



**REVIEW ON *DASHANGA LEPA* – AN ANTI-INFLAMMATORY FORMULATION**  
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**ABSTRACT:**

Inflammation and oedema associated with it is known by different names in Ayurveda in different contexts like *Shotha* and *Shopha*. Inflammation has been dealt with as a disease, as a symptom and as a complication of disease. Topical application of herbal formulations is one of the recommended treatment modalities for inflammatory conditions in *Ayurveda*. Such formulations are called *Lepa*. In *lepa Kalpana* different herbal drugs in the form of powder is taken and is mixed with different medias to form paste and is applied externally as *lepa*. *Dashang lepa* is one of ten combinations of traditional medicines that are widely used and very successful locally for treating a variety of mild inflammatory disorders.

**Keywords:** *shopha, dashanga lepa, shrisha, ela, anti-inflammatory*

## INTRODUCTION

Inflammation and oedema associated with it is known by different names in Ayurveda in different contexts like *Shotha* and *Shopha*. Inflammation has been dealt with as a disease, as a symptom and as a complication of disease.<sup>[1]</sup> *Dashanga Lepa* is one such an *Ayurvedic* formulation clinically used as an anti-inflammatory agent and widely recommended for treating a multitude of skin disorders including herpes wounds, eczema and inflammation. Ingredients of *Dashanga lepa* include *Shirisha*, *Yashtimadhu*, *Tagara*, *Rakta chandana*, *Ela*, *Jatamansi*, *Haridra*, *Daruharidra*, *Kushta*, and *Sugandha bala*. *Dashang Lepa* which is mentioned in many Ayurvedic texts like: Chakradutta in *Visarpa-Visphota Chikitsa* 53/32 , Sharangdhar, *Madhyam Bhag*, *Uttarkhand* 11/4-6 *Bhavprakash*, *Uttrardh*, *DwitiyaBhag* 56/32, *Yogaratanakar*, *Uttrardh*, *Visarpa Chikitsa* , *Bhaishjyaratnavali* 57/18, *AFI part 1 second edition* page no. 487-488 same as *Bhaishjyaratnavali*.

Inflammation is a protective mechanism of organisms to defence against harmful stimuli. It involves various molecular pathways with a wide variety of physiological processes. However, up-regulated inflammation can lead to many diseases such as cancer, asthma, allergic rhinitis, atopic dermatitis, and rheumatoid arthritis<sup>[2]</sup>.

In certain circumstances the normal *snigdha-sheet- agneya* character of *Srotas* get disturbed by the *Vidahi & Abhisandhya dravyas*, as a result there is a disturbances in the transport mechanism of the affected *Srotas*. So this retention or accumulation of the fluid is termed as *Sopha*. With reference to the classical knowledge *Sopha* is a condition which is characterised by the features like *Grathita* (hard swelling), *Sama /Vishama*(regular or irregular), *Twak mamsa sthayi* (located superficially), *sharira ekadeshasthit* (localised lesion)<sup>[3]</sup>.

There is no single name for inflammation in *ayurveda*, but based on the different context, inflammation is termed as '*Shotha*' in *Charaka samhita* and '*Sopha*' in *susrutha samhita*. The terms '*Svayathu*', '*Utsedha*' and '*Samhata*' are also used to define inflammatory conditions. The classical *ayurvedic* texts refer inflammation as a condition involving vascular and cellular changes. The changes or impaired microcirculation or '*Srotodushi*' leads to excessive function/obstruction/ inadequate activity, tumor growth and movements in unnatural directions.

A complicated biological reaction of vascular tissues to damaging stimuli, such as pathogens, damaged cells, or irritants, is called inflammation (*sopha*). Pain , heat , redness , swelling , and loss of function are the

traditional symptoms of acute inflammation. Inflammation is a protective attempt by vascular reaction and cellular reaction to remove the injurious stimuli and to initiate the healing process<sup>[4]</sup>.

Nowadays, the drugs used for the skin inflammation treatment are corticosteroids and non steroidal anti-inflammatory drugs (NSAIDs). However, the routine treatment of inflammatory disease with these agents over long periods of time leads to adverse effects, including pruritus, skin dryness, folliculitis, hypertrichosis, hypopigmentation, allergic contact dermatitis, etc<sup>[5]</sup>. Utilising medicinal plants instead of traditional pharmaceuticals seems to have certain benefits over them, including a higher level of safety and lower costs. <sup>[6]</sup>. In the poly herbal compound Dashanga lepa, Sirisha (*Albizzia lebeck*) has

anti-inflammatory activities, anti oxidant properties, anti allergic and analgesic activities. Yastimadhu (*Glycyrrhiza glabra*) has anti-inflammatory, anti microbial and wound healing properties. Raktachandana (*Pterocarpus marsupium*) has anti-inflammatory activity. Ela (*Elettaria cardamomum*) has anti-inflammatory analgesic and anti-oxidant properties. Haridra (*Curcuma longa*) has anti-inflammatory anti-carcinogenic and anti-microbial properties<sup>[7]</sup>.

#### Materials and Methods:

All the raw materials were procured from the nageshwar pharmacy N.I.A., Jaipur except shirish, tagar, and jatamansi which were purchased from local market, Jaipur. Dashanga lepa churna was prepared with proper S.O.P & SMP as mentioned in the classical text in Practical lab of Rasashastra and Bhaishajya Kalpana N.I.A., Jaipur.

**Table 1.1 Ingredients of Dashanga lepa as per Sharangdhara Samhita<sup>[8]</sup>.**

S.no	Ingredients	Latin Name	Family	Part Used	Proportion
1.	Shirisha	<i>Albizzia Lebeck</i> Benth.	Fabaceae	Bark	1 part
2.	Madhuyasthi	<i>Glycyrrhiza glabra</i> Linn.	Fabaceae	Root	1 part
3.	Raktchandana	<i>Pterocarpus Santalinus</i> Linn.	Fabaceae	Heart wood	1 part
4.	Tagara	<i>Valeriana Wallichii</i> DC.	Valerianaceae	Root	1 part

5.	Ela	<i>Elettaria Cardomomum</i> Linn. Maton	Zingiberaceae	Seed	1 part
6.	Haridra	<i>Curcuma Longa</i> Linn.	Zingiberaceae	Rhizome	1 part
7.	Daruharidra	<i>Berberis Aristata</i> DC.	Berberidaceae	Stem	1 part
8.	Jatamansi	<i>Nardostachys Jatamansi</i> DC.	Caprifoliaceae	Root/ Rhizome	1 part
9.	Kustha	<i>Saussurea Lappa</i> C.B. Clarke	Asteraceae	Root	1 part
10.	Hriversa	<i>Pavonia Odorata</i> Wilid.	Malvaceae	Root	1 part

Note:- Here hriversa is not available so we used tagar in double quantity in place of Hriversa. ( In local market tagar is available in the name of hriversa and also we consulted from dravya guna expert and they also suggested tagar so we used tagar in place of hriversa.)

#### Preparation of dashanga lepa churna-

First of all after cleaning we took 50g of each drug. All drugs are separately powdered by pounding with mortar and pestle and some hard drugs are powdering in disintegrator.

After that each drug is pass through sieve no. 85. And then all drugs are mixed together homogeneously to get fine powder of dashanga lepa churna. After cleaning and passing through sieve we got 471.7g out of 500g . This lepa is apply externally with one fifth part of cow's ghee in form of lepa in the required quantity.

**Table 1.2 Shows Rasapanchaka of ingredients of dashanga lepa<sup>[9]</sup>.**

S.no.	Drug name	Rasa	Guna	Virya	Vipaka	Karma
1.	Shirisha	Tikta, Kashaya Madhura	Laghu	Anushna	Katu	Visaghna ,Tvagdosa Tridosahara, sothahara ,Varnya

		Katu				
2.	Madhuyasthi	Madhura	Guru, Snigdha	sheeta	Madhura	Vatapittaja Raktaprasadana, Balya, Varnya Vrshya, Chaksushya
3.	Raktchandana	Tikta, Madhura	Guru Ruksha	sheeta	Katu	Pittahara ,Netraroga Visaghna,Vrshya
4.	Tagara	Tikta, Katu, Kashaya	Laghu, Snigdha	Ushna	Katu	Tridosahara, Visaghna, Raktadosahara, Manasadosahara
5.	Ela	Katu, Madhur	Katu, Madhur	Laghu	Madhura	Rochana, Dipana, Anulomana, Hridya, Mutrala
6.	Haridra	Tikta, Katu	Ruksha, Laghu	Ushna	Katu	Vranashodhana, Vranaropana, Krimighna, Shothaghna Kushthaghna
7.	Daruharidra	Tikta	Ruksha	Ushna		Stanya shodhana, Stanya Doshahara, Dosha Pacana
8.	Jatamansi	tikta, kashaya	Laghu	Sheeta	Katu	tridosanut, medhya, varnya, nidrajanana, kushthaghna

9.	Kustha	Katu, Tikta	Laghu	Ushna	Katu	Kaphavitajit, Sakala, Raktaiodhaka, Vargya
10.	Hrivera	Tikta	Ruksha, Laghu	Sheeta		Deepana , pachana

**Table 1.3 shows chemical constituents and pharmacological activity<sup>[10]</sup>.**

S. N. O.	Ingred ients	Chemical constituents	Pharmacological activity
1.	Shirisha	Twak- tanin and saponin, resin.	Vishaghna , antihistaminic, antiinflammatory, antioxidant, antiallergic, analgesic
2.	Madhuyasthi	Glycyrrhizin, glycyrrhetic acid, glycyrrhetol, glabrolide, isoglabrolide, asparagine, sugars, resin, and starch	anti-microbial, hypolipidaemic, antiantherosclerotic, antiviral, hypotensive, hepatoprotective, anti-exudative, spasmolytic, antidiuretic, antiulcer, antimutagenic, antipyretic, antioxidant, antiinflammatory, anti-nociceptive
3.	Raktchanda	Santalin, pterocarpin, pterostilbene	astringent, anti-inflammatory
4.	Tagara	Valrianic acid	analgesic and anodyne
5.	Ela	Cineol, terpineol, terpinene, limonene, sabinene.	anti-inflammatory, analgesic and antioxidant

6.	Haridra	Curcumene, Curcumenone, curcione, cineole, curzerenone, epiprocurcumenol, eugenol, camphene, procurcumadiol, curcumins	Antibacterial, cholagogue, insecticidal, antifungal, anti-inflammatory, antiprotozoa, CNS depressant, antifertility, antiarthritic, hypocholesteremic, antihepatotoxic, antihistaminic.
7.	Daruharidra	Berberine, oxyberberine, berbamine, aromoline, karachine, palmatine, oxycanthine and taxilamine	anti-microbial, anti-bacterial, anti-pyretic, immunostimulant, laxative, anti-haemorrhagic and anti-inflammatory
8.	Jatamansi	Volatile oil, jatamansik, jatamanson.	Amebicide, Analgesic, Antibacterial, Antiseptic, Carminative, Hypnotic, Sedative, Tranquilizer action.
9.	Kusthara	Essential oil, alkaloid (seassurine) and biller resin.	anti-tumor, anti-bacterial, anti-inflammatory, immunomodulation, antiulcer,
10.	Hrivera		antipyretic, stomachic and astringent

## DISCUSSION-

The treatment of ailments with various types of Kalpana is referenced in the Ayurvedic Classics. One particular Kalpana, called Lepa, is believed to both treat illness and promote good skin. The fundamental idea behind Lepa Kalpana is to gather raw drugs, whether they are in wet or dry form, and thoroughly grind them to create a paste-like consistency. *Visarpa*, *Shotha*, and *Vrana* are the three basic uses of *dashanga lepa*.

The formulation's constituents help in blood purification, which calms Rasa Dhatu and stops the circulation of impure Rasa in the body. Vata and Pitta are calmed by Dashang Lepa. The formulation's nutritive benefits start the natural healing process. Pain is reduced by the formulation's analgesic action. Topical application aids in boosting blood flow, which boosts the flow of nutrients and potentiates Dhatus. The majority of the elements in Dashanga Lepa are Katu Tikta Rasa Pradhana, that help in Sroto Shodhana. Some ingredients have Sheeta Veerya, which help in alleviating Vata Dosha. Here, Rakta is also purified by Katu, Tikta Kashaya Rasa. Ruksha Guna assists in reducing Kleda at the location of the disease. The skin's Avbhashani layer contains Bhrajaka Pitta, which is influenced by the Varnya properties of Shirisha, Jatamansi, Haridra, and Kushta. They subsequently

stabilise Pitta Dosha and help in blood purification as a result. Tagar and Daruharidra also have Ushna Veerya, Vata Shamaka, and Vedana Sthapana properties, that help in reducing Vata Dhosha. Because Vata Dhosha is necessary for all pain to occur. Kushtha functions as Kushta Ghana, which primarily helps in blood purification. Jantughana and Durgandhanashaka are properties owned by the *Kushtha*. These actions are well known for treating *Vrana* and skin conditions. *Daruharidra* performs as *Vranropana*, *Vedanasthapan*, and *Shothahara*. These activities lead to its Use for *Shotha* and *Varnya*. According to modern understanding, this kind of formulation lowers prostaglandin levels, which are thought to be the cause of inflammatory disorders. So, a decrease in prostaglandin levels reduces inflammation and pain.

Previous research work-

1. A review article on *dashang lepa* for *jwara* in children-*Dashang lepa* reduces features of *Jwara* like; pain, edema and temperature. The ingredients of formulation possess anti-pyretic properties and can relieve symptoms of fever<sup>[11]</sup>.
2. Assessment of the anti-inflammatory effect of dashang lepa in Acute experimental models in albino rats-The observations of the present study suggest significant anti-inflammatory



activity of Dashang Lepa against Carrageenan induced paw oedema in rats. The carrageenan-induced paw oedema test is widely accepted as a sensitive phlogistic tool for investigating potential anti-inflammatory agents<sup>[12]</sup>.

3. Review on utility of preferred drugs from *Dashanga lepa* as herbal hand sanitizer intended for pandemic COVID 19- From this study, it can be concluded that the drug in *dashanga lepa* having *vishaghna*, *krimighna*, *kushtaghna*, *Kandughna*, *visarpaghna* activity, etc. As the activity of *dravyas* depends on the predominance of *rasa* and *guna* possessed by it, so these herbs may be the drug of choice for the management of various infectious diseases like COVID19<sup>[13]</sup>.

### CONCLUSION

Lepa Kalpana is one of the unique Kalpana which is used for both to treat disease and to get healthy skin. Alkaloids, tannins, pinene, curcuminoids, phenolic compounds, flavonoids, and ephedrine, among other chemical components of Dashang Lepa, have antipyretic and anti-inflammatory properties. Each ingredient of dashanga lepa have anti-inflammatory, anti oxidant, analgesic properties. Due to its chemical constituents and pharmacological actions and rasapanchak it reduces body temperature, subside inflammation and related symptoms. lepa is

apply with one fifth part of ghritha which inhibit any toxic effect and provide soothing effect.

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