

Uses of Kal-lavi (*Gloriosa superba* Linn.): An Ethnomedicinal Perspective

¹M. B. Patil and Y. P. Gavale

¹Department of Botany, J.E.S's, Arts, Science and Commerce College, Nandurbar
E-mail¹; drmadhukarpatil@gmail.com

Abstract

The current work is based on the ethnomedicinal prospective of *Gloriosa superba* Linn in various area of India. *Gloriosa superba* Linn is an important medicinal plant which is used in various drug formulations of tribes for different ailments. The study focused on the different tribes, and their utilization methods of *Gloriosa superba* Linn in different area with respects to diseases and plant part used. Around 36 tribes use as a medicament and also being used as an Abortifacient, leprosy, lice, rheumatism etc.

Key words: *Gloriosa superba*, Tribes, Medicinal Plants and Ethnomedicines

Introduction

About 2500 plant species are used for medicinal purposes by traditional healers in India (Madhukar B. Patil 2016a). World Health Organization reports 21000 plant species possessing medicinal properties. Among them 2500 plant species are used for medicinal purposes by traditional healers in India (Chandel *et al.* 1996). About 43% of plants from Indian subcontinent (approximately 7,500 species) are reported to have medicinal value (Pushpangadan 1995 and Patil MB *et al.* 2015a). These all traditional medicine has served as alternative medicine for new pharmaceuticals, and health care products developments in near future (Patil MB *et al.* 2015b).

Gloriosa superba Linn is locally known as Khadyanag around north Maharashtra region of Maharashtra state, it is climbing herbs with tuberous rootstock. Tubers are used in veterinary medicine like root infusion is fed to cattle, to expel intestinal worms (Patil MB *et al.* 2015a). Various authors reported the medicinal value and importance of *Gloriosa superba* Linn.

Madhukar B. Patil 2016b reported that Root tuber extract is given orally for twice a day for 3days as an Abortifacient.

Gloriosa superba Linn., (Liliaceae), a glorious herbaceous climber with underground tuberous rhizome is found throughout India, upto an altitude of 2000 m, in Khasia hills, Bihar, Odisha, W. Bengal, Gujarat, Konkan and Andaman Islands (Sharma *et al.* 2002). Root of this plant is used as an ingredient in many Ayurvedic classical formulations and indicated for various clinical conditions such as, shotha (inflammation / oedema), vrana (wound), gandamala (lymphadenitis), charmaroga (skin diseases), khalitya (hair loss), agnimandya (loss of appetite), arsha (piles), vatavyadhi (joint pain / arthritis) and many others (Bhide 1999). Root of langali is enlisted as an essential drug, to be kept in delivery room (Caraka *et al.* 2005) and especially indicated in delayed labour and expulsion of placenta (Ibidem 2002), Other than Ayurvedic classical texts, traditionally many tribal's use this plant for curing various ailments. Despite of being a useful plant, information regarding its ethnomedicinal uses is not available in a single place. Ayurveda advocates to report those uses for the benefit of the society (Sharma PV and Guruprasad Sharma 2005). Many such uses of plants have been recorded during various survey studies and reported in different ethnobotany and ethno-medicinal research journals. Single hand information on an individual plant about its ethnic uses is lacking. Recently the demand of *Gloriosa superba* has been increased due to its colchicine content, which is used in various clinical conditions such as acute gout, (Ian *et al.* 2003) acute pericarditis, (Massimo *et al.* 2012) cirrhosis of liver, (David *et al.* 1988) severe constipation (Frame *et al.* 1998) etc.

An attempt has been made to gather information regarding the reported ethnobotanical uses of *Gloriosa superba* from various ethnobotanical journals (Mitra *et al.* 2009) research journals (Silja *et al.* 2008), and books (Massimo *et al.* 2012). The information obtained is arranged in a tabular form, concerning the use of the plant in different tribes, reported from different parts of India, local name of the plant, parts used indications and mode of administration etc (Ambastha *et al.* 1986).

Research Background

Around 46 articles and 7 books related to ethnobotany were searched for traditional uses of Langali from which about 29 clinical conditions were observed. The claims regarding this plant are

depicted in Table and number is depicted in Graph 1. The conditions are abortion, cancerous wounds, scorpion bite, painful delivery, suppressed urination, arrow poisoning, epilepsy, stomachic, anthelmintic, skin troubles, rheumatism, joint pain, asthma, sinusitis, contraceptive, gout, dandruff, head lice, antivenom for snakebite, small pox, piles, abdominal pain and intestinal worms. It is also useful in veterinary practices like foot and mouth disease (anthrax) and easy delivery of cattle. Various actions of *Gloriosa superba* have also been evaluated scientifically which support the reported claims about this plant (Madhukar B. Patil 2015a).

Table 1: Various reported indications of Langali (*Gloriosa superba* Linn.)

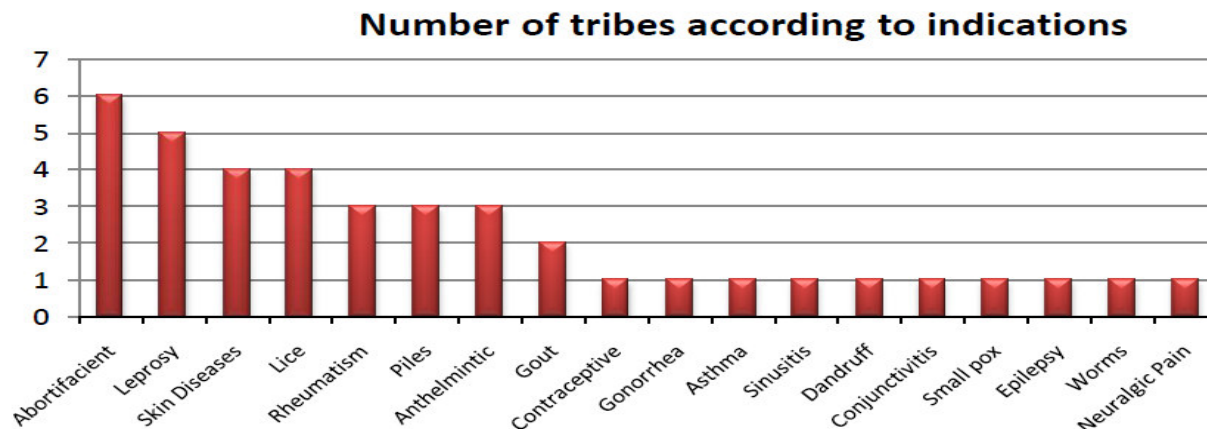
Sr. No.	Local name	Part used and form / mode of application	Uses	Tribal area
1.	Ulatchandal (B); Samansom (O); Selep Samonom (S); Daini (H)	20 gm root paste with 7 black pepper and goat milk	Induce abortion ^{[10][11]}	Oraon
2.	Kalihari (H)	Bulb boiled with mustard oil, leaves, seeds	Cancerous wounds ^[12]	Chhattisgarh
3.	Bhadrosi Kalihari	Plant	Edible ^[13]	Kalpi
4.	Kalihari (H)	Grinded rhizome with ghee orally	Induced abortion ^[14]	Gond
5.	Menthonni (Mal)	Root paste on bitten spot	Scorpion bite ^[15]	Mullu kuruma
6.	Langalya (Ba)	Tuber powder, leaf extract	Painful delivery, suppressed urination ^[16]	Jaunsuri
7.	Kalihari, Ranchendi, Kachla (Bh)	Aqueous extract of bulb	Arrow poisoning ^[17]	Jhabua
8.	Senganthal (Tm)	Rhizome paste	Wound ^[18]	Malayali
9.	Kanvalipoo, Kazhappaikilangu (Tm)	Tuber paste, seed	Tuber for inflammation and abortion, seeds for epilepsy ^[19]	Malayali
10.	Akkinchilam (Tm)	Tubers	Used as stomachic, anthelmintic and skin troubles ^[20]	Salem

Critical Observations

Tribal's who only uses langali for many disease conditions but also in the classical texts of Ayurveda, langali is used in 158 formulations having an indication in more than 30 disease conditions like aparapatana (removal of placenta), vrana (vrana), agnimandya (loss of appetite), jvara (fever), grahani (irritable bowel syndrome), kasa (cough), hikka (hiccough), kushtha (leprosy), shvitra (leucoderma), visarpa (erysipelas), arsha (piles) etc (Madhukar B. Patil 2015a).

Regions of India: The plant is being used in about twelve regions/states of India viz. West Bengal (Purulia), Chhattisgarh (Raigarh), Madhya Pradesh (Balaghat, West Nimar, Jhabua), Uttar Pradesh (Meerut), Jharkhand, Kerala (Wayanad), Tamil Nadu (Kanyakumari, Salem, Kolli hills, Pallapatty,

Coimbatore), Maharashtra (Jalgaon, Nandurbar), Odisha (Phulbani), Assam (North Cachar Hills), Rajasthan (Udaipur, Aravalli hills) and Karnataka (Bidar, Gulbarga).



Tribes:

The thirty five tribes who use Langali are: Santal, Munda, Oraon, Irular, Baiga, Gond, Mullu Kuruma, Pawara, Mavachi, Kokani, Tadvi, Kodava, Bhilala, Bhil, Garasia, Damor, Gamati, Kathodia, Menna, Kharadi, Mohradi, Randhor, Parmar, Meghwal, Chakma, Marma, Tripura, Kondareddi, Bhumij, Lambanis, Korwa, Korku, Dimasa, Malayali, Jaunsuri (Satyavati *et al.* 1981). The plant is also reported to be useful for leprosy, lice, piles, scorpion bite among 5, 4, 3 and 2 tribal communities respectively. The drug is used for cancerous wound, epilepsy, contraceptive, gonorrhea, asthma, sinusitis, dandruff, small pox and conjunctivitis among one tribal community; though the drug is used for various diseases among the tribes further researches are required to support the reported data (Patil *et al.* 2011 and Madhukar B. Patil 2015a). Colchicine is the major constituent of *Gloriosa superba* and its demand is increasing day by day. This has led to exploitation of this plant all over the world.

Conclusion

Totally **36** tribes use langali (*Gloriosa superba* Linn.) as a medicament. It is being used as an abortifacient and for the management of 29 disease conditions such as leprosy, lice, rheumatism etc. Its major chemical constituent colchicine, is reported for its use in various clinical conditions leading to its over exploitation.

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