

**AYURVEDIC REVIEW ARTICLE ON LANGALI****Dr. Saurabh Gite\*<sup>1</sup>, Dr. Nayana Hingmire<sup>2</sup> and Dr. Vijay patil<sup>3</sup>**

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Article Received on  
01 March 2024,

Revised on 21 March 2024,  
Accepted on 11 April 2024

DOI: 10.20959/wjpr20248-32019



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**ABSTRACT**

Langali, a drug of herbal origin, has been used by the Ayurvedic physicians, for the management of different disease conditions. The botanical source of the plant is *Gloriosa superba* Linn. of the family liliaceae. It is a climber with very attractive or glorious flowers hence the name as such. Agadtantra is a branch of Ayurveda which deals with the symptoms and treatment of various animal, plant, artificial, latent poisons. The drug Langali (*Gloriosa superba* Linn) has been categorized as one of the nine Upavishas (semipoisonous) of Ayurvedic pharmacopoeias. Langali is commonly used as an abortifacient. It is used in various compound formulations in the treatment of poisoning. In this article an attempt is made to collect the information regarding its poisonous effects, treatment and its therapeutic usage after purification, and information regarding Langali in Agadtantra perspective.

**KEYWORDS:** Agadtantra, Ayurveda, Langali, Upavisha.

**INTRODUCTION**

Agadtantra is a branch of Ayurveda which deals with the symptoms and treatment of various animal, plant, artificial and latent poisons. The drug Langali (*Gloriosa superba* Linn) is being categorized under Moolavisha (poisonous roots) and is also one among the nine Upavishas (semi poisonous drugs) by different Ayurvedic pharmacopoeias. Even though it is poisonous

it has got Shothahara (anti-inflammatory), Vranahara (wound healing), Krimigna (wormicidal), Shalyaharana (removal of foreign substances), Garbapaatana (abortificant) properties etc.

### Medico legal importance

Accidental

Mostly, Due to its use in therapeutic medicine,

For criminal abortion it is introduced in vagina. Homicidal,

Suicidal: Rare

Fatal Dose: 60 mg in adults.

Fatal Period: 12 to 72 hours

Poisoning symptoms according to Ayurveda There is nausea, vomiting, diarrhea, pain in abdomen, hypotension, weak pulse rate, convulsions, etc.<sup>[1]</sup>

Treatment for Langali poisoning according to Ayurveda

1. Intake of andraka alone cures visha of langali.
2. Consumption of chanampayar (*Lens culinaris*), bhumyamalaki, and ardraka in equal quantity.
3. Consumption of kwatha of bibhitaka twak.
4. Consumption of shigrumoolarwak xwarasa and dadhi in equal quantity.
5. By external application and intake of neelimoola and maricha.
6. Intake of haritaki kwatha.
7. Consumption of shigrutwak with madhu.
8. Consumption of shunthi kalka with ushna jala or lepa in whole body.<sup>[2]</sup>
9. Boiling shunthi in water and then consuming it.<sup>[3]</sup>

Shodhana of Ashuddha Langali

Shodhana is the process, which involves the conversion of any poisonous drug into non-poisonous one and at the same time beneficial for the body. It is combination of processes which removes unwanted material from the drug & controls its toxic effect thus enhancing the properties of drug.

Brihatruvee does not report the shodhana of Langali, it is only considered mulajavisha by Charaka. Other classical texts of Ayurveda, categories it under upavisa varga and has given

certain shodhana procedures, before its internal administration. Different methods are as follows-

1. Soaking langali in gomutra for 1 day, 2. By mixing pieces of langali with saidhav lavana
3. By making a solution of takra and saindhava Lavana then immersing pieces of langali in it for 3 days. The pieces should be immersed during night time then dried during day time in sunlight. After completion of 3 days, wash the pieces of langali with warm water and dry it in sunlight.<sup>[4]</sup>
4. Soaking langalikanda in gomutra for 1 day, then in the kwath of guduchi and tanduleeyaka moola for 30 nazika (30x24 minutes). Then in godugda for 1 day.<sup>[5]</sup>

Pharmacological/Therapeutical applications Langali (*Gloriosa superba* Linn.) [Ayurvedic aspects proved through Researches) Analgesic and Anti-inflammatory activity

Ayurvedic aspect

Root powder is given to treat rheumatic fever. 2 Seeds are used for relieving rheumatic pain and muscular pain.

Ethnomedicinal uses

The tuberous root stocks of *Gloriosa superba* is boiled with sesamum oil and applied twice a day on the joints, affected with arthritis to reduce pain, Seeds and tubers are used to cure gout and rheumatism, The plant rhizome is used as poultices to relieve neuralgia, used in topical applications to treat arthritic conditions, sprains, dislocations and swellings of the joints

Treatment According to Modern<sup>[6]</sup>

The patient requires immediate hospitalization, followed by gastric lavage. There is no specific antidote which is available for the treatment. Fluid resuscitation and/or ionotropic support for correction of fluid loss. Assisted ventilation for patients with respiratory depression. Dialysis for patients with renal failure and oliguria. Prophylactic antibiotic therapy is advisable if leucopaenia is present. Vitamin K and fresh frozen plasma should be given if the clotting time is abnormal.

### **Taxonomy**

Botanical Description: A perennial herbaceous climbing herb growing 3.5 to 6.0 meters in length.

Tubers: V or L-shaped, finger-like that are pure white when young, becoming brown with age.

Leaves: Pointed, dark green, glossy, each equipped with a tendril by means of which it clings onto other plants. Occur in whorls of 3 to 4. opposite or alternate, simple, sessile, ovate to lanceolate ranging from 6 to 20 cm in length and 1.5 to 4 cm wide.

Flowers: Attractive borne on long stalks. Have six erect petals ranging in colour from bright yellow to bicoloured, red and yellow or purple and yellow. The genus derives its name from the Latin word 'gloriosus' referring to the flowers.

Fruits: Capsules that split open to release several smooth red seeds with a spongy test (Maroyi et al., 2011).

### **AIMS AND OBJECTIVES**

1. To study the concept of Langli (*Gloriosa superba*) according to Ayurveda.
2. Study to concept according to *Gloriosa superba* modern science.

### **MATERIAL AND METHODS**

All available authentic books viz. Samhitas, books of modern science and books of toxicology.

### **DISCUSSION**

#### **Shodana (purification) of Langali**

Purificatory measures are mentioned in both Grandas in which Takra and Saindhava are made solution and pieces of Langali are immersed in 5 3 days or 7 days, UV spectroscopy method was used to analyze the media (Takra and Saindhava) before and after Shodhana to provide objectiveness to the process of Shodhana and role of media in the process. Loss on drying, total ash, water soluble extractive and alcohol soluble extractive were found to be increased in the samples after Shodhana with the media as compared to the samples before Shodhana, while acid insoluble ash was found to be decreased after Shodhana procedure. Qualitative analysis shows presence of alkaloids, saponins, tannins and carbohydrates in the samples before and after Shodhana although their quantification was not done.

#### **Abortificant property and Cardiovascular effects**

Phytochemical analysis as well as toxicity (in mice) and antifertility studies, uterotrophic assay, duciduomamodel, uterotonic assessment in-vitro and. in-vivo of aqueous extract was carried out in rats. Oxytocin was used as the uterotonic reference standard. The effect of the extract on cardiovascular parameters was also evaluated. Phytochemical analysis shows presence of flavonoids, tannins, alkaloids, and glycosides in the aqueous extract of *Gloriosa*

superba. The aqueous extract of *Gloriosa superba* showed oxytocic activity and early abortiflucant activity which may be due to the presence of alkaloids such as colchicine. Both the reference (oxytocin) and the extract produced dose dependent contractions but the extract had no effect on heart parameters and blood pressure.<sup>[7]</sup>

### **Gynecological disorders**

#### **Ayurvedic aspect**

In case of painful labor langali churn is given to ease childbirth. For fetus expulsion root of langali is placed in the vagina, The paste of the rhizome is applied to the palm, sole, and lower part of belly for easing childbirth.

#### **Ethnomedicinal uses**

20 gm root paste. 7 black pepper with goat milk is given to induce abortion, Roots of Langali and seeds of piper nigrum are grounded together then 2 spoonful of this paste

### **Skin diseases Ayurvedic aspect**

Langali is used in the treatment of kushta,

In skin diseases paste of langali mool is applied over the affected areas,

#### **Ethnomedicinal uses**

Roots and leaves are used in parasitical skin. infections, Tuber paste is applied on the affected parts once every two days till it cures, Rhizome paste is rubbed on the body externally for 3 days in Leprosy 1571 Seed paste is applied externally in dermatitis, 18 The sap from the leaf tip is used as smoothening agent for pimples and skin eruptions.

### **Male fertility-suppressing activity**

#### **Ethnomedicinal uses**

Used as herbal contraceptive.

### **Tumors**

#### **Ethnomedicinal uses**

Warm poultice of root tuber is applied over the Seeds are used to cure cancer related diseases.

### **CONCLUSION**

Medicinal plants have been used in healthcare system since many decades, because of the presence of various bioactive compounds present in them. This plant *Gloriosa superba* has showed a number of pharmacologically important phytochemicals such as colchicine and

gloriosine which are toxic but after proper shodhana, it becomes a potent therapeutic agent to treat various ailments. *Gloriosa superba* has been claimed for potent activity confirming its various traditional and ayurvedic uses. It is believed that the medicinal properties and biological activities mentioned in this review will help researchers to explore this plant to a further extent. Thus, randomized trials should be done to explore the mentioned traditional and ayurvedic uses of the plant.

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