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A REVIEW ON LANGALI GUTIKA AND ITS CONTENTS

Sakshi Sharma¹, Guru Prasad Sharma²

¹MD. Scholar 2nd year, *Rog Nidan Avum Vikriti Vigyan*, RGGPG Ayurvedic College & Hospital, Paprola, Himachal Pradesh, India ²MD, *Kaya Chikitsa*, Jammu Institute of Ayurveda & Research, Jammu, J&K, India

Email: drguru984@gmail.com

ABSTRACT

Vati or *Gutika* is a term used to indicate tablets or pills in the *Ayurvedic* system of medicine. The intake of *Ayurvedic* medicines is often unpleasant due to their bitter and astringent taste. *Vati* or *Gutika* is the palatable form of *Ayurvedic* medicines, which are pleasing for the taste buds thus allowing the patients, especially children, to consume them without having to bear the unpleasant taste. *Vati* or *Gutika* an *Upakalpana* of *Kalka Kalpana* (formulations in which drugs are in paste form) & comprise more than one drug from plant, animal or mineral origin. This form of medication is widely accepted in present clinical practice because of its accuracy in dosage, longer shelf life & palatability. *Langali Gutika* is one formulation mentioned in classics which is widely used in present day clinical practice. First reference of this yoga (formulation) is from *Bhavprakash* of *Bhavmishra*, *Vataraktadhikar*. This paper is an attempt to make a review on the formulation "*Langali Gutika*" from various literatures of *Ayurveda*.

Keywords: Langali Gutika, Vati, Vata, Rakta, Vatarakta

INTRODUCTION

Medicine is one among the four *Padas* of *Chikitsa Chatushpada*¹. The consideration of the drugs during the line of treatment for particular ailment has great importance.

W. H. O defines drug as "a substance or product that is used or intended to be used to modify or explore physiological system or pathological status for the benefit of the recipient". Ayurveda was the first to give an elaborate description of various therapeutic measures not merely of radical removal of the causative factors but also at the restoration of *Doshik* equilibrium.

According to *Ayurveda*, drug or diet article that reverses or break the *Samprapti* is ideal. It is often the total effect of all the ingredients in the formula rather than the action of individual drugs that plays a vital role in therapeutics. Drug combinations are envisaged to serve synergistic action, combined action, toxicity neutralising action and specific action.

Taking this fact into consideration, *Ayurvedic* physicians have formulated single as well as compound drugs for the cure and prevention of various ailments. Many systemic and local therapeutic applications have been mentioned in *Ayurvedic* texts. *Langali Gutika* is one of those formulations which are described here in detail.

REVIEW OF LITERATURE

Classical reference of this formulation is from *Bhav Prakash (Laghutrayee)*²

Bha.prk of bhv.mis. vataraktadhikar (29/83-86) The ingredients of *Langali Gutika* are as follows:-

- 1. Langali kandha
- 2. Amrita
- 3. Triphala
- 4. Loha bhasam
- 5. Trikatu
- 6. Guggulu
- 7. Draksha

Langali Kanda and Amrta both equal in quantity are mixed with Triphala, Loharaja and Trikatu

all equal quantity, *Guggulu, Amrtavalli* and *Draksha* are macerated in the juice of *Matulunga* or decoction of *Triphala* and made into pills of 500 mg each: this is consumed along with honey, cures cracks of the foot, fracture of knee and many other diseases of *Vata* and *Rakta* said to be incurable and also the severe form of *VataRakta*.

Method of Preparation of Langali Gutika:-

Step 1- *Langali Shodhana*- Langali is dipped in Gomutra for more than one day to purify it for medicinal purpose. Then it is taken out from gomutra and washed with clean water.

Step 2-Guggulu Shodhana³:- Guggulu is purified by dissolving in *Triphala Kashaya* and boiling it for few minutes. Then it is filtered through a cloth and dried in Sunlight.

Step 3- *Langali* is grinded into powdered form in mixer. All other drugs that is *Trikatu*, *Triphala*, *Guggulu*, *Guduchi*, *Loha Bhasma*, *Draksha* are also grinded in powder form. All these powder form drugs are mixed in equal quantity. These are given the shape of Tablets.

S.No	INGREDIENTs	BOTANI-	FAMILY	GANA	PARTS	CLASSICAL
		CAL NAME			USED	NAMES
1	Langali	Gloriosa su-		Upvisha	Tuber	Agnishikha,
		perba Linn	Liliaceae			Garbhanut ,Agnimukhi,
						Hiranyapushpi,
						Kanakapushpi, Halini,
						Vabnivakrta
2	Amalaki	Embellica	Euphor-	Vayasthapana,	Fruit	Amalaki, Vayasya,
		officinalis	biaceae	Virechanopaga		Dhatriphala, Amritaphala,
				(Ch.)		Amalaka, Tishyaphala.
				Triphala, Pa-		
				rushakadi (Su.)		
3	Bibhitaki	Terminalia	Combre-	Jwarahara,		Bibhitaka, Aksha,
		bellirica	taceae	Virechanopaga	Fruit,	Karshaphala, Kalidruma,
				(Ch.)	Seed,	Bhutavasa, Kliyugalaya.

 Table 1: LIST OF THE INGREDIENTS OF LANGALI GUTIKA

					Bark	Γ
				Triphala, Mustadi (Su.)	Duik	
	4	Haritaki	Termina- lia che- bula	Jwarahara, Pra- jasthapana, Kust- haghna, Ka- saghna, Ar- shoghna (Ch.), Triphala, Parushakadi (Su.) Shiva,rohini.	Fruit	Haritaki, Abhaya, Pathya, Kayastha, Putana, Haimavati, Avyatha, Chetaki,
5	Guduchi	Tinospora cordifolia	Menis- permacea		Root, Stem, Leaf.	G uduchi,Amrita, Amritavallaii, Vatasadani, Tantrika, kundalini, Dhira
6	Shunthi	Zingiber offi- cinace	Zingib- eraceae	Triptighna, Trushanigrahana, Deepaniya, Shoolaprasha- mana (Ch) Pipalyadi, Trikatu (Su)	Kanda	Shunthi,Nagara, Ma- haushadha, Vishwabheshaj Shringabera, Katubhadra, Ardrika, Ardraka.
7	Pippali	Piper longum	Piper- aceae	Triptighna, Dee- paniya, Vamanopaga, Kasahara, Shoolaprasha- mana, Hikka nigrahana, (Ch.) Pipalyadi, Urdhvabha- gahara, Shiro- virechan (Su.)	Fruit	Pippali, Magadhi, Krishna, Kana, Chapala, Ushana, Shaundi, Vaidehi, Tikshna tandula
8	Maricha	Piper nigrum	Piper- aceae	Deepaniya, Shoolaprasha- mana Krimighna, Shiro- virechana (Ch.) Pipalyadi, trikatu (Su)	Fruit	Maricha, Vellaja, Krishna, Dharmapattana.
9	Guggulu	Commiphora mukul Engl.	Burse- raceae		Gum resin	Guggulu, Devadhoopa, Kaushika, Kalaniryas, Ulukhalaka, Palankasha, Pura, Mahishaksha, Jatayu.
10	Draksha	Vitis vinifera	Vitaceae	Sanehopaga, ka- sahara, jawarhara	Ripe fruit, Leaf,	Draksha, Mridwika, Gostami, Charuphala,Kapisha,

		Stem,	Harahura,	
		Flower	Swaduphala.	

Lauha Bhasma is procured directly from the market and is prepared by a GMP certified standard pharmaceutical house. It is prepared according to the references mentioned in *Rasa Trangani* and it has been seen that it suits all the parameters of *Bhasma Pariksha* **Preparations** of test drugs –

Scraps of wrought iron and old rusted iron collected from local market, taken as raw materials of *Lauha* and made into course powder by hammering. These are then subjected to *Shodhana* according to traditional *Ayurvedic* procedure. For this purpose it is heated to red hot and quenched in sesame oil, butter milk, cow's urine, sour gruel, decoction of *Kulattha* seeds, and decoction of *Triphala*, seven times in each media, total 42 times.

The purified materials are subjected to Marana according to traditional procedure. For this purpose one part of these materials are mixed with 1/12th part of cinnabar (Hingula) and is levigated by Kumari Swarasa (aleo gel) for 6 hrs. Pellets are prepared from this levigated doughy mass and taken into earthen crucibles faced together, and the junction is sealed by mud smeared clothes. This apparatus, called as Sarava Samputam was subjected for heating in electric muffle furnace. Heating of materials confined to this appratus is called Putapaka in the parlance of Ayurveda. Burning is approximately continued for 3 hrs, when cooled apparatus is taken out and opened to get the incinerated iron powder. These procedures are repeated for 7 times and finally the Lauha Bhasma is collected in glass container.

S.NO	INGREDIENTS	RASA	GUNA	VIRYA	VIPAKA	DOSHA
						KARMATA
1	Langali	Katu,tikta	Laghu,tikshna	Ushna	Katu	Kaphavata
						shamaka
2	Amlaki	Madhur	Guru	Sheeta	madhur	Tridoshahar
		Amla	Ruksha			
		Katu	Sheeta			
		Tikta				
		kashaya				
3	Bibhitaki	kashaya	Laghu	Ushna	madhur	Tridoshahar
			Ruksha			
4	Haritaki	Madhur	Laghu	Ushna	madhur	Tridoshahar
		Amla	Ruksha			
		Katu				
		Tikta				
		kashya				
5	Guduchi	Tikta	Guru	Ushna	madhur	Tridosha shamak
		kashaya	Snigdha			
6	Shunthi	Katu	Laghu	Ushna	madhur	Vatakapha
			Snigdha			Shamak

Table 2: PROPERTIES OF LANGALI GUTIKA INGREDIENTS^{4,5,6}

7	Pippali	Katu	Laghu	Anushna	madhur	Vatakapha
			Snigdha	Sheet		Har
			Tikshna			
8	Maricha	Katu	Laghu	Ushna	Katu	Vatakapha
			Tikshna			Shamaka
9	Lauha	Tikta	Guru	Sheet	madhur	Kaphapitta
	Bhasma	kashaya	Lekhana			Shamak
10	Guggulu	Tikta	Snigdha	Ushna	Katu	Kaphavata
		Kashaya	Pichila			Shamak
		Katu				
11	Draksha	madhur	Snigdha	Sheeta	madhur	Vatapitta
			Guru			Shamak
			Madhur			

DESCRIPTION OF ACTION OF EACH DRUGS:-

LANGALI

Rogaghnata: Shotha, Varna, Gandamala, Charmaroga, Unmantha, Arsha, Kustha.

Karma: Raktotkleshaka, Kshobhaka, Krimighna, Garbhapatana, Deepana, Rechaka,vamak.

ChemicalConstituents:Cornigerina,3-demethyl-N-formyl-N-decet

-ylcolchicine, colchicines, colchicamide.

Pharmacological and clinical study of *Langali:* Spasmolytic, CNS depressant, antibiotic, oxytocin, uterine stimulant, nematicidal.

Actions and Uses:-

- The tuber is abortifacient, depurative, antihelmintic, digestive, stomachic, purgative, emetic, expectorant, rejuvenating, and tonic.
- They are useful in inflammation, ulcers, scrofula, haemorrhoids, parasitic skin disease, leprosy, pruritus, dyspepsia, helminathiasis, colic, flatulence, baldness, gonorrhoea, intermittent fevers, bites of poisonous insects and debility.
- It is useful in promoting labour pains and expulsion of the placenta.

In large doses it is highly poisonous and may cause vomiting, purging, gastralgia and burning sensation.

AMALAKI

Rogaghanata: Paittikavikara, Daha, Pattikashirahshoola, Mootravarodha, Netraroga, Khalitya, Palitya, Rasayana, Mootrala, Kushthaghna.

Karma: Rasayana, Raktastambhaka, Dahaprashamana

Chemical Constituents: Vitamin C, Gallic acid, Cellulose, Caphospherous, Iron, Nicotinic acid, Ellegic acid, Proteins, Fat.

Pharmacological and clinical study of the *Amalaki*:

- Vitamin C 600 mg/100 gm (Vitamin C) content up to 720 mg / 200 g of fresh Pulp and 921 mg/100 cc of fresh juice has been recorded
- ➤ Amla fruit is probably the richest known natural source of Vitamin C.
- It has anti-inflammatory property and it modifies the effect of drug when used in combination (In. J. Phy. Pha. Jan. 1986).
- It possesses an antioxidant property and has proved to be an immunomodulatory drug (Chem. and the Env.).

It has strong antiulcer property (In.J.Phy.Pha.1998)

Spasmolytic, mild CNS depressant, hypolipideamic, antiatherosclerotic, antimutagenic, antimicrobial, antioxidant, immunomodulatory, antifungal, Antitumour, hypoglycaemic, antiinflammatory, antibacterial, antiulcer, adrenergic potentiating, HIV-1 reverse transcriptase inhibitory action.

BIBHITAKI

Action: Raktastambhaka, Shothahara,

Chemical Constituents: Tannin (21.4 %), Galic acid, Egalic acid, Chebulagic acid, Manitol, Glucose, Galactose.

Pharmacological and clinical study of the *Bibhitaka:-*

Purgative, blood pressure depressant ,antifungal, antihistaminic, activity against viral hepatitis and vitiligo, antiasthmatic broncho-dilatory, antispasmodic antibacterial, CNS stimulant, antistress and endurance promoting activity.

HARITAKI

Action: Raktastambhaka, Shothahara, Shonitasthapana, Vedanasthapana, Vranaropana.

Chemical Constituents: Chebulagic acic, Chebulinic acid, Tannin, Corilagin, Amino acids.

Pharmacological and clinical study of *Hari-taki*:

Antimicrobial, Antifungal, Antibacterial, Antistress, Antispasmodic, Hypotensive, indurance promoting activity, Anti hepatitis B virus activity, hypolipidaemic, inhibitory activity, against HIV-1 protease, antihelmintic, purgative.

GUDUCHI

Action: Kustha, Vatarakta, Trishna, Daha, Chardi, Aruchi, Shoola, Amalapitta.

Chemical Constituents: Tinosporine, Tinosporon, Tinosporic acid, Tinosporol, Palmarin, Columbin.

Pharmacological and clinical study of Guduchi:

Hypoglycaemic, Antihyperglycaemic, CNS Depressant, Antibacterial, Antimicrobial, Antipyretic, Ant diabetic, Antioxidant.

SHUNTHI

Action: Shothahara, Amapachana, Shoolaprashamana

Chemical Constituents: Calcium (20%), Phosphorus (60%),

Iron (2.6 mg), Carbohydrate, Protein, Starch, Zingiberaceae (35.6%), Zingiberol, aromatic oil, Gingerol, Shogaol, zingerone.

Pharmacological and clinical study of *Shun-thi:*

Shunthi having antibacterial activity + grade (+ = mild active), as per "On the antibacterial activity of some Ayurvedic drugs" (Jour.Res.Ind.Med. 9:2, 1974)

Antiinflammatory, hypolipidaemic, antiemetic, antiulcer, antiplatelet, antipyretic, cardiovascular, antioxidant, antibacterial, antifungal, carbonyl reductase activity, cholagogic, antirhinoviral, inotropic, inhibition of prostaglandin release.

PIPPALI

Chemical Constituents: Aromatic oil, Piperine, Piplartine, Sesamin, Piplasterol, Piparin.

Pharmacological and clinical study of *pippali* :-

It is antibacterial, anti-inflammatory, insecticidal, antimalarial, CNS stimulant, antitubercular, antihelmintic, hypoglycaemia, antispasmodic, cough suppressor, anti-giardial, immunostimulatory, hepatoprotective, analeptic, antinarcotic, antiulcerogenic.

MARICHA

Action: Deepana, Pachana, Krimighna Chemical Constituents: Piperine (5 - 10 %), Piperidin (5 %), Pipreltinc, Chavicine, Aromatic oil, Protein, Carbohydrate, Calcium, Phosphorus, Iron, Vit. A

Pharmacological and clinical study of *Maricha:-*

It is antioxidant, anticonvulsant, sedative, analgesic, insecticidal, pesticidal, CNS depressant, muscle relaxant, antipyretic, anti-inflammatory, antifungal, hepatoprotective, antimicrobial, antiulcer, antibacterial, lipolytic, cyclo oxygenase inhibitory activity.

LAUHA BHASMA

Karma: Kaphapittashamaka, Balya, Varnya, Medhya, Vrishya.

Rogaghanata: Pandu, Krimi, Shwasa, Kasa, Twakaroga, Kamala, Hridaroga, Kshaya,Chardi.

Lauha Bhasma is the most commonly used preparations of incinerated iron.

It is indicated in anaemia, oedema etc and are also used as immunomodulators (*Rasayana*). All iron preparations are probably equally toxic per unit mass of soluble iron. They produce mild gastrointestinal disturbances characterised by colic pain, nausea, vomiting, diarrhoea, and gastric distress.

GUGGULU

Rogaghnata: Amavata, Sandhivata, Gandamala, Charmaroga, Arsha, Krimi, Vrana, Gridhrasi

Karma: Shothahara, Vedanasthapana, Vranashodhana, Vibandha, Hridroga, Prameha, Medoroga, Kustha.

Properties and Uses:-

- According to *Charaka* in the disease of stomach.
- Sushruta has indicated its use in Urustambha, Shotha, Karna durgandha, etc.
- Vagbhata mentioned in Shvasa roga.
- Chakradatta refers its use in Gridhrasi, Kroshtukshirsha, Vidradhi etc.

- Guggulu is an olea-resin obtain from the plant Commiphora mukul and is very much used in Indian system of medicine as astringent, antiseptic, expectorant, aphrodisiac, demulcent, carminative, antispasmodic and use in rheumatism. The drug is described as hridya, medoghna and mehaghna, ashmaghna.
- It also reduces the level of cholesterol and obesity .Oleo-resin gum of C.mukul has been proved to be a potent hypocholesterolemic, hypo-lipidaemic, antiatherosclerotic agent both in clinical as well as in experimental studies.
- The steroidal fraction had a significant effect on the primary as well as the secondary inflammation induced by Freud's adjuvant, the activity being less than that of hydrocortisone acetate in primary inflammation but it is more effective than hydrocortisone in reducing the severity of secondary lesions (Arora et al, 1971, 1972). Further study showed that the steroidal component of fraction A had a pronounced antiarthritic effect and is superior to phenyl-butazone and comparable to hydrocortisone (Sharma and Jain, 1978).
- The oleo-resin fraction possessed significant anti-arthritic and anti-inflammatory activities. Only the acidic fraction showed significant activity while the monacid and solid fraction were inactive (Santha Kumari et.al, 1964). Chemistry :-
- From the gum-resin, sesamin, cholesterol, few other steroids, essential oil containing steroidal ketones, alcohols and aliphatic triols (mostly as esters of ferulic acid) were reported. The structure elucidation of steroidal constituents viz, Z-guggulsterone, Eguggulsterone, three new sterols guggul-

sterols-I,-II and III have been established along with partial synthesis of guggulsterol II from diosgenin. In addition, diterpenoid constituents cembrene-A and Mukulol, some fatty tetrols-octadecan-1,2,3,4-tetrols, eicosan-1, 2,3,4,-tetrol and non-adecan-1,2,3,4,tetrol were reported (CRU,P).

Two new sterols viz, guggulsterols-IV & V have been reported for the first time Known compounds isolated were guggul-sterols-I,-II &III and guggulsterones-Z and E. (CSMDRIA, M). A diterpene alcohol, guggulsterone, guggulsterol-I-II & III were isolated from the gum-resin (CRU, D).

DRAKSHA

Doshaghnata:Vatapittashama, Rogaghnata: Mastishadaurbalya, Bhrama, Madatya, , Chhardi, Grahni, Gulma, Udavarta, Kamala, Pandu.

Karma:Medhya, Saumanasyajanana, Snehana, Anulomana, Hridya, Mootrala, Vrishya, Garbhasthapana, Jwaraghna.

Chemical Constituents: Palmitic, stearic, oleic, linoleic, and linolenic acids; isochlorogenic acid, isomer of quercitrin, isomer of rutin, caffeic and caffeyltartaric acids.

Pharmacological and clinical study of *Drak-sha:-*

Antifungal, angiotensin-converting enzyme activity, tumour inhibitory, antiulcer, hepatoprotective, antioxidant, wound healing, antimutagenic, antihepetic, cardioprotective, breast cancer suppressor, antibacterial.

DISCUSSION

The action of *Rasa, Guna, Virya* etc. get neutralized among themselves. Therefore, stronger component neutralizes the action of weaker component. Hence, action of particular drug compound is the action 'as a whole and slow in nature'.

Langali Gutika contains mainly Tikta, Madhura, Kashya Rasa, Laghu, Snighda, Tikshan Guna, both Katu and Madhura Vipaka and also Ushna Virya. It cures cracks of the foot, fracture of knee and many other diseases of Vata and Rakta said to be incurable and also the severe form of VataRakta.

It has anti-inflammatory, analgesic and anti rheumatic properties. It is used in auto -immune disorders especially Gouty Arthritis.

ACTION ON SAMPRAPTI GHATAKA:

Dosha:

- Tikta, Madhura, katu and Kashaya Rasas contain mainly Laghu, Snigdha Gunas.(Ch. Su. 26).
- Snigdha Guna inhibits the Ruksha Guna of Vatadosha and Pittadosha.
- Laghu guna and Madhura, Kashaya Rasas normalise the Pitta and Rakta.
- Katu Guna removes the obstruction and dilate the passage and allay Kapha. In this way they help in Sroto-Shodhana.

Thus in this way the compound drug acts on *Dosha* and disintegrates *Dosha Samprapti*.

Dushya:

Madhura Rasa & Madhura Vipika: Nourishour of *Rakta Dhatu*.

Tikta Rasa: Anti-inflammatory, anti-toxic.

Katu Rasa: Removes the toxic elements from the Tissues.

Srotas:

Katu Rasa and Laghu, Tikshna Guna remove the obstruction and dilate the passage and allay Kapha. In this way they help in Sroto Shodhana. Madhura Rasa and Sheeta Vir ya aggravates the vitiated Vata & rakta. In this way, Srotas Sanga is removed and this acts on symptoms of Vata Rakta.

CONCLUSION

- *Langali Gutika* is mainly used in diseases of *Vata, Rakta* and severe form of *Vatarakta*..
- It is used in auto -immune disorders especially Gouty Arthritis.
- Due to its anti-inflammatory, analgesic and anti rheumatic properties, it is widely used in various joint disorders like *Sandhi Shool, Sandhi Shoth, Sandhi Graha* etc
- Classical reference of this formulation is from *Bhav Prakash (Laghutrayee)*
- The main *Rogadhikar* of *Langali Gutika* is *Vatarakta*.
- It can be used in various ailments of *Vata* and *Rakta* with proper *Anupanas*.

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