

PHARMACEUTICAL PREPARATION OF HARIDRA MALAHARA AND ITS ANALYTICAL EVALUATION

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ABSTRACT

In developing countries like India people have a fast phase of life. As a result, injuries are common. Economically a huge amount is spent on wound management. In olden days substances derived from animals, minerals and plants were used as crewed remedies in the management of wounds. *Haridra* is used as a household remedies from time unknown. This study is aimed at introducing one such ethno-medicine *Haridra* into a *Malahara* form. *Haridra* was converted into a tropical *Malahara* form after extracting oil from it. This approach was done to make it more user friendly, so that its shelf life and acceptability among the people would be increased. Analytical study was carried out for the same. A homogenous consistency with a strong smell of *siktha* was noted. The colour obtained after was light yellowish in nature. The pH value was 7.4. Spreadability value was 172.23 – gm-cm/sec. The measurement of viscosity of the sample was done using Brookfield viscometer. It would be cost effective and with less complication hence various formulations need to be revived, tested and used in the treatment of wounds. Through this study an attempt has been made to convert a household drug into an acceptable form. The result of analytical study was found to be encouraging and it could be taken up for other studies.

Keywords: Wound healing, *Haridra Malahara*, *Vrana*, *Malahara*

INTRODUCTION: According to a statistical survey in India, cutaneous wounds have an incidence of 15 per 1000; in which 10.5 corresponds to acute cases while 4.5 are chronic¹. Humans have complexly surrounded themselves with fast moving life style, gadgets (digitalization) along with the advent of globalization and industrialization due to which various kinds of accidents have increased affecting the life span of all age groups. Attending these accidents for the basic wound healing has always been the topmost priority in health care system. An obvious and significant part of wound treatment includes topical applications. In present medical practice, Povidone Iodine is commonly used in wound management as a topical antimicrobial agent.

In Ayurvedic classics, Acharya *Sushruta* has elaborated the varieties of *Vrana* and its management in eight different chapters². The management of *Vrana* is evident by the 60 *Upakramas* (treatment modalities) mentioned by the Acharya³ *Alepa* is the second among these *Upakramas* and said to be having the properties like-*Vranaropana*, *Vranashodhana*, *Vedanahara*, *Shophahara*^{4,5} etc. Acharya *Sushruta* has mentioned *Haridra* in several *Ropanayogas* which has been proven globally for its antimicrobial activity. *Nighantukaras* have mentioned *Haridra* with the following attributes like *Vranahara*, *Shophahara*, *Krumihara* and *Kanduhara* etc.^{6,7,8,9}. Due to its *Tridoshahara* properties it facilitates

wound healing. *Yogaratnakara* mentioned *Malahara Kalpana*, it removes *Mala* from *Vrana vidradhi* and *Twakvikaras*¹⁰. A convenient and effective mode of administering *Haridra* in *Malahara* form is to be analyzed. The study to standardized the preparation of *Haridra Malahara* in *Sadyovrana* has been taken up.

AIM AND OBJECTIVES

The aim and objectives were to prepare *Haridra Malahara* and evaluate it analytically.

MATERIALS AND METHODS

I. Identification and collection of drugs

Fresh rhizome of *Haridra (curcuma longa (Zinziberaceae family)*, was procured from authentic source in local areas of Moodabidri, Dakshina Kannada, Karnataka. Cleaned well and washed.

II. Pharmaceutical preparation:

Pharmaceutical preparations such as *Haridra taila* and *Haridra Malahara* was carried out under the supervision of experts from the *Rasa shastra* and *Bhaishajya Kalpana* Laboratory, Alva's Ayurveda Medical College, Moodabidri.

Haridra Taila: The preparation was carried out as per classical references of *Taila kalpana*^{11,12}. *Kalka* (paste of raw drug) was taken from the same drug. Sesame oil was used as *snehadravya* in the preparation. The preparation was carried out in mild intensity of fire, with frequent stirring, till the attainment of *Taila Paka Sidhi Lakshana*. Further it was filtered using a clean cloth, preserved in an airtight container. The ingredients of the *Haridra taila* are depicted in Table. 1.

Table 1: Ingredients of *Haridra taila*

Sl. No	Ingredients	Quantity Used	Quantity Obtained
1	<i>Haridra Kalka</i>	400 G	1200 L
2	Water	6400 ml	
3	<i>TilaTaila</i>	1600 ml	

Haridra Malahara: *Haridra Malahara* is a modified preparation without any classical references. The procedures were according to the rules of *Malahara kalpana*¹³. The ratio followed was 1:6. To *Haridra taila*, small pieces of bee wax was slowly added and stirred carefully. Preparation was carried out in mild intensity fire. After complete dissolution of wax, filtered properly using a clean cloth. The *Malahara* was later filled into the tubes. The composition of *Haridra Malahara* is depicted in Table 2.

III. Analytical study

A study can never be valued without any scientific basis. Standardization of herbal medicine has become the present-day need. To achieve this, one must carry out necessary analysis to detect any factors which hinders the genuineness of the product. Analytical studies were carried out from Srinivas College of Pharmacy, Valachil, Mangaluru, according to standard procedures of Laboratory guide for analysis of *Ayurveda* and *Sidhha* formulations¹⁴. The parameters considered for analysis includes:

Organoleptic evaluation: Carried out by sensory organs. It includes:

1. *Sparsha* - consistency, 2. *Rupa* - appearance, colour, 3. *Gandha* - odour

Physico- chemical evaluation: This includes:

1. Determination of pH
2. Viscosity

Topical sensitivity test

RESULTS

Pharmaceutical preparation

Table 2: Ingredients of Haridra Malahara

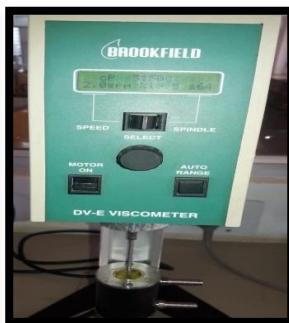
Sl. No	Ingredients	Ratio	Quantity Used	Quantity Obtained
1	<i>Haridra Taila</i>	6 Parts	1200 ml	1300 g
2	Beeswax	1 Part	200 ml	

Organoleptic Characters**Table 3: Organoleptic Characters:**

Parameters	Results
Colour	Light Yellow
Odour	Strong Characteristic Odour Of <i>Siktha</i>
Consistency	Homogenous and Free from Lumps

Table 4: Physico- Chemical Analysis:

Parameters	Results
pH	7.2
Spreadability (Gm.Cm/S)	171.23
Microbial Contamination	18 Colonies of Bacteria

Topical Sensitivity Test: Negative.**Fig1:** Haridra taila**Fig2:** Haridra Malahara**Fig3:** Viscometer**Fig.4:** Spreadability

DISCUSSION: Drug: *Haridra* is used in the traditional system of medicine. It is used as an anti-oxidant and possess various beneficial properties such as anti-inflammatory, anti-allergic, anti-septic, blood cleansing etc. Curcumin is a derivative from *Haridra* it has excellent result in reepithelization, neovascularization. These results gave me an idea to develop such a pharmacological agent.

Pharmaceutical preparation: Initially standard preparation method of *Taila kalpana*, the *kalka*, was taken from the *haridra* Rhizome. The ratio was 1:4:16. *Tila taila* was used as the *Snehedraya*. *Madhyama paka* was obtained after stirring continuously. The *paka siddhi lakshanas* were obtained. According to

classical reference the ration of *siktha* to *taila* is 1:5 or 1:6, 1:6 ratio gave us a homologous mixture. A homologous butter like substance with light yellow color was obtained.

Analytical study:

In the present work various Analytical studies were carried out to check the genuity and the quality of the medicine. The organoleptic characters of the drug were analysed by the *Pancha Gyanendriyas*. The consistency of the drug was homogenous and free from lumps. The *malahara* has a strong characteristic order of *siktha*. The colour pursued with *chakshurendriya* was light yellowish. The organoleptic study was satisfactory. The pH value was observed to be 7.2. 7.2 pH denotes a slight alkalinity it is because of

the contents used in the preparation line *tila taila* & beewax. *Haridra Malahara* was applied to the elbow of the hand and observed for any adverse effects like redness of the skin, irritation and inflammation. The observed result was negative. There was no evident adverse effect noted. Spreadability testing is done to assess the spreading properties of liquids, cosmetic oils and emollients. The test method was developed to study the amount of spread that a simple exhibit and be able to characterize materials based on their spreadability. The value was found to be 171.23 GM.CM/S. *Haridra malahara* shows good amount of spreadability. Thermal stability determines the likelihood of a material to undergo phase transitions in response to thermal stress which may occur due to manufacturing process or storage conditions. *Malahara* shows a temperature range of 40-45 C.

Extrudability is the measure of force required to extrude the material from a collapsible tube when certain amount of force has been applied on it in the form of weight. The value signifies, the percent of ointment extruded was good. Loss on drying at 105 C indicates the presence of all evaporating solvents along with water.

CONCLUSION: In the present study, *Haridra* was modified into a topical ointment form. The ointment was prepared using *Sikta* (Beewax) as the base substance and the method adopted was with accordance with *Malahara Kalpana*. Analytical evaluation of the formulations was found to be satisfactory.

REFERENCES:

1. Thakre Rushikesh Bhutadas, Chouragade B, Khobragade P, Harne Ketaki, Unexplored wound healing property of *Ehtritia laevis* Roxb. (Khandu

Chakka) PLANT, IJRAP, Sep-Oct 2016, (Suppl.4), page no. 54- 57.

2. Sushrutha samhitha by sushrutha explained by Dr. K.R Sreekantha Murthy, Chaukambha Orientalia, Varanasi volume two Chikitsa sthana 2012 Dvi Vraneeya adhyaya sloka no1 page no3.

3. Sushrutha samhitha by sushrutha explained by Dr. K.R Sreekantha Murthy, Chaukambha Orientalia, Varanasi volume two Chikitsa sthana 2012 Dvi Vraneeya adhyaya sloka no8, page no7.

4. Acharya Sushrutha ,Sushrutha samhitha, explained by Dr. Anantharam Sharma, published

Chaukambha surabharathi prakashan, Varnasi .reprint(2009) ,volume two, chikita sthana 1:8 pp 156.

5. Acharya Sushrutha ,Sushrutha samhitha, explained by Dr. Anantharam Sharma, published

Chaukambha surabharathi prakashan, Varnasi .reprint(2009) ,volume two, chikita sthana 1:16 pp 157.

6. Acharya Shodala , Shodala nighantu, commentator -Prof. Dr Gyanendra Pandey ,edited by Prof .R.R Dwivedi ,published by Chaukambha Krishna Das Academy, Varanasi, edition (2009), Aushadhi dravya varga pp 201

7. Bhava Mishra, Bhava Prakasha Nighantu, Commentary by Krishnachandra Chunekar, Published by Chaukambha orientalia ,Varnasi,reprint (2012),volume 1, 06:196,197 pp 175.

8. Raj Nighantu Pandit. Narahari, by Dr. Indradeo Tripathi, Chaukambha Krishna Academy, Pippalyadi varga, ppl75.

9. Bhava Mishra „Bhava Prakasha Nighantu, Commentary by Krishnachandra Chunekar, Published by Chaukambha Orientalia, Varnasi, reprint (2012), volume 1 6:196,197 pp 175.

10. Dr. Ram Chandra Reddy, Bhaishajya kalpana Vigyanam, published by Chaukhamba sanskrit bhawan, Varnasi, second edition (2012) pp 587,588.

11. Sarangadara- Sarangadara Samhitha, translated by Dr. Himasagara Chandra Murthy, Chowkamba Sanskrit Series Office publications, Sneha Kalpana Adhyaya, page no:199

12. Taila, The Ayurvedic Formulary of India, Part II, published by Govt. of India, page no. 133

13. Dr. Ravindra Angadi, Textbook of Bhaishajya Kalpana Vijnana, Chaukhamba Surbharati Prakashan, Varanasi, Sikthataila. Malahara, Upanaha and other Kalpanas, page no:360-362

14. The Ayurvedic Pharmacopoeia of India, Part II (Formulations), 2007, published by Ministry of AYUSH, Govt. of India.

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Source of support: Nil Conflict of interest: None Declared

Cite this Article as :[R Vishnu et al : Pharmaceutical Preparation of Haridra Malahara and its Analytical Evaluation] www.ijaar.in : IJAAR VOLUME IV ISSUE XII JAN-FEB 2021 Page No:1395-1399