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Review Article

Anti-Inflammatory Potential of *Shothari Louham*, a Herbomineral Formulation - A Review

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ABSTRACT

Inflammation is very normal desired effect in the body to rid the body of all its ill effects, our body creates inflammation under different situations, as soon as it has done its share of work, the body produces anti inflammatory process and inflammation settles down, in normal healthy person this process is in perfect balance, however where there is an imbalance our body does not stop producing inflammation, instead inflammation will often simmer for long time and turning into a serious problems. Nature has provided a complete store house of remedies to cure all ailments of mankind. The natural or herbal remedies are still the backbone of medicines. These herbs or plants and their active ingredients are used in traditional herbal remedies. The easy availability, low cost and negligible side effects, natural products are popular in the nowadays in the world. Hence the anti - inflammatory potential of *shothari louham*, a herbomineral formulation mentioned in the text is taken for review. Different research and review article were searched in different journals to establish the anti-inflammatory potential of *shothari louham.*

Keywords: anti-inflammatory, *shotha,* piperine, *shunthi, trikatu.*

INTRODUCTION

Inflammation can be correlated to Shotha on the basis of equivalent symptoms mentioned in the concerned literature. Inflammation is a symptom according to modern system while Ayurveda signifies it as a disease in accordance to Shotha. Inflammation is a host defence mechanism of the body and it's an essential immune response that enables the body to survival during infection or injury and maintains tissue homeostasis in noxious conditions. According to the modern concept, inflammation is a healthy process resulting from some disturbance or disease. Inflammation is a normal response to any noxious stimulus that threatens the host and may vary from localized response to a generalized one [1] To overcome this problem different kind of safe and effective anti-inflammatory agents are available, including aspirin and other nonsteroidal anti-inflammatories. [2] Inflammation is currently treated by NSAIDs. Unfortunately these drugs cause increased risk of blood clot resulting in heart attacks and strokes. Therefore, the developments of potent anti-inflammatory drugs from the natural products are now under considerations. Natural products are rich source for discovery of new drugs because of their chemical diversity. A natural product from medicinal plants plays a major role to cure many diseases associated with

inflammation. The conventional drug available in the market to treat inflammation produces various side-effects. [3] The polyherbal and Ayurvedic medicines are getting popularity because of is less side effects as compared to synthetic drugs. [4] *Shothari louham* possessess anti inflammatory properties mentioned in the text. [5]

Method of preparation *Shothari louham* [6]

Following ingredients are used for the preparation of *Shothari Louham*

S.No	Ingredients	Latin name	Family	Part used	Quantity
1	Louha bhasma			Bhasma	4 part
2	Shunthi	Zingiber officinale	Zingiberaceae	Rz	1 part
3	Maricha	Piper nigrum	Piperaceae	Fr .	1 part
4	Pippali	Piper longum	Piperaceae	Fr .	1 part
5	Yavakshara	*Alkali of yava*			1 part

The fine powder of all the ingredients above mentioned are mixed together in the prescribed quantity .and given in the dose of 250mg-500mg.

Ingredients of *Shothari Louham* and their pharmacological and therapeutic properties

S.no.	Name of the drug	Rasadi panchak & Ayurvedic properties	Pharmacological properties
1	Louha bhasma	***Rasa*** *– tikta, kashaya* ***Guna****- ruksha, guru* ***Veerya*** *– sheeta* ***Vipaka*** *– madhura* ***Rogaghanta****- chakshushaya, balya, udararoganashaka, kaphapittaprakopanashak, twakrogahara,shothahara, panduroganashak, shwasa roga, shoolanashak, gulma, pliha, medorogahara, premahahara,* [7,8]	Anti-inflammatory [7,9]
2.	Shunthi	***Rasa*** *- Katu* ***Guna*** *- Laghu, Snigdha (Shunthi), guru, Ruksha, Teekshna Ardraka).* ***Virya*** *- Ushna,* ,***Vipak*** *- Katu (Ardraka), Madhur(Shunthi),* ***Doshaghnata*** *- Kaphavatashamak,* ***Rogaghnata*** *– Amavata, Aruchi,Chhardi,agnimandya,Koshthavata, sheetpitta, Kasa, Shwasa, pratishyay.* ***Karma*** *- Shothahara, vednasthapana, Nadiuttejak, rochana, Dipan, Pachana, vatashamak, Triptighna, vatanulomak, Grahi, Bhedana,kaphahara, Shwasahara, vrishya.* [10]	Hypo-lipidaemic, [11] Hypoglycemic, Antiematic, Cardiovascular and Antiplatlat. [12] Anti-inflammatory [13]
3.	Maricha	***Rasa*** *- Katu,* ***Guna*** *- Laghu, Teekshna, Ruksha,* ***Virya*** *- Ushna,* ,***Vipak*** *- Katu,* ***Doshaghnata*** *-Kaphavatashamak,* ***Rogaghnata****- Hriddaurbalya, Pratishyaya, Kasa, Swasa, Hikka, Shoola, Adhmana, Agnimandya, Vatavikar, Krimi, Pama, tarunyapidika, Shothavednayuktavikar, charmaroga.* ***Karma*** *- Raktotkleshak, deepana Lekhan,adiuttejaka, Lalasravajanana, pachana, vatanulomak, Krimihar, swedajanan.* [14]	Hepato-protective, Antifungal and Antimicrobial, Anti-inflammatory and analgesic [15]
4.	Pippali	***Rasa*** *- Katu, madhur* (fresh piper) ***Guna*** *- Laghu, Snigdha, Tikshna,* ***Veerya*** *- Anushna sheet, sheet* (fresh piper) ***Vipaka*** *- Madhur,* ***Doshaghnata*** *- Kaphavatashamak, Kaphavata Vardhak* (fresh piper) ***Rogaghnata*** *-Shotha, Agnimandya, Vibandh, Gulma, Hikka,Yakshma, Mootravikar, shukradaurbalya, Rajorodha, kashtaprasava, Yakrutvruddhi, krimiroga, Pandu.* ***Karma*** *- Dipana, Pachana, Truptighna, Vatanulamaka, Yakruduttejaka, Garbhashay sankochaka, Vrushya, kushthaghna, Rasayana.* [16]	Hepato-protective, [17] Antigiardial Antibacterial, Cough suppressor, Antiallergic. [18] Anti-inflammatory [19,2,3]
5.	Yavakshara	***Karma*** *Tridoshaghana,saumyata,dahana, pachana,darana,katu,tikshna, vilayana,shodhana,ropana, shoshana,lekhana,krimighana* [20]	Antibacterial [21]

DISCUSSION

The scientific studies proved the role of Piperine as bioavailability enhancer; it increases the bioavailability of certain drugs. [22] Similarly it may enhance the bioavailability of the

Gingerols and thus may increases the anti-inflammatory activity of the whole formulation. [23] Piperine effect may be due to inhibition of one or more of the phlogistic mediators, antagonizing their interaction with their respective receptors, inhibition of phlogistic mediators or it may be due to general mechanism like increasing the membrane stability in the cell. [24]

Pippalı (*Piper longum* Linn.) fruit contains a number of constituents, including volatile oil, alkaloids, isobutylamides, lignans and esters. Piperine, which is the prime constituent of fruit, is reported to be having significant anti-inflammatory activity. [25,26]

The earlier report suggested that in Rheumatoid arthritis (RA) and Osteoarthritis (OA) patients, use of powdered ginger for 3-month to 2.5-year period, reduce pain and inflammation in 75% patients without any adverse effect and suggested ginger is an anti-inflammatory agent. [27] 6-gingerol acts as an anti-inflammatory compound that may be useful to treat inflammation without interfering with antigen presenting function of macrophages [28]

Ginger Supplement inhibits both cyclooxygenase -2 COX- 2 & lipoxygenase LPO expression by suppressing nuclear factor NF- ƙB activity via tumour necrosis factor TNF – α. [29]

The inhibitors of prostaglandin biosynthesis are directly associated with anti-inflammatory and anti platelet aggregation activities. [30]

In other study eugenol present in ginger oil was shown to be the anti inflammatory constituent of ginger. Oral administration of eugenol, a major component if clove oil and ginger oil was administered orally to rats following induce severe arthritis in the paw and knee. The oil was given for 26 days, it caused a significant suppression in paw and joint swelling. The researchers concluded that eugenol and ginger oil have anti-inflammatory properties. [31]

In another study, *Trikatu*, (1000 mg/kg/b.w.) was evaluated for anti-inflammatory activity in comparison to indomethacin (reference drug) in rats. A significant anti inflammatory effects was observed in *Trikatu* treated adjuvant induced arthritic rats by a reduction in the levels of circulating immune complexes and inflammatory mediators (TNFalpha and Interleukin-1beta) [32]

The louha bhasma and yavakashar also been mentioned for their anti-inflammatory activities in the ayurvedic classics. [33]

CONCLUSION

This review has presented a collective knowledge on therapeutic, pharmacological activities of *shothari louham* as anti inflammatory. So, this review will also facilitate to gain all about the past scientific research and the necessary information about the enormous pharmacological activities of this formulation which helps the researcher to explore this formulations for the promotion of health.

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