

Langali (Gloriosa superba) Linn. and its therapeutic importance in Ayurveda - a review

Review Article

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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. The drug langali, has been categorized as one of the nine upavishas (semipoisonous) of Ayurvedic pharmacopoeias. In this article an attempt has been made to collect the information related to langali from six samhitas, seven samgraha grantha, seven nighantu and five other texts. It is observed that the drug is used in 158 formulations, which are effective in more than 30 disease conditions among which aparapatana (removal of placenta), mudhagarbha (dead foetus), vrana (wound), agnimandya (loss of appetite), jvara (fever), grahani (Irritable bowel syndrome), kasa (cough), hikka (hiccough), kushtha (leprosy), shvitra (leucoderma), visarpa (erysipelas), arsha (piles) etc. Useful part of the plant is root with a dose of 125 – 250 mg and should be administered internally after passing through various shodhana procedures. It is used in various dosage forms such as svarasa, kvatha, lepa, varti, avaleha, taila, rasa, vati, kshara, modaka, ghruta, loha, rasakriya, churna, dhupa, nasya and udvartana.

Key words: Langali, Gloriosa superba, Ayurveda, upavisha

Introduction:

Ayurveda deals with drugs of plant, animal, metal and mineral origin. Among these maximum drugs are of plant origin (1). Information regarding the drugs is available in the classical texts of Ayurveda named as Veda (6000 BC), Samhita (1500 BC – 600 AD), Nighantu and Samgraha granthas (800AD – 1900AD) (2).

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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. It is a branched herbaceous climber common in low jungles almost throughout India upto an altitude of 6000 feet and in Andaman Islands (3). Texts of Ayurveda systematically recorded the part use, pharmacological properties, actions, indications and contraindications of the plant drug. Its use as an ingredient of compound formulations was recorded in samhitas (treatise) as well as samgraha granthas (compendia of Ayurveda).

Langali, a drug of herbal origin,

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Various available *samhitas* (classical texts), *nighantus* (lexicons) *samgraha granthas* (compendia) were referred; the synonyms, properties, actions and various formulations with their *adhikara* (prime indication) were compiled and arranged in a systematic manner.

Results and discussion

Total 43 synonyms were attributed to *Langali* for describing its morphological and pharmacological characters in various texts. (Table 1). On the basis of reported synonyms it is presumed that, the plant is a climber, grows during rainy season from its tuber, has glorious golden yellow

coloured flowers resembling a flame or lightening, supposed to resemble 'vajra' of Indra, blooms during morning, attract the viewer. Its tuber resembles the shape of a plough, poisonous in nature, used mainly for inducing abortion, to remove foreign matter from the body and cleaning or healing of wounds and kill lice from hair. Gloriosa superba Linn. (Liliaceae), a climber with very attractive or glorious flowers, blooms during rainy season, with "L" shaped tuber, reported for its abortificient activities is the botanical equivalent of langali.

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Table 1: Synonyms attributed to *Langali* in different *Nighantus*(laxicons) and their interpretations

	their interpretations					
	Synonyms (4-10)	Interpretation (11,12)				
Morphological						
Habit	Vidyullata	A climber resembling to the lightening which may be due to its colourful flower				
Flowers Agnijihva, Agnimukhi, Vahnivaktra, Vahnishikha, Dipta, Pradipta, Shikhimukhi Vidyullata, Vidyujjihva, Vidyujjvala, Indrapushpi, Svarnapushpa, Svarnapushpika Flowers Having golden yellow coloured Shuklapushpi* Pushpasaurabha Flowers having nice smell. Raktendupushpika Flowers are red in colour. Pushpasikara Flowers that bind or catch the		A climber resembling lightening. Having golden yellow coloured flowers. Flowers having nice smell.				
viewer		viewer The shape of the tubers resembles that of a				
Tubers	Eurgun, Eurgun, Hun, Hunn, Siri	langalaka or sira i.e. plough.				
Time	Prabhata	Indicating the blooming of the flowers i.e during morning.				
Time	Naktendupushpika*					
Latex	Kshiri	Plant produces latex.				
Season	Sharadi	It grows during rainy season.				
Propagation	Ananta	Never die or remains for long period i.e The plant regenerate from its tuber every year during rainy season.				
Pharmacolog	ical					
Obstetrics	Garbhanut, Garbhapatini, Garbhaghatini	Expels <i>Garbha</i> (foetus) i.e having abortifacient effect or induces abortion				
Surgical	Kalihari, Vishalya, Kalikari	Removes <i>shalya/kali</i> (foreign matter / arrow) from the body.				
Surgical	Vranaghni, Vranahrut, Vranahari	Repair vrana (Wound)				
Hair	Yukari	Kills lice (yuka).				



Nature	Visha	Poisonous in nature
Horticulture	Shukuladani	Being favoured as a food by fish or may be
		used for fish poisoning

^{*} explained below.

Knowledge regarding the plant may be traced back to *vedic kala* (6000 BC) (13). *Atharvaveda* (1|23|1) has mentioned a plant called '*Naktanjata*' and *Langali* is one of the probable plant which can be accepted by this name (14). There are other two plants which could also be taken as *naktanjata*.

The synonym 'Shuklapushpi' may be mistakenly taken for Langali as it does not have white coloured flowers, it may be a typographical error or apabhrashta rupa of Shakrapushpi as shape of its flower resemble as that of vajra of Indra (Shakra). Similarly, Naktendupushpika could also have attributed to the plant which means that flowers open during night. This synonym does not stand proper as the flowers open during day time, or it apabhrashta may be rupa of Raktendupushpika.

Classification:

Nighantus (lexicons) and classical texts of Ayurveda details lanagli under different categories by keeping the drug under various vargas like bhedaniya gana (15) (group of purgatives), shakavarga (16)(group of vegetables), shleshmasanshamana varga (group of drugs pacifying shleshma), katuka varga (group of pungent drugs), svarnamarana varga (group of drugs useful for incineration of gold) and upavisha varga (17) (group of semi-poisonous plants). Categorization of Langali under upavisha varga (semi poisonous) may be due to its reported abortifacient activity or the extremely poisonous alkaloid colchicines which is one of its major chemical constituent (18). Colchicine is now a days used for treating gout (19).

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Pharmacological properties of Langali:

Table 2: Pharmacological properties attributed to Langali in different Nighantus (8-13)

Rasa	Vipaka	Virya	Guna	Dosha-	Karma	Rogaghnata	Prabhava
				karma			
Katu, Tikta, Kashaya	Katu	Ushna	Tikshna, ruksha, sara, laghu, sakshara	Kapha- vata shamaka, pittala	antahshalya- hara, garbhashalya- hara	Kushtha, shopha, arsha, vrana, dushtavrana, shula, krumi, Visha, bastishula, kandu, shosha,	Garbhapatana

Langali is having katu-tiktakashaya rasa, katu vipaka and ushna virya; has tikshna, ruksha, sara and laghu gunas. It pacifies kapha-vata doshas, increases pitta dosha and has garbhapatana (abortifacient) property. (Table 2)

It is indicated for various disease condition such as *kushtha*, *shopha*, *arsha*, *vrana*, *dushtavrana*, *shula*, *krumi*, *visha*,

shalya, bastishula, kandu, shosha etc. (Table 2)

Langali as a single drug or part of compound formulation has been recommended for various disease conditions such as aparapatana (removal of placenta after labour), mudhagarbha, -nadivrana-agnidagdhavranavrana agnimandya, kitalutavrana. jvara, grahani, kasa, hikka, shvitra, visarpa,



bhagandara, vatavyadhi specially vatarakta, granthi, apachi, arbuda, galaganda, sarpavisha, ajagallika, khalitya-indralupta, rajayakshma, prameha, dantakrumi, nasaroga, karnaroga-krumikarna etc.

Shodhana (purification) of the drug:

Brihatrayee does not report the of Langali except being considered under mulajavisha by Charaka. classical texts of categories it under upavisa varga and advocate certain *shodhana* (purificatory) procedures for Langali, before its internal administration. It was mentioned for the first time by Ayurvedaprakasha (17th century AD) (20) which states shodhana in gomutra for whole day (21). Other method is mixing of pieces of the drug with saindhava (22). In the third method, takra and saindhava are made into solution and pieces of Langali are immersed in it for 3 days (23) or 7 days (24). The pieces are immersed during night time and dried during day time in sunlight. After completion of 3 and 7 days, the pieces are washed with warm water and dried in sunlight.

Some recent scholars of *Ayurveda* like Bapalal Vaidya do not consider it as poisonous. According to him a non poisonous drug has wrongly been considered as poisonous and this may be due to its abortifacient effect (25).

Uses of Langali:

The plant is being mentioned 5 times in *Charakasamhita* under *bhedaniya* gana, shakavarga, as an essential drug to be kept sutikagara (labour room) and one of the content of tiktekshvakvadi taila. It is also mentioned under mulaja visha by Acharya Charaka in the name Langalaki (26).

Uses of Langali as a drug was gradually increased, during samhita period from *Charakasamhita* (5 times), *Sushrutasamhita* (15 times),

Ashtangahrudaya (14 times) and Ashtangasamgraha (26)times). Sharngadhara (8 times) and Bhavaprakasha (16 times) have also used this drug in various formulations (Table 3). Samgraha granthas (different pharmacopoeia) of Ayurveda reports about 158 formulations having Langali as an ingredient. (Table 3) It is also having rasayana property (27).

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It is used, both internally as well as externally, in various dosage forms such as *svarasa* (expressed juice), *kvatha* (decoction), *churna* (powder), *taila* (oil), *ghruta* (ghee), *avaleha* (confectionaries), *dhupa* (smoke), *lepa* (paste), *varti* (suppositories), *rasa*, *vati* (tablet), *kshara*, *modaka*, , *loha*, *rasakriya*, *nasya* and *udvartana*. (Table 3)

It is observed that Langali has been used as an ingredient in 159 formulations (Table 3). Among them 60 and formulations are used as internal and external applications respectively. external application, the formulations are indicated for burn wounds, arsha (piles), bhagandara (fistula), galaganda (goitre), gandamala (lymphadinitis), (scrofula), karnapurana (pouring liquid in ear), khalitya (hair loss), kitavisphota (insect bite), krumi (worms), kushtha (skin diseases), mukharoga (oral diseases), dantakrumi (dental caries), nadivrana (fistulous ulcers), shiroroga, (vitiligo), vatavyadhi (diseases of joints), visarpa and vrana (wound): where as in internal administration the formulations are indicated for sannipata, arsha (piles), (intestinal disorders), grahani (hiccough), kasa (cough), jwara (fever), kshaya, kushtha (skin diseases), mukharoga (oral diseases), prameha (diabetes), shula (abdominal pain), sarpavisha (snake bite), striroga (gynaecological disorders), vatarakta (gout) and vatavyadhi (diseases of joints).

Highest number of formulations was found in *kushtha* (34), followed by *arsha* (16), *bhangadara* (9) and *vatarakta*



(7) (Table 3). Especially *Langali* is mentioned for inducing labour pain and also for carrying out delivery classically (28) as well as traditionally (29).

Part used:

Mula / tuber

Dose:

125-250 mg. of purified drug(30).

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Formulations of Langali

Various *sangraha granthas* were scrutinized for the formulations containing *Langali* as an ingredient. Following table mentions the formulations of *Langali*.

Table 3: Formulations of Langali

Sr. Yoga Adhikara Internal /					
no.	Togu	Aanikara	External	Reference	
1.	Abhayadi lepa	Vrana	External	YR	
2.	Abhayadi vartika	Galaganda chikitsa	E	CD	
3.	Abhrakaharitaki	Arsha	I	RRS	
4.	Adityapaka taila	Vatarakta	E	BP	
5.	Ankolakalkadi yoga	Kushtha	E	GN	
6.	Arshakuthara rasa	Arsha	I	YR	
7.	Arshohara lepa (1)	Nabhilepa in arsha	E	RChM	
8.	Bhallatakadi lepa	Kushtha	E	AS	
9.	Bhallatakadi pralepa	Kushtha	E	GN	
10.	Bhallatakamruta	Grahani	I	BNR	
11.	Bhallatakavaleha	Kushtha	I	GN	
12.	Bhallatakavaleha/	Kushtha	I	BP	
12.	Mahabhallataka	Kusnina	1	Dr	
13.	Bhishyandana taila	Bhagandara	Е	GN	
14.	Bhramarika taila	Kushtha	E	GN	
15.	Bolabaddha rasa	Kasa	I	RRS	
16.	Bruhan marichadya vishagarbha	Kushtha	E	GN	
10.	taila	Kusnina	E	GN	
17.	Bruhanmarichadya taila	Kushtha	Е	CD	
18.	ž	Kusnina	I	HS	
19.	Bruhat Hingu Churna Bruhat kasisadi taila	Kushtha	E	VS	
20.	Bruhat kasisadya taila	Arsha	E	BBR	
21.	Chanchatkuthara rasa	Arsha	I	BBR	
22.		Prameha	I	RRSu	
	Chandraprabha vati (4)		I		
23.	Chapalabaddha rasa	For formation of agnisthayi	1	RseM	
24.	Chinabilyadi lana	parada Shotha	Е	BBR	
25.	Chirabilvadi lepa Chitrakadya taila	Bhagandara, arsha	E	GN	
26.	Drvantyadi taila	Vranashodhana	E	SS	
27.	Dvitiya marichadya taila	Kushtha	E	VS	
28.	ž ž		E	CD	
	Galagandahara taila	Galaganda chikitsa			
29.	Grahanigajapanchanana rasa	Grahani	I	RKD	
30.	Gunjadi lepa	Kushtha	E	YR	
31.	Gunjadi udvartana	Kushtha	E	VS	
32.	Hansapotali rasa (2)	Grahani	I	RRSu	
33.	Hansapotali rasa (3)	Sangrahani	I	RKD	
34.	Haridradi taila	Kushtha-pama-vicharchika	E	HS	
35.	Hikkanashana rasa	Hikka	I	RRS	
36.	Ikshvaku taila	Kushtha	E	CS	
37.	Jayamangala rasa	Jvara	I	RseM	



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38.	Kachchhurakshasa taila	Kushtha	Е	BP
39.	Kakadani taila	Gandamala	E	GN
40.	Kakubhadi dhupa	Krumi-matkuna-yuka nashaka	E	YR
		dhupa	_	
41.	Kalanala/kalanasho rasa	Jvara	I	BBR
42.	Kalingadya gutika	Arsha	I	GN
43.	Kanakasundara rasa	Kushtha	I	Sh.
44.	Kanakasundara rasa (2)	Jvara	I	BNR
45.	Kanakasundara rasa (3)	Yakshma	I	RseSS
46.	Kanakavati vati	Arsha	I	Rasaratnaka
				ra
47.	Karanja taila	Visarpa	Е	BP
48.	Karanjadi taila	Visarpa	Е	YR
49.	Karaviradi taila	Bhagandara	E	BP
50.	Karaviradi yoga	Agada in vyantaradashta	I	AH
		sarpavisha		
51.	Karaviradya taila	Bhagandara	Е	CD
52.	Kasisadi taila	Arsha	E	AS
53.	Kasisadya taila (bruhat)	Arsha	Е	Sh
54.	Katukalabu taila	Kandu-kushtha	Е	GN
55.	Kingini taila (Bruhat)	Shiroroga	Е	BBR
56.	Kitaghna lepa		Е	Sh
57.	Krumikarnapaha yoga	Karnaroga	Е	CD
58.	Kruminashaka dhupa	Krumi	Е	YR
59.	Kshara	Nadivrana	Е	BBR
60.	Kulirashrungyadi lepa	Arsha	Е	GN
61.	Kushthadya taila	Karnaroga	Е	GN
62.	Kushthahara lepa (1)	Kushtha	Е	RChM
63.	Kushthakalanala taila	Vatarakta-kushtha-	Е	YT
		dushtavrana		
64.	Kushthanashaka modaka	Kushtha	Е	VS
65.	Laghukasisadya taila	Arsha	E	GN
66.	Langali ghruta	Agnidagdha, visarpa	Е	YR
67.	Langali gutika	Kushtha	I	YR
68.	Langali gutika/ Langalyadi	Vatarakta	I	BP
	gugguluvatika		-	C1
69.	Langali taila	Nasya in gandamala	E	Sh
70.	Langali kalpa rasayana	Rasayana	I	BBR
71.	Langalika ghruta	Agnidagdha vrana	E	VS
72.	Langalyadi churna	Vatarakta Vuoletka	I	BBR
73.	Langalyadi gutika*	Kushtha	I E	AS
74.	Langalyadi lepa	Arsha Stringga in ananga arbhini	E	BBR
75.	Langalyadi lepa	Striroga in apannagarbhini	E	VM
76.	Langalyadi lepa (2)	Kitavisphotanashana	1	Sh
77. 78.	Langalyadi modaka	Arsha	I	BNR RM
79.	Langalyadi nasya (1) Langalyadi nasya (2)	Mukharoga Visharoga, sarpavisha	I	BNR
80.	Langalyadi vatika	Vatarakta Vatarakta	I	GN
81.	Langalyadya lauha	Vatarakta Vatarakta	I	RseSS
82.	Langalyadya taila	Karnapurna-nadivrana-krumi	E	GN
83.	Lepa Lepa	Mukharoga, dantakrumi	E	RM
84.	Lepa (single drug) on	Shalyaharana	E	BBR
04.	Lepa (single arag) on	энш уанатана	ند ر	אממ



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	vranamukha			
85.	Mahabhallataka	Kushtha	I	VS
86.	Mahabhallatakavaleha	Kushtha	I	BP
87.	Mahabhutavishaghna yoga	Visha	I	BBR
88.	Mahalakshminarayana taila	Vatavyadhi	Е	YR
89.	Mahamarichyadi taila	Kushtha	Е	BBR
90.	Mahanarayana taila	Vatavyadhi	Е	BBR
91.	Mahatrunaka taila	Kushtha	E	CD
92.	Mahavajraka taila	Kushtha	Е	SS
93.	Mahavira rasa	Rajayakshma	I	RRS
94.	Mahavishagarbha taila	Vatavyadhi	E	BBR
95.	Mansyadi yoga	Shodhana-utsadanartha	E	GN
96.	Marichadya taila (bruhat)	Kushtha	E	CD
97.	Mashakahara dhupa	Krumi	E	VS
98.	Mrugankapottali rasa	Kshaya	I	Sh
99.	Mulikadi dharana	Gulma, Yonigata shula	E	BBR
100.	Mutrika rasakriya	Shvitra-krumi	I	AS
101.	Nirgundi taila	Gandamala-apachi	E	YR
102.	Nirgundyadi taila	Shiroroga Shiroroga	E	GN
103.	Nishadi taila	Bhagandara	E	YR
104.		Vatavyadhi; Apasmara	E	GN
104.	ž	Kushtha	E	BBR
106.	1	Marana of parada	E	RseSS
100.	Raktachandanadi churna	Vatavyadhi	I	GN
107.	Rasnadya churna	Vataroga	I	GN
100.	,	Bhagandara	E	SS
110.	Sannipatabhairava rasa (dvitiya)	Jvara	I	BBR
111.		Abhinyasa sannipata	I	RKD
111.	Sannipatagajankusha rasa Sannipatavidhvamsaka	Sannipata	I	RRSu
113.	*	Shiroroga	E	BBR
114.	Saptaraja taila (prathama) Sarpavishapratishedha agada	Sarpavisha	I	AH
115.		*	I	AS
	G	Vyantara sarpadashta	I	BBR
116.	Sarvarogyarasa/ Sarvarogyavati	Visuchika-hikka-grahani- gulma-shula	1	DDK
117.	Shadbindu taila	Kushtha	Е	BBR
117.	Shankhapushpyadi yoga	Dhatrichikitsa	I	BBR
	1 12 2 0		E	
119.	Shirishabijadi lepa	Arsha	E	GN
120.	Shirishadi ahuma (2)	Arsha	I	GN
121.	Shirishadi churna (2) Shulahara kshara	Jvara	I	GN
122.		Shula	E	RRS
123.	Shvitragajasimha taila	Shvitra		RChM
124.	Shvitrahara lepa Shvitrahara taila	Shvitra si Ilma dadan nama	E E	RChM
125.		Shvitra-sidhma-dadru-pama		RChM
126.	Snuhidugdhadi taila	Khalitya	E	BP
127.	Snuhyadi lepa	Arsha	E	BNR
128.	Snuhyadi taila	Khalitya	E	CD
129.	Snuhyadi taila	Vranaropana	E	VS
130.	Snuhyadya taila	Visarpa	E	VS
131.	Snuhyadya taila (2)	Kushtha	E	VS
132.	Snuhyadya taila (3)	Khalitya	E	VS
133.	Somaraji taila	Kushtha	E	BR
134.	Somaraji taila (bruhat) (2)	Kushtha	Е	BBR



135.	Sukhaprasavakaraka yoga	Striroga	I	CD
136.	Suryarasa (2)	Hikka, kasa	I	RKD
137.	Suryavartakadi churna	Karnaroga	I	BBR
138.	Syandana taila	Bhagandara	E	SS
139.	Taleshvara rasa (1)	Kasa-hikka	I	RR
140.	Tiktekshvakvadi taila	Kushtha	E	CS
141.	Tiladi lepa	Bhagandara	E	BBR
142.	Triphaladi gutika	Kushtha	I	YR
143.	Triphaladi kalka	Vatarakta	I	AH
144.	Triphaladya gutika	Kushtha	I	VS
145.	Trivrutadi varti	Vrana	E	VM
146.	Vadavanala rasa (svalpa) (11)	Sannipata jvara	I	RRS
147.	Vaishvanara rasa (2)	Gulma	I	RRS
148.	Vajraka taila (1)	Kushtha, nadivrana	E	CD
149.	Vajraka taila	Kushtha	E	SS
150.	Vasarudra taila	Kushtha	E	BR

Vicharchika

Kushtha

Kushtha

Kushtha

Krumi

Vrana

Kushtha

CS – Charakasamhita(31), SS – Sushrutasamhita(32), AH – Ashtangahrudaya(33), AS – Ashtangasamgraha(34), HS – Haritasamhita(35), Sh – Sharngadharasamhita(36), BP – Bhavaprakasha(37), CD – Chakradutta(38), VS – Vangasena(39), GN – Gadanigraha(40), VM – Vrundamadhava(41), RRS – Rasaratnasamuchchaya(42), YR – Yogaratnakara(43), BR – Bhaishajyaratnavali(44), BBR – Bharatbhaishajyaratnakara(45), RR – Rasaratnakara(46), RKD – Rasakamadhenu(47), RChM – Rasendrachintamani(48), RseSS – Rasendrasarasangraha(49), BNR – Bruhannighanturatnakara(50)

Agnidagdha vrana

Bhagandara

Conclusion

151.

Vicharchikari taila

152. Vidangadi gutika*

153. Vidangadi modaka

154. Vidangadi vatika

155. Vidangadya taila

156. Viparitamalla taila

157. Vishyandana taila

159. Yogaraja rasayana

158. Vranashodhana yoga

Langali(Gloriosa superba) is found throughout India and its description can be traced since Vedic period. Classical texts of Ayurveda, except samhita, describes it under upavisha varga and recommends various shodhana procedures before its internal use. Langali is attributed with pharmacological properties i.e katu, tikta, kashaya rasa; katu vipaka and ushna virya; and useful to combat various disease conditions such as various skin diseases, piles, worm infestation and inducing labour etc. It is need of the hour to have a scientific study regarding toxicity of the Langali before and after shodhana.

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