A Literary & Pharmacological Review of *Vatapatradi Lepa*

Vd. Pallavi Hitendra Bhirud[1*], Vd. Ashwini Shitre[2]

[1]Ph. D. Scholar, Department of Balrog , School of Ayurveda ,D. Y. Patil Deemed to be University, Nerul, Navi Mumbai

[2] Professor & Ph.D Guide , School of Ayurveda, D. Y. Patil Deemed to be University, Nerul, Navi Mumbai.

Abstract-

Lepa are the topical medicament meant for external application. Various references of *Lepa* are mentioned in text as per their disease condition and their *Dosha* predominance. The facial skin is most sensitive and is prone to conditions such as acne, pigmentation, dryness, tanning etc. Though Ayurveda puts them in category of '*Kshudra'* i.e., minor diseases, they can bring about large psychosocial turmoil in one's life. In Sharangadhara Samhita, many *Lepa* for enhancing beauty as well as curing facial skin ailments have been described. In this review, such a *Lepa* with promising potential, viz., *Vatapatradi Lepa* has been studied. It has been mentioned for treatment of *Mukhadushika* (acne), *Vyanga* (melasma) in Sharanghadhara Samhita. The reference from Sharangadhara Samhita was considered for this literary review. All the contents derived from the reference were studied thoroughly. Their information, properties and usage were studied from major texts of Ayurveda. The review of their pharmacological properties and research works was done from published literature in journals available online. This literary review provides a basic framework for future pre-clinical and clinical studies.

Keywords-Acne, *Vatapatradi Lepa*

Introduction-

Lepa are the topical medicament meant for external application. Various references of *Lepa* are mentioned in text as per their disease condition and their *Dosha* predominance. *Lepa* is traditionally used as a paste. However, its various modifications such as ointments are also being explored to give it a contemporary look.

Since ancient times, various herbs such as *Haridra, Lodhra* etc. have been used for cosmetic purposes. In Sharangadhara Samhita, many *Lepa* for enhancing beauty as well as curing facial skin ailments have been described.[1] The facial skin is most sensitive and is prone to

conditions such as acne, pigmentation, dryness, tanning etc. Though Ayurveda puts them in category of '*Kshudra'* i.e., minor diseases, they can bring about large psychosocial turmoil in one's life.

In view of this, formulations described for such ailments are being studied with new interest, as many of them have been successfully used with promising results.

In this review, such a *Lepa* with promising potential, viz., *Vatapatradi Lepa* (VL), has been studied. It has been mentioned for treatment of *Mukhadushika* (Acne), *Vyanga* (Melasma) in *Sharanghadhara Samhita, Vangasena, Yogaratnakara and Bhavaprakash*. The objective of this study is to compile pharmacological properties of contents of *Vatapatradi Lepa*. Also, available research data for *Vatapatradi Lepa* has been studied. This review will provide a basic framework to plan studies to increase spectrum of activity of *Vatapatradi Lepa.*

Methods-

The reference of *Vatapatradi Lepa* from *Sharangadhara Samhita* was considered for this literary review.[2] All the contents derived from the reference were studied thoroughly. Their information, properties and usage were studied from major texts of Ayurveda. The review of their pharmacological properties and research works was done from published literature in journals available online. The data was presented and discussed in a concise manner.

Results-

The contents of *Vatapatradi Lepa* are mentioned in Table 1 along with their Latin names and part used in preparation of this formulation. As the first ingredient of this formu lation is '*Vata Patra'*, the nomenclature, *Vatapatradi Lepa* has been acknowledged.

- Method of preparation –

All the raw drugs in equal quantity except Banyan and Jasmine leaves are grinded to make a fine powder. The leaves of Banyan and Jasmine are added to it and pounded to make a paste. Adequate amount of water is added to it to prepare *Lepa* of proper consistency. This procedure has not been elaborated in classical reference. However, it is followed taking into consideration the general preparation of *Lepa Kalpana* and other principles of *Bhaishajya Nirmana* described in Sharangadhara Samhita.

Table 1- Ingredients of *Vatapatradi Lepa*

Sr. No.	**Ingredient**	**English Name**	**Latin Name**	**Part Used in formulation**

1	*Vatapatra*	Banyan Tree	*Ficus bengalnesis*	Ripened leaves
2	*Chamelipatra*	Jasmine	*Jasminum grandilorum*	Fresh Leaves
3	*Raktachandan*	Red sandalwood	*Pterocarpus santalinus*	Heart wood
4	*Kushtha*	Indian Costus Root	*Saussurealappa*	Root
5	*Agaru*	Agarwood	*Aquilaria agallocha*	Resinous wood
6	*Lodhra*	Symplocos Tree	*Symplocosracemosa*	Stem Bark

 The properties of each of these ingredients are elaborated as follows-

A. Attributes as per Ayurveda-

The *Bhavaprakasha Nighantu* has described *Rasa*, *Vipaka*, *Veerya*, *Guna* and action of *Dosha* for each of these ingredients. Also, the specific groups or *Gana* in which they are included by Charaka Samhita[3] and Sushruta Samhita[4] has been mentioned. They have been tabulated in Table 2.

Table 2- Attributes of contents of *Vatapatradi Lepa* as per Ayurveda

Sr. No.	**Ingredient**	***Rasa***	***Vipaka***	***Veerya***	***Guna***	**Action on *Dosha***	***Gana***
1	*Vatapatra*	*Kashaya*	*Katu*	*Ushna*	*Guru, Ruksha*	*Kapha-Pitta Shamaka*	*MootraSangrahaniya, Kashaya Skandha, NyagrodhadiGana*
2	*Chamelipatra*	*Tikta-Kashaya*	*Katu*	*Ushna*	*Laghu, Snigdha*	*TridoshaShamaka*	*Kushthaghna*
3	*Raktachandan*	*Tikta-Madhura*	*Katu*	*Sheeta*	*Guru, Ruksha*	*Kapha-Pitta Shamaka*	*Patoladi, Sarivadi, PriyangvadiGana*
4	*Kushtha*	*Tikta-Katu - Madhura*	*Katu*	*Ushna*	*Laghu, Rooksha, Teekshna*	*Kapha-VataShamaka*	*Shukrashodhana, Lekhaniya, Asthapanopaga, EladiGana*
5	*Agaru*	*Katu-Tikta*	*Katu*	*Ushna*	*Laghu, Teekshna*	*Kapha-VataShamaka*	*Sheetaprashamana, Shwasahara, Shirovirechanopaga, TiktaSkandha,*
							Shalasaradi, EladiGana
6	*Lodhra*	*Kashaya-Tikta*	*Katu*	*Sheeta*	*Laghu, Ruksha*	*Kapha-Pitta Shamaka*	*Shonitasthapana, Sandhaniya, PurishaSangrahaniya, Kashaya Skandha,*

B. Chemical Constituents and pharmacological activities of ingredients-

The chemical composition of different parts of herbs mentioned in *Vatapatradi Lepa* have been studied extensively. Also, their pharmacological actions have been studied by various researchers.

The major chemical constituents and pharmacological activities are tabulated in Table 3.

Table 3- Chemical Constituents of ingredients of *Vatapatradi Lepa*

Sr. No.	**Ingredient**	**Chemical Constituents**[5]	**Pharmacological Activities**
1	*Vatapatra*	The aerial root of Banyan contains Phytosterolin. Its leaves contain Triterpin, Friedelin and Beta sitosterol. Its bark contains a glucoside, Bengalinoside and avonoidglycosides, Leucocyanidin and Leucopelargonidin. The heartwood contains ester of alphatatraxasterol and Liglic acid.	Anti-microbial[6], Anti-arthritic[7], Wound Healing activity[8]
2	*Chamelipatra*	The leaf of the plant contains ascorbic acid, anthranilic acid and its glucoside, indoleoxygenase, alkaloid jasminine and salicylic acid. The flowers contain pyridine andnicotinate derivatives. The oil extracted from the plant yield benzyl acetate, benzylbenzoate, phytol, methyl jasmonate, linalool, geranyl linalool and isophytol.	Anti-bacterial[9], Anti-inflammatory Activity[10]
3	*Raktachandan*	Pterocarpol, Santalin A,B pterocarptriol, Pterocarpodiolone, Lupenediol, Pterostilbene, Homopterocarpin	Anti-oxidant, Anti-bacterial, Anti-inflammatory Activity[11]
4	*Kushtha*	Essential oil, costol, taraxas- terol, costunolide, Dehydroconstuhactone, alphaCyclocostunolide, sitosterol, Sesquiterpenes, Ar- curcumene, isodihydrocostuslacttone, costol- lactone etc.	Anti-inflammatory,[12]Anti-ulcer, Anticancerand hepatoprotective[13]
5	*Agaru*	Agarospirol, Aquillochin, Holocellulose, Lignan, Pentosans, Essential ois viz.	Antimicrobial,[14] anti-
		Agarol (a sesquiterpene alchol, the main odoriferous component) a-and b-	
6	*Lodhra*	Symposide, (-) epifzelechin; loturine, loturidine, colloturineetc.The bark of the	Analgesic, Anti-inflammatory16, Anti-

C. Researches carried out on *Vatapatradi Lepa*

This formulation is used by physicians since long time. In Sharangadhara Samhita, the usage of VL for *Tarunya Pitika* (Acne vulgaris), *Vyanga* and *Nilika* (dark pigments) has been advocated. Efforts have been taken to study its efficacy and mode of action. Nayana N., Prashanth B.K. and Rohith Krishnan have studied *Vatapatradi Lepa* in its aqueous extract form.[18] They have carried out the physico-chemical and preliminary phytochemical analysis. Thin Layer Chromatography

and High- Performance Thin Layer Chromatography was also done for standardization purpose.

Sampada Sant and Rupali Patil have studied its clinical efficacy on melasma (*Vyanga*).[19] They observed that when used along with *Virechana Karma*, *Vatapatradi Lepa* was effective in improvement of the condition. The relief was significant according to Melasma Area & Severity Index (MASI) as well as photographic assessment.

A study by Nayana N, Prashanth BK elaborated about effort to modify *Vatapatradi Lepa* from *Lepa* to *Malahara* (ointment) form. It was considered owing to better compliance and shelf-life enhancement. It was found successful in preliminary phytochemical and HPTLC studies.

Discussion-

The literary study of Ayurvedic and modern pharmacological aspects of ingredients of *Vatapatradi Lepa* reveal their promising potential. These herbs are both easily available and well established to possess beneficial properties pertaining to various skin ailments. From the present review, they seem to be more beneficial in common skin ailments such as melasma. However, its efficacy in acne remains under-explored. Validation of such claims can be done by further pre-clinical and clinical studies. This literary review provides a basic framework for it.

References-

1. Dr. Brahmananad Tripathi, Editor, Sharangadhara Samhita of Sharangadhara, Reprint edition, Varanasi, ChaukhambaSurbharatiPrakashana, 2001, p. 391
2. Dr. Brahmananad Tripathi, Editor, Sharangadhara Samhita of Sharangadhara, Reprint edition, Varanasi, ChaukhambaSurbharatiPrakashana, 2001, p.393
3. Pt. Rajeshwar Datta Shastri, Pt. Yadunandan Upadhyaya, Pt. Ganga SahayaPandeya, Dr.Banarasidas Gupta, Pt. Brahmashankar Mishra, Editors, Charaka Samhita Volume 1, Reprint Edition, ChaukhambaBharati Academy, Varanasi, 2001, p. 135
4. Vaidya JadavjiTrikamji Acharya & Narayan Ram Acharya, Editor, Sushruta Samhita, Seventh Edition, ChaukhambhaOrientalia, Varanasi, 2002, p. 72
5. Dr. J. L. N. Sastry, llustrated*DravyagunaVijnana*: Study of the Essential Medicinal Plants in Ayurveda (Volume II),First Edition, Varanasi,Chaukhamba Orientalia, 1999
6. Aswar Manoj, Aswar Urmila, Wagh Akshaya, WatkarBhagyashri, VyasMeenakshi & Gujar Kishore. Antimicrobial activity of *Ficus benghalensis*. Pharmacologyonline.2008, 2.
7. Bhardwaj L.K., Patil, K.S., Kaushik, M., Sahu, A., Prakash, Y., Verma, V.K. Study on efficacy of treatment with *Ficusbenghalensis* leaf extracts on Freund's adjuvant induced arthritis in rats.2010. International Journal of Drug Development and Research. 2. 744-749.
8. Garg V. K., &Paliwal S. K. Wound-healing activity of ethanolic and aqueous extracts of *Ficusbenghalensis*. 2011. Journal of advanced pharmaceutical technology & research,

2(2),110–114.

9. Joy, Priya & Raja, D.Anti-Bacterial Activity Studies of *Jasminumgrandiflorum* and*Jasminumsambac*. 2008. Ethnobotanical Leaflets. 12.
10. Arun M., Satish S., & Anima P. Phytopharmacological Profile of *Jasminumgrandiflorum* Linn. (Oleaceae). 2016. Chinese journal of integrative medicine, 22(4), 311–320.
11. Bulle, Saradamma, Reddyvari, Hymavathi, Varadacharyulu, N.,VaddiDamodaraReddy.Therapeutic Potential of *Pterocarpussantalinus* L.: An Update. 2016. Pharmacognosy Reviews.
12. Hassan Reyaz&Masoodi, Mubashir. *Saussurealappa*: A Comprehensive Review on itsPharmacological Activity and Phytochemistry. 2019. Current Traditional Medicine.
13. Mohan, Madan, Rastogi, Subha, Rawat, Ajay. *Saussureacostus*: Botanical, chemical and pharmacological review of an ayurvedic medicinal plant. 2007, Journal of ethnopharmacology.110 379-90.
14. Dash Manasi, Patra Jayanta Kumar, Panda, Prasanna. Phytochemical and antimicrobial screening of extracts of *Aquilariaagallocha*Roxb. 2010. African Journal of Biotechnology. 7.
15. Rahman Habibur, Vakati K. &Eswaraiah Dr. In-vivo and in-vitro anti-inflammatory activity of *Aquilariaagallocha* oil.2012. Int J Basic Med Sci Pharm. 2. 7-10.
16. Kumar S.S., Marella S.S., Vipin S., &Sharmistha M. Evaluation of Analgesic and Anti- Inflammatory Activity of *Symplocosracemosa*. 2013. IJRP, 2013, 4 (2)
17. Devmurari V.P. Antibacterial evaluation and phytochemical screening of *SymplocosRacemosa* Roxb.2010 International Journal of PharmTech Research. 2. 1359-1363.
18. Nayana N, Prashanth BK, Rohith Krishnan. Preliminary phyto–chemical study on the extractof *Vatapatradilepa* - A poly herbal formulation. 2015. Ayurpharm Int J Ayur Alli Sci.2015;4(7):136-144)
19. Sampada Sant and Rupali Patil. Study the Incidence of *Vyanga* According to *Prakruti* And Effect of *VatapatradiLepa* On It.2017. World Journal of Pharmaceutical and Medical Research. 3(2), 156-161
20. Nayana N, Prashanth BK, Formulation Development and Preliminary physico-Chemical Characterization of *VatapatradiMalahara*: A Modification.2015. Int. J. Res. Ayurveda. Pharm.6 (6), 676-681