and works as tranquilizer and psycho-stimulant.

2. *Convolvulus pluricaulis* for neurodegenerative diseases

Due to its memory enhancing property *Convolvulus pluricaulis* herb is useful to treat neurodegenerative diseases like Alzheimer's disease. It has anti-ulcer properties and is helpfulness in alleviating the symptoms of hyperthyroidism, Dementia and reduces the activeness of a liver enzyme.

3. *Convolvulus pluricaulis* Improve Memory

Convolvulus pluricaulis is one of the best and prominent natural medicines for improving memory due to its chemical composition, including phytonutrients like Scopoline β -Sitosterol, Convolvidine, Subhirsine, Convolvine, Phyllabine, Convoline and Confoline. *Convolvulus pluricaulis* is mainly used as a brain tonic and brain stimulator. Daily consumption of *Convolvulus pluricaulis* prevents memory loss. The whole plant of *Convolvulus pluricaulis* is used as medicine.

4. *Convolvulus pluricaulis* for hypertension & ulcers

The *Convolvulus pluricaulis* herb is very helpful in fighting various ulcers which are formed in the body due to mucous secretions and glycoprotein it also improves the nerve tissues and increase bone marrow quality and nerve tissues. *Convolvulus pluricaulis* includes anti-ulcer due to mucosal defensive factors like mucin secretion and glycoprotein's. It also have been studied that *Convolvulus pluricaulis* is best remedy for hypothyroidism.

5. *Convolvulus pluricaulis* for Beauty

Convolvulus pluricaulis herb is used as an alternative, tonic, and febrifuge it is also used for nourishing all the layers of skin and helps in Enhancing Beauty. *Convolvulus pluricaulis* is used in the form of decoction with milk and cumin.

6. *Convolvulus pluricaulis* Cholesterol Decrease

The extract of *Convolvulus pluricaulis* herb helps to decrease the cholesterol level in the blood including triglycerides, phospholipids and helps in removing certain types of fatty acids that are harmful for the body.

1.7 Uses of *Convolvulus pluricaulis*^[18]

1. The *Convolvulus pluricaulis* plant extract is well known for treating insanity and hematemesis.
2. Leaves of *Convolvulus pluricaulis* plant are used to treat bronchitis and asthma.
3. The plant root is herbal remedy to treat childhood fever.
4. *Convolvulus pluricaulis* plant extract avoids fluid retention in the body and supports digestion.
5. The ethanolic extract of *Convolvulus pluricaulis* herb reduces the levels of (NEFA) non esterified fatty-acid which is main cause of death due to cardiac arrest.
6. In Ayurveda *Convolvulus pluricaulis* plant is also used for treatment of epilepsy.

1.8 Traditional Uses of *Convolvulus pluricaulis* In India

Convolvulus pluricaulis is used traditionally to treat nervous debility, insomnia, fatigue, low energy level. The whole herb is used medicinally in the form of decoction with cumin and milk in fever, nervous debility, and loss of memory. *Convolvulus pluricaulis* is used as a brain tonic. Is used as a tonic, alterative and febrifuge. It is a sovereign remedy in bowel complaints especially dysentery. The plant is reported to be a prominent memory improving drug. It is used as a psychostimulant and tranquilizer. It is reported to reduce mental tension. The ethanolic extract of the plant reduces total serum cholesterol, triglycerides, phospholipids and nonesterified fatty-acid. There is a pertinent reference in Ayurvedic literature about the use of the drug as brain tonic in hypotensive syndromes. The pharmacological studies of the herb have shown varying degree of its hypotensive and tranquilizing effects. Clinical studies have exhibited demonstrable beneficial effects in the patients of anxiety neurosis. The herb induces a feeling of calm and peace, good sleep and a relief in anxiety, stresses, mental fatigue, producing a significant reduction in the level of anxiety, neuroticism arising due to various levels of stresses. The herb appears to produce its action by modulation of neuro-chemistry of the brain. Further, the herb is non-toxic and its use does not produce any side effects. On the other hand, there is invigorating effect in improvement of health and weight gain. Ayurvedic classics namely Charak, Sushrita, Ashtanga Sangrah and Ashtanga Harida provide ample reference for management of various diseases. According to Ayurvedic concept, Rasayan therapy simultaneously effects the body and mind and brings about physical and psychic improvement. This therapy prevents the effects, ageing, develops intelligence and increases the body resistance against diseases. There is an imperative need for in-depth scientific investigations on the specific eology of medicines and the procedure of Rasayan Chikitsa discussed in Ayurveda. The World Health Organization has laid down that "Health is a state of complete physical, mental

and social well-being and not merely absence of disease or infirmity". Rasayana drug in Ayurveda may be equated with modern immunomodulator drugs since they possess similar properties and perform similar functions. A twining perennial herb, *Convolvulus pluricaulis* occurs in the plains of Northern Indian and Bihar. The whole plant is one of the most important Medha Rasayana drugs in Ayurveda. Its use improves the balance and vitiation in Kapha-vata-pitta doshas and the herb is astringent and bitter. Chemical studies of whole plant have shown the presence of glycosides, coumarins, flavonoids and alkaloids. Shankhpushp, (the alkaloid) has been identified as active principle. B. sitosterol glycoside, Hydroxy Cinnamic acid, Octacosanol tetracosane along with glucose, sucrose also have been isolated from the plant drugs.

1.9 Plant Chemicals

Convolvulus pluricaulis plant has been very thoroughly studied and many important constituents have been isolated. These constituents have a very profound impact on the health and wellbeing of the human body. Various chemical constituents such as glucose, sucrose, glycosides, nutrients, minerals, anti-oxidants, alkaloids and various acids etc., are found in the plant.

1.10 Health Benefits of *Convolvulus pluricaulis* or *Convolvulus pluricaulis* ^[15, 16]

1. Primarily, *Convolvulus pluricaulis* is used as a brain tonic. It is one of the best and prominent natural medicines that help in improving memory. The whole plant of *Convolvulus pluricaulis* is used in medical treatment. Its consumption also prevents memory loss.
2. The herb is also used as one of the most important ingredients in the treatment of disorders/syndromes, such as hypertension, hypotension, anxiety neurosis, stresses etc.
3. It is also beneficial in rejuvenation therapy and works as psycho-stimulant and tranquilizer.

4. The extract from *Convolvulus pluricaulis* helps in reducing the level of cholesterol in blood, including triglycerides, phospholipids and fatty acids.
5. The herb is helpful in fighting ulcers that are formed in the body due to glycoproteins and mucous secretions, improving the nerve tissues and bone marrow quality.
6. The studies on *Convolvulus pluricaulis* have also put forward that it is beneficial in remedying hypothyroidism.
7. It is also one of the best herbs that are used for enhancing beauty and helps in nourishing all the layers of skin.
8. 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 and neuroticism occurring due to varied stress levels.
9. *Convolvulus pluricaulis* has an invigorating effect on overall health and promotes health and weight gain.
10. It also helps in removing certain types of fatty acids that are harmful for the body.
11. Not much research has been published in the western medical literature on *Convolvulus pluricaulis*. There is one study on the herb, which throws light on its anti-ulcer properties and its helpfulness in alleviating the symptoms of hyperthyroidism, by reducing the activeness of a liver enzyme.

1.11 Medicinal Importance of *Convolvulus pluricaulis*^[10-16]

First and foremost, *Convolvulus pluricaulis* or *Convolvulus pluricaulis* is known to have been used since ages as a brain tonic. It is one of the finest and outstanding natural medications that help in improving memory. The entire plant of *Convolvulus pluricaulis* or *Convolvulus pluricaulis* is employed in medical treatment of brain related ailments like dementia, OCD, phobias and insomnia. Its consumption retards memory loss and has been tried successfully in Parkinson Syndrome and Alzheimer's disease. It

does not prevent the disease but retards the progress of the disease. It is also very beneficial in different types of disorders/syndromes, such as hypertension, hypotension, anxiety neurosis, stresses etc. It also works as psycho-stimulant and tranquilizer. *Convolvulus pluricaulis*, also known as *Convolvulus pluricaulis*, is an Ayurvedic preparation used in India as a mental booster. *Convolvulus pluricaulis* is a brain tonic used to treat nervous conditions, insomnia, memory loss and both mental and physical fatigue. The tonic has been used in India over the centuries due to a chemical composition that is said to help the brain to calm down and relieve tension helping focus and allowing it also to be used for insomnia. In the Ayurvedic preparation of *Convolvulus pluricaulis*, the entire plant is used to create medicinal remedies

1.12 Improving memory with *Convolvulus pluricaulis*:

Take 3 to 6 grams of *Convolvulus pluricaulis* powder with milk early in the morning to enhance the memory power. Fatigue would vanish if you are studying for long hours. Give 2 to 4 grams of *Convolvulus pluricaulis* powder with 1 gram of Sweet Flag (bach) powder to raise intelligence in children and to make them sharp.

Take its powder 2-4 grams, adding it to honey or sugar for 6 months. Wrinkles would disappear from your face in the old age. Memory power and astuteness would be increased. For Sharp memory take 3 to 6 grams *Convolvulus pluricaulis* powder and honey with milk.

1.13 Treating Epilepsy with *Convolvulus pluricaulis*:

Take 2 grams of *Convolvulus pluricaulis* juice with honey to cure epilepsy.

Take powders of *Convolvulus pluricaulis*, Sweet flag and Brahmi in equal quantities. To cure epilepsy, hysteria and delirium take 3 grams of this mixture twice a day.

Dry in the shade 1 kilogram of *Convolvulus pluricaulis* add 2 kilograms of Sugar and make powder. Sieve it and fill in bottles. Take 5 to 10 grams with milk for better memory.

Convolvulus pluricaulis juice 10-20 grams, powder of Saussurealappa roots (kooth) 500 grams with honey to cure epilepsy. Take swaras of *Convolvulus pluricaulis* with honey to cure the state of delirium.

1.14 Treatment for Head Ache with *Convolvulus pluricaulis*.

Convolvulus pluricaulis 1 gram, Black Henbane 250 milligrams with hot water to remove headache within 5 minutes.

1.15 Treatment for Vomiting with *Convolvulus pluricaulis*:

Take panchang of *Convolvulus pluricaulis* juice, 2 spoons, add one quid of black pepper powder and give it with honey over and over again to control vomiting.

1.16 Cure for Bed Urination with *Convolvulus pluricaulis*:

If child is urinating in their bed at night times, give *Convolvulus pluricaulis* powder 2 grams and black sesame 1 gram along with milk to check bed urinating problem.

1.17 Treatment of Diabetes with *Convolvulus pluricaulis*:

Take *Convolvulus pluricaulis* 6 grams morning and evening along with cow's butter or with water to control diabetes.

To overcome the weakness caused by diabetes, take 2-4 grams of powder or swaras of 10-20 mg.

1.18 Treatment for Sun Stroke with *Convolvulus pluricaulis*:

When the patient would get unconscious state and babbling, you may give *Convolvulus pluricaulis* powder 5-10 grams with milk and honey for the benefit of the patient.

1.19 Treatment for Bleeding with *Convolvulus pluricaulis*:

Take 10-20 grams swaras of *Convolvulus pluricaulis*, add it with honey to control bleeding.

1.20 Treatment for High Blood Pressure with *Convolvulus pluricaulis*:

Take fresh swaras of *Convolvulus pluricaulis* 10-20 mg. every morning and evening for some days to get rid of High blood pressure.

2. Conclusion

Convolvulus pluricaulis is a perennial herb that seems like morning glory. It is believed to be the only herb that is capable of enhancing all the aspects related to brain power, such as learning, memory and the ability to recall. However, its popularity stems from its ability to treat insomnia effectively. Clinical studies have exhibited demonstrable beneficial effects in the patients of anxiety neurosis. The herb induces a feeling of calm and peace, good sleep and a relief in anxiety, stresses, and mental fatigue, producing a significant reduction in the level of anxiety, neuroticism arising due to various levels of stresses. The herb appears to produce its action by modulation of neuro-chemistry of the brain. Further, the herb is non-toxic and its use does not produce any side effects. On the other hand, there is invigorating effect in improvement of health and weight gain

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