



Convolvulus prostratus Forssk. A Review on its Medicinal Applications

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Abstract

Convolvulus prostratus is an herb used in ancient medicine systems, is also frequently known by its another synonym *Convolvulus microphyllus* and *Convolvulus pluricaulis*. The plant having important ingredient which is used in several herbal formulations i.e enhance memory or as brain and nerve tonic. The plant parts having several other medicinal importance which is used in several traditional systems of medicine. The review highlights the medicinal applications of *Convolvulus prostratus*.

Keywords: *Convolvulus prostrates* Forssk., Convolvulaceae, medicinal, Shankhpushpi

Introduction

The herb, known for its memory-boosting properties, belongs to the Convolvulaceae family, commonly referred to as the morning glory or bindweed family (Ahmad *et.al.*, 2007). In Indian traditional system it is also known as ‘Shankhpushpi’ (Ganie *et. al.*, 2015). The word ‘shankhpushpi’ is originated from Sanskrit. In Indian traditional medicinal system, some plants have been classified into “medhya rasayana” the word ‘medhya’ meaning ‘cognitive capacity’ and ‘rasayana’ means ‘rejuvenation’. This herb is commonly found in xerophytic environments and open wastelands across Northern India (Malik *et. al.*, 2011). Plants are good source of herbal



medicines as well as modern medicines.
Ayurvedic treatment are more beneficial for

neurological disorders (Semwal *et. al.*,
2020).

Table 1. Taxonomic position of *Convolvulus prostratus* Forssk. (Singh, 2019).

| | |
|-----------|---------------------------|
| Kiingdom | Plantae |
| Division | Magnoliophyta |
| Class | Magnoliopsida |
| Sub class | Asteridae |
| Order | Solanales |
| Family | Convolvulaceae |
| Genus | <i>Convolvulus</i> |
| Species | <i>prostratus</i> Forssk. |

Table 2: Morphology and Taxonomy of plant *Convolvulus prostrates* Forssk.

| Description | Characters bears by <i>C. prostrates</i> |
|------------------|---|
| Growing Area | Wastelands |
| Habitat | Perennial herb |
| Leaves | The leaves are without stalk, invert lance shaped or lance shaped. Leaves are hairy. |
| Inflorescence | Axillary solitary |
| Flowers | Flowers are 1 to 3 together, Monoecious, 2 small bracts. |
| Calyx | Calyx is long- pointed, unequal and hairy. |
| Corolla | Corolla is pale pink or white, funnel shaped, mid-petaline areas are velvety. |
| Androecium | Stamens are five (5). |
| Gynoecium | Ovary are 2 celled and glabrous. |
| Stigma | Stigma are 2 and lobed. |
| Fruit and Seeds | Fruit is capsule and round and seeds are dark brown in colour. |
| Flowering season | October to January. |



(Chouhan *et. al.*, 2023 and Singh, 2019)

Review of Literature

The different parts of the plant or the entire plant are used to prepare various formulations such as powders, pastes, and syrups for different medicinal condition (Pritika, 2021). The name ‘Shankhpushpi’ encompasses several plant species in India, including *Convolvulus prostratus* (Convolvulaceae), *Evolvulus alsinoides* (Convolvulaceae) and *Clitoria ternatea* (Fabaceae). Although all share cognitive

benefits, *Convolvulus prostratus* Forssk. stands out for its potent memory-boosting properties, making it the preferred choice for Shankhpushpi (Karnam *et. al.*, 2022). The plant having wide range of commercial importance i.e. cosmeceuticals, nutraceuticals, pharmaceuticals (Bhowmik *et. al.*, 2012). A comprehensive overview of medicinal applications of *convolvulus prostratus* Forssk. in the table below.

Table 1: Medicinal uses of *Convolvulus prostratus* Forssk.

| Plant name | Medicinal uses with recipe | References |
|------------|---|---------------------------------|
| | The syrup made from Piper nigrum and <i>C. prostratus</i> Forssk. is used to treat sexual illnesses and bleeding piles. | (Chouhan <i>et. al.</i> , 2023) |
| | It is also used in treatment of mental related problems and Alzheimer. | (Pritika, 2021) |
| | One spoon powder of whole plant is used to treat stomach achne. | (Katewa and Jain, 2006) |
| | Similar to sucralfate, the fresh entire plant juice of <i>Convolvulus pluricaulis</i> had a gastroprotective action. Plant juice is used for the prevention of excessive menstruation. The herb can be ground into a fine paste that helps heal abscesses. | (Agarwa <i>et. al.</i> , 2014). |



| | | |
|--|--|--|
| <p><i>Convolvulus prostratus</i> Forssk.</p> | <p>Sankhahauli includes 15g of <i>Convolvulus prostratus</i> Forssk. leaves, 3g of <i>Piper nigrum</i> seeds, 20g of <i>Papaver somniferum</i> seeds, 10g of <i>Prunus amygdalus</i> whole plants, 20g of <i>Vitis vinifera</i>, and 10g of <i>Coriandrum sativum</i>. This composition is primarily used to treat drug addiction, hypertension, and sleeplessness.</p> <p>A paste made from flowers and leaves is used to treat bone fractures.</p> | <p>(Balkrishna <i>et. al.</i>, 2020)</p> |
| | <p>It is used to treat the cytotoxicity, epilepsy, bacterial diseases, viral diseases.</p> | <p>(Gupta <i>et. al.</i>, 2023)</p> |
| | <p>Mix equal proportions of Shankhpushpi, Vach, and Brahmi powders. Take 3 grams twice a day to support neurological health and alleviate symptoms of epilepsy, hysteria, and delirium.</p> <p>Consuming 3 to 6 grams of plant powder in early morning with milk can improve mental sharpness in children.</p> <p>Combine Shankhpusphi juice with small amount of black pepper powder and honey and take to control vomiting and nausea.</p> | <p>(Bhowmik <i>et. al.</i>, 2012)</p> |

| | | |
|--|---|---|
| | <p>The oil is obtained from the plant bear keratogenic activity which promotes hair growth.</p> <p>Mixture is prepared from flowers and roots having anti- aging effects showing antioxidant property</p> <p>Leaves are used as such to treat asthma.</p> | <p>(Gogte, 2012)</p> <p>(Adams <i>et. al.</i>,2007)</p> <p>(Mishra and Sethiya,2010).</p> |
|--|---|---|



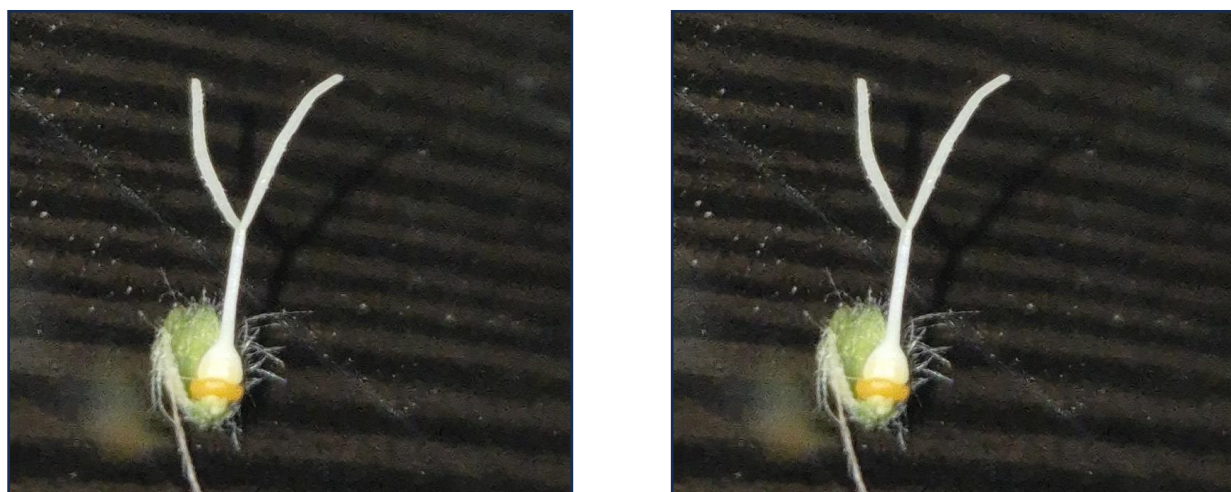


Figure 1: *Convolvulus prostratus* Forssk.

Discussion and Conclusion

The use of herbal medicines increases day by day and people again trust on traditional medicines for primary health care needs. The plant-based product has negligible toxicity. The study comprehensively reviewed the medicinal importance of *Convolvulus prostratus* Forssk. The plant is used from ancient time as memory booster and to treat various ailments including insomnia, hypertension, bone fracture, excessive menstruation and anti-Ulcerogenic effect, antidiabetic, neural related, antigastric, antioxidant, hypolipidemic (Dhuna *et. al.*, 2012). The demand of drug increasing because of this plant species has been over-exploited and

habitat degradation, therefore it requires protection (Ganie *et. al.*, 2015). Some other plants are also known as ‘Shakhpushpi’ but the real source of ‘Shankhpushpi’ is *Convolvulus prostratus* Forssk. (Malik *et. al.*, 2011). Despite extensive research was already done on *Convolvulus prostratus* Forssk., a major issue persists: identifying the authentic source of Shankhpushpi remains unclear to many.

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