ISSN: 2322 - 0902 (P)
ISSN: 2322 - 0910 (O)

International Journal of Ayurveda and Pharma Research

Research Article

ANALYTICAL STUDY OF *YASHTAYADI LEPA* IN *VIDALAKA KARMA*

Ranjana Negi[1], Gunjan Sharma[2]*

[1]P G Scholar, *[2]Professor and HOD, PG Department of Shalakya Tantra, Rishikul Campus, Uttarakhand Ayurveda University, Dehradun, Uttarakhand, India.

ABSTRACT

Lepa is considered as an important and initial *Chikitsa* in reference with *Vranashotha chikitsa* described by *Acharya Sushruta* and when the *Lepa* is applied around the outer surface of eyes it is termed as *Vidalaka*. *Vidalaka* a type of *Kriyakalpa* therapy which is mainly indicated in acute inflammatory conditions of eyes such as *Daha* (burning sensation), *Updeha* (discharge), *Ashru* (watering) *Shopha* (swelling) and *Raga* (redness). Different formulations are given in classic texts for eye diseases and one among them is *Yashtayadi lepa* mentioned by *Acharya Sharangadhara* in *Sharangadhara Samhita.* It is described as *Sarvanetrarujahara Yoga* and consists *Yastimadhu, Gairika, Saindhav, Daruharidra* and *Rasanjana* as its main ingredients. *Yashtyadi lepa* was prepared as per the guidelines given for *Lepa* in API (Ayurvedic Pharmacopoeia of India) and analyzed using various standard physico-chemical parameters given for *Lepa* such as Loss on drying, Ash value, Water extract value, Alcohol extract value and pH. There is no standard guidelines is given for pharmaceutical analysis for *Yastyadi Lepa* in API. With this background the present study was undertaken to find pharmacognostical and physicochemical qualities of *Lepa* as recommended in Ayurvedic Pharmacopoeia of India (API) and to use them as reference for future studies on *Yashtyadi Lepa* for different ocular diseases.

KEYWORDS: *Lepa, Vidalaka, Shophanashaka, Yashtyadi Lepa, Vranashotha chikitsa,* pharmacognostical and physicochemical analysis.

INTRODUCTION

Kriyakalpa[1] has been described as local therapeutic ocular procedure in *Shalakya Tantra* and it has immense potential to treat many diseases of eyes. Various *Kriyakalpa* procedures are described in classical texts and are applied according to the disease type and disease stage. *Vidalaka* is one of the therapies described under *Kriyakalpa* given in Ayurvedic texts[2] and it is described as a type of *Lepa* which is applied to the outer surface of the eye. [3] *Acharya Charaka* has indicated the use of *Vidalaka* karma in inflammatory conditions of eyes.[4] Different drug formulations have been described in various ancient texts for local application in different eye diseases and *Yashtyadi Lepa* is one of such compound which is given by *Acharya Sharangdhara* as *Sarva-netramayahara Yoga* in *Netrprasadana* chapter of *Uttar Khand*[5]. The contents of the *Lepa* are: *Yastimadhu, Gairika, Saindhav, Daruharidra* and *Rasanjana* which have the properties like *Vedna-nashaka, Kandunashaka, Vranaropana* and *Vrana-shophhara* which help in residing the signs and symptoms of acute inflammatory conditions of eyes. All the contents are used in powdered form to make a semisolid paste out of it and applied in the form of *Vidalaka* around the eyes leaving the eyelashes. This present study is aimed at to develop a local therapeutic formulation which has potential to relieve the disease and to provide quality standardization of drug through recommended analytical tests.

Materials and Methods

Aims and objective

To analyze the physicochemical and pharmacognostical character of drug.

Collection of raw materials

The raw drugs for the study were procured from Hansa Pharmacy Sidicul, Haridwar, Uttarakhand. *Rasanjana* was prepared in the Hansa Pharmacy Sidicul, Haridwar, Utterakhand. (Table 1)

Identification and authentication

The raw drugs were identified and authenticated by PG Department of *Dravya Guna,* Rishikul campus, Haridwar. The minerals for *Yashtyadi Lepa* after preparation were identified and authenticated by PG Department of *Rasa Shashtra* and *Bhaishjya Kalpana,* Rishikul Campus, Haridwar. (Figure 1)


Yastimadhu


Gairika


Rasanjana


Daruharidra


Saindhav

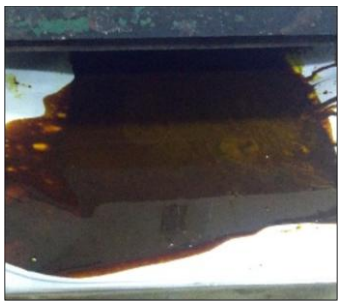
Method of preparation of *Yashtayadi Lepa*

The herbal ingredients were taken in their crude form and washed with clean water to remove the dirt and mud and then dried in sunlight for 7 days. The dried herbs and *Gairika, Saindhav Lavana* was made fine coarse powder in 1:1 ratio. *Gairika* was purified with *Goghrita* by *Ghrit Bhrinjana*[6] process and added to the mixture in equal amount ratio.

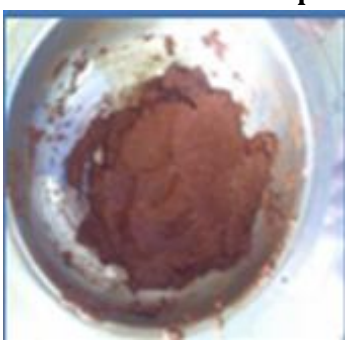
Rasanjana was prepared by *Ghanasatwa* method at Hansa Pharmacy Sidicul, Haridwar, Uttarakhand. For this insect free *Daruharidra moola* was taken from its natural habitat in Pauri Garhwal and dried in the sunlight for seven days. The dried wood was then taken to Hansa Pharmacy Sidicul, Haridwar, Uttarakhand for *Yavakuta* and 8 kg was obtained for preparation of *Rasanjana*. *Yavakuta Daruharidra* then washed thoroughly and soaked in 16 times water (128 liters) as mentioned in *Bhavprakash*[7] for 12 hours. Soaked *Daruharidra* then subjected to medium flame for *Kwath* preparation. It was reduced to ¼ (32 liters) and then this part of decoction was filtered and allowed to sediment for 12 hours. The sedimented portion was left and the clear portion was again boiled till it become thicker like *Lehakalpna* as mentioned in *Sharangdhara Samhita*[8] and around 500 gram *Ghansatwa* was obtained. After that all that *Ghanasatva* was dried into tray drier at temperature 35-40 degree Celsius and then powdered. (Figure 2)


Yavkuta Daruharidra


***Kwatha F*ormation**


Prepared *Rasanjana*


Lepa contents


Prepared *Vidalaka*

Pharmacodynamics of *Yashtyadi Lepa*

The mode of action of and their physiological effect can be better disclosed by the properties of physiochemical factors of their contents i.e. *Rasa, Guna, Virya, Vipaka* and *Dosha-shamakta*. (Table 2)

Analytical study

The final products of *Yashtyadi Lepa* was analysed by implementing a number of analytical parameters.

Organoleptic study

Organoleptic characters like texture, taste, odour and colour etc**.** of *Yashtyadi Lepa* was evaluated in this study. (Table 3)

Physico-chemical analysis of Drug

As per the API guideline, *Yashtyadi lepa* was analyzed by using qualitative and quantitative parameters at Multani Pharmaceuticals Ltd Bhagwanpur, Haridwar.

Physico-Chemical Parameters

Yashtyadi lepa was analyzed using various standard physico-chemical parameters such as Loss on drying, Ash value, Water extract value, Alcohol extract value and pH. The results are shown in Table 4.

Microbiological Limit Test

This test reveals total bacterial count and total yeast and mould count in cfu/g. Also reveals presence of other specific pathogen which was negative. (Table 5)

Results

Table 1:Ingredients of *Yashtyadi Lepa*

Name of Drug	Latin Name	Part used	Ratio	Form
Yastimadhu	*Glycyrrhiza glabra*	Root	1 part	*Choorna*
Daruharidra	*Berberis aristata*	Root	1 part	*Choorna*
Saidhava Lavana	*Sodium Chloride*	Whole	1 part	Raw form
Gairika	Iron oxide (sometime contains titanium & magnesium)	Whole	1 part	*Ghrita-bhranjita*
Rasanjana	Extract of *Berberis Aristata*	Root	1 part	*Ghana-satva*

Table 2: Pharmacodynamics of *Yashtyadi lepa*

Dravya	***Rasa***	***Guna***	***Virya***	***Vipaka***	***Dosha Shamkta***
Yashtimadhu	*Madhura*	*Guru, Snigdha*	*Sheeta*	*Madhura*	*Vaat-Pitta shamak*
Daruharidra	*Kashaya, Tikta*	*Laghu, Ruksha*	*Ushna*	*Katu*	*Kaph-Pitta shamak*
Saindhava lavana	*Lavana, Madhura*	*Kinchita Guru, Snigdha, Teekshna*	*Sheeta*	*Katu*	*Tridosha Shamaka*
Gairika	*Kshaya- Madhura*	*Snigdha*	*Sheeta*	*Madhura*	*Pitta-Kapha Shamaka*
Rasanjana	*Tikta, Kshaya*	*Laghu, Ruksha*	*Ushna*	*Katu*	*Kapha-Pitta Shamaka*

Table 3: Organoleptic Properties of *Yashtyadi lepa*

Rupa (colour)	Reddish Brown
Rasa (Taste)	Sweet, Salty
Gandha (Odour)	Sweet, Sour
Sparsha (Consistency in Touch)	Fine Powder

Table 4: Physico-chemical Analysis of *Yashtyadi Lepa*

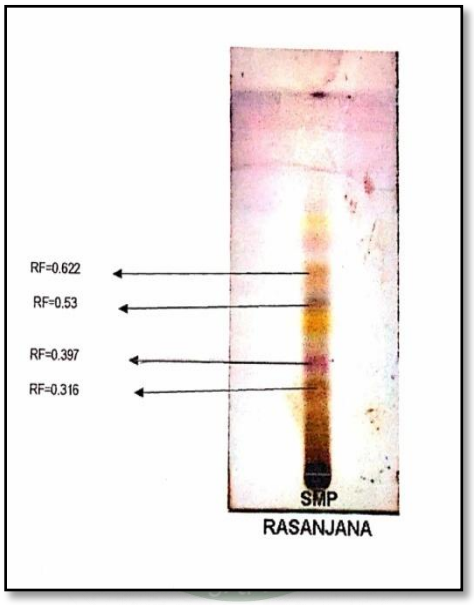
Parameters	***Yashtyadi Lepa***
pH (10% Aqueous solution)	5.65
Total ash (%w/w)	48.4
Water soluble extractive (%w/w)	42.82
Alcohol soluble extractive (%w/w)	13.5

Table 5: Microbiological Limit Test

Micro-oraganisms	***Yashtyadi Lepa***
Total bacterial count(cfu/g)	800
Yeast and mould count (cfu/g)	200
E coli	Absent
Staphylococcus aureus	Absent
Pseudomonas aeroginosa	Absent
Salmonella sp.	Absent

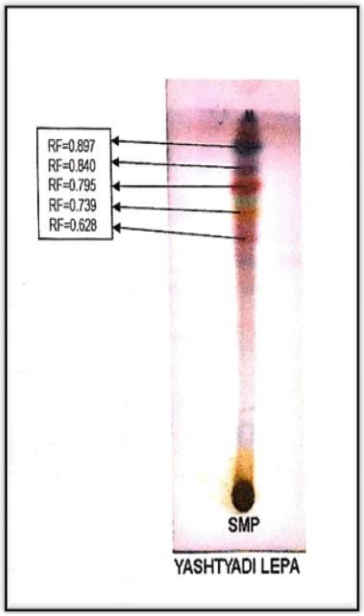
Thin layer Chromatoghraphy (TLC) of *Rasanjana*

It was carried out at 254 and 366 nm UV to establish finger printing profile. It has revealed RF values 0.622, 0.530, 0.397, and 0.316 which can be concluded to responsible for its pharmacological and clinical actions. (Figure 1)



Thin layer Chromatoghraphy (TLC) of *Yashtyadi Lepa*

It was carried out at 254 and 366 nm UV to establish finger printing profile. It has revealed 5 spot under UV 366 nm with corresponding RF values 0.897, 0.840, 0.795, 0.739 and 0.628 (Figure 2)



DISCUSSION

Yashtyadi lepa is one such formulation explained in *Sharangdhara Samhita*, which is said to be useful in inflammatory signs and symptoms of eye i.e., *Sopha, Ruja, Daha, Raga* etc. which are more commonly found in *Vranasophas* of *Netras*. All the pharmaceutical parameters analyzed showed values permissible for the *Churna*. The Physico-chemical parameters show that percentage of alcohol soluble material is more than water soluble extract. It also shows presence of slightly acidic nature of *Churna* which may help in augmenting the function of *Brajaka Pitta* ultimately work as a transdermal action. TLC is the most common form of chromate-graphic method used by Ayurvedic research workers to detect the number of compounds present in a product. It also helps to determine the purity of the sample. The results shows that the active phytoconstituents are slight equaled sensitive for both UV radiation i.e. 254 nm & 366.

CONCLUSION

The contents of *Yashtyadi lepa* are predominantly *Pittashamaka*, works on vitiated *pitta* and *Rakta* and majority have haemostatic activity. Preliminary organoleptic features and results of microscopy were cross verified with individual raw drug of *Yashtyadi lepa* with the parameters mentioned in Ayurvedic Pharmacopeia of India and all the ingredients were proved to be authentic. Pharmacognostical evaluation of *Yashtyadi lepa* illustrated the specific characters of all ingredients which were used in the preparation. In physico-chemical analysis, water soluble and alcohol soluble extract, pH, Ash values were assessed. So the pharmacognostical and phyto-chemical analysis of *Yashtyadi lepa* provides substantial information for the proper identification, authentication, and scientific evaluation of the final product/drug. On the basis of observations made and results of studies, this study may be beneficial for future researchers and can be used as a reference standard in the further quality control researches.

REFERENCES

1. Kaviraj Shastri Ambikadutt Kriyakalpam Uttaratantra Sushruta Samhita vol 2.Varanasi; Chaukhambha Sanskrit Sansthan; reprint 2013 p 93.
2. Professor Dhiman KS Shalakya Tantra Kriya Kalpa Vigyana Chapter 9. Edition 2013; Varanasi; Chaukhmabha Vishwabharti; 2013 p142.
3. Dr. Srivastava Shailaja Netraprasadanvidhi Uttar Khanda Jiwanprada Hindi Commentary of Sharangdhara Samhita; Varanasi; Chakhambha Orientalia; 2011 p 485.
4. Charaka Samhita with Vidyotini Hindi Commentary by Pt. Kashinath Shastri and Dr. Gorakhnath Chaturvedi, Published By Chaukhamba Bharti Academy Varanasi Chikitsa Sthana 26/236, pg no.757.
5. Dr. Srivastava Shailaja Netraprasadanvidhi Uttar Khanda Jiwanprada Hindi Commentary of Sharangdhara Samhita; Varanasi; Chakhambha Orientalia; 2011 Reprint p 485.
6. The Ayurvedic Pharmacopoeia of India Part 1 Vol 7 Minerals And Metals.1st edition; Delhi; The Controller of Publication, Civil Lines; 2008 p 5.
7. Bhishagratna Mishra Brahamshankar Haritkyadi Varga Nigantu Bhaag 1 Bhavprakash Vidyotini Hindi Commentary 11th edition; Varanasi; Chaukhambha Sanskrit Sansthan; 2004p122.
8. Pt.Vidyasagar Shastri Parashuram Madhyama khanda 8/1 Sharangdhara Samhita 1st edition; Varanasi; Chowkhamba Krishandas Academy; 2013 p 206.

Cite this article as:
Ranjana Negi, Gunjan Sharma. Analytical Study of Yashtayadi Lepa in Vidalaka Karma. International Journal of Ayurveda and Pharma Research. 2020;8(1):51-55.

Source of support: Nil, Conflict of interest: None Declared

***Address for correspondence**
Dr Gunjan Sharma
Professor and HOD,
PG Department of Shalakya Tantra,
Rishikul Campus, Uttarakhand
Ayurveda University, Dehradun,
Uttarakhand, India.,
Email: gunjan06purity@gmail.com
Contact no: 8218428029

Disclaimer: IJAPR is solely owned by Mahadev Publications - dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJAPR cannot accept any responsibility or liability for the articles content which are published. The views expressed in articles by our contributing authors are not necessarily those of IJAPR editor or editorial board members.