

PHYTOCHEMICAL AND MEDICINAL USES OF ARGYREIA NERVOSA PLANT**S.M. Nagrale**Shri R.L.T. College of Science, Akola (MS), India
sushilnagrale75@gmail.com.**ABSTRACT**

Argyreia nervosa is a perennial climber native to the Indian subcontinent and introduced to numerous areas worldwide. Though it can be invasive, it is often prized for its aesthetic and medicinal value. Common names include **vidhara** (in Sanskrit), **elephant creeper** and **woolly morning glory**. *Argyreia nervosa* seeds contain various metabolites like ergoline, alkaloids such as ergine. Study reported presence of ergometrine, lysergol, lysergic acid and other alkaloids that shows its pharmacological effects. It is a popular Indian medicinal plant, which has long been used in traditional Ayurvedic Indian medicine for various diseases. This plant was pharmacologically evaluated for hepatoprotective, antioxidant, antiinflammatory, antihyperglycemic, antidiarrheal, antimicrobial, antiviral, nematocidal, antiulcer, anticonvulsant and analgesic activities. Phytochemical, medicinal values and dietary uses of *Argyreia nervosa* plants are discussed here.

Keywords: *Argyreia nervosa*, alkaloids, ergoline, leaf, seeds

Introduction

There has been an explosion of scientific information concerning plants, crude plant extracts and various substances from plants as medical agents during the last 20 to 30 years. Numbers of plants are claiming various medicinal uses and many researches are going on in this view. One such plant, *Argyreia nervosa* synonym of *Argyreia speciosa* (L. f.) Sweet, which have various medicinal properties is widely used in Ayurveda, the ancient traditional medicinal system in India. *Argyreia nervosa* is a perennial climber native to the Indian subcontinent and introduced to numerous areas worldwide. Though it can be invasive, it is often prized for its aesthetic and medicinal value. Common names include **vidhara** (in Sanskrit), **elephant creeper** and **woolly morning glory**.

Taxonomy

Kingdom: *Plantae*
Subkingdom: *Tracheobionta*
Super-division: *Spermatophyta*
Division: *Magnoliophyta*
Class: *Magnoliopsida*
Subclass: *Asteridae*
Order: *Solanales*
Family: *Convolvulaceae*
Genus: *Argyreia*

Synonyms

Argyreia speciosa (L. f.) Sweet, *Argyreia nervosa* (Burm.f.) Bojer

Vernacular name

Hindi: Samandar-ka-pat, Samundarsokha, Ghav-patta
Marathi: Samandarshokh, Samudrasoka
Sanskrit: Vidhara, Vryddhadaraka, Samundrasosha
Urdu: Samandarsosha
English: Elephant creeper, Woolly Morning-Glory

Material and Methods**Collected and preparation of material**

The fresh Aerial part collected from local area, (Dist-Akola, Maharashtra). The plant was authenticated by Botanical Survey of India (BSI) and reference book. The whole aerial part was dried under shade and powdered by the help of mechanical process. Powder of whole aerial part was stored in a suitable place.

Crude Extraction for Phytochemical evaluation

The dried powder plant material was extracted with ethyl acetate and methanol, by successive cold maceration method. The powdered drug was extracted for 7 days with each solvent. The extract was then filtered using filter paper and the filtrate so obtained was evaporated in a distillation unit (Harborne, 1998).

Qualitative tests for the presence of plant secondary metabolites such as carbohydrates, alkaloids, flavonoids, proteins, saponins and glycosides were carried out on powder drug

and extracts using standard procedure (Shah and Nayak, 2008).

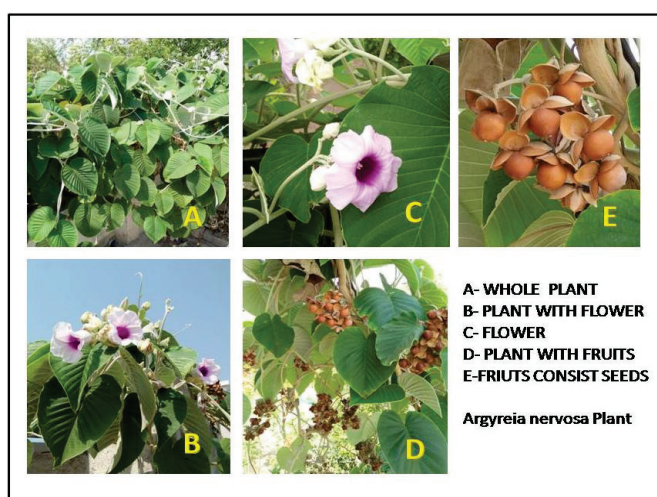
Medicinal investigation of plant

Medicinal investigation of whole plant was carried out by using reference books and survey of locally uses of plant parts as medicine.

Results and Discussions

Morphology

Argyreia nervosa is a native to India. It has large, leathery heart shaped leaves which are white on the lower side due to hairs. It also called elephant creeper because of its large leaves which look like elephant ears. Leaf blades are 15-25 cm long and 13-20 cm wide, heart shaped. Flowers are trumpet shaped 5-7 cm long with white velvety stalk. Sepals are 1.3-1.5 cm long velvety like the leaves. Flower colour is lavender to pink and throat being darker shade. Fruits brown in colour and woody capsule.



Chemical constituents

The plant contains tannin and resin. The seed are reported to contain alkaloids, chanoclavin ergine, ergonovime and isorgine. The extract of seeds exhibits hypotensive and hallucinating activity. The leaf contain 1-triacontanol and its acetate and β -sitosterol.

Preliminary Phytochemical evaluation

Preliminary phytochemical evaluation shows that the powder shows presence of almost all secondary metabolite, Ethyl acetate extract of plant part from shows the presence of phytosterols, glycosides, flavonoids, alkaloids and phenolic compounds while methanol extract shows the presence of carbohydrates, protein, amino acids, fixed oil, phytosterols, glycosides, flavonoids, alkaloids and phenolic compounds.

Medicinal Uses

1. Leaf is slightly heated and applied over wounds associated with pus for quicker ripening of the wound and proper healing.
 2. The cold infusion or the decoction of plant is given in a dose of 40-50ml to control diabetes
 3. The powder of the root is given in a dose of 2-5g to treat oligospermia.
 4. The powder of the root is given in a dose 2-3 g to of insomnia.
 5. The decoction is given in dose of 30-40ml to treat nerve weakness and improve the strength of the cardiac muscles
 6. The juice of the leaf is used to treat indigestion, lack of appetite and aphrodisiac and should be usually those desiring progeny.
- phytochemical studies greatly help in the correct identification of the crude drugs and also in the preparation of commercially viable phytodrugs (Muthukumaraswamy S *et al.*,

2003). Phytochemical studies play an important role in detecting the chemical compounds, their structural characteristics and biosynthetic origin (Harborne J. B. 1998). Therefore, preliminary screening for bioactive extracts would be beneficial.

Conclusion

Plants used for traditional medicine contain a wide range of substances that can be used to treat chronic as well as infectious diseases. The

present study showed that all plant extracts of *A.nervosa* has good medicinal values. With its vast and diversified pharmacological potential, it has a strong future in the field of herbal medicine.

Acknowledgement

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