

PHARMACEUTICAL STUDY OF VIPARITA MALLA TAILA AND ITS MODIFIED OINTMENT

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ABSTRACT

Viparita Malla Taila^[1] is a polyherbal formulation mentioned in *Chakradatta Vranashotha Chikitsa* chapter. First *Viparita Malla Taila* was prepared classically and then modified into ointment and evaluated its wound healing activity through experimental study on Wister albino rats. The aim of modification of *Taila* into ointment is for easy availability, good portability and moreover to increase contact time with skin which makes it cost effective to patient. For preparation of ointment, *Siktha* (Bees wax) is used as base. *Viparita Malla Taila* and *Siktha* (bees wax) taken in the ratio 1:5 based on the principle of *Siktha Taila* formulation mentioned in *Rasa Tarangini*. The pharmaceutical aspect of *Viparita Malla Taila* and its modification of *Viparita Malla Taila* ointment are discussed in this article.

KEYWORDS: *Viparita Malla Taila*, *Viparita Malla Taila* ointment, pharmaceutical study.

INTRODUCTION

Ayurveda being one of the indigenous (native, regional) system of Indian medicine has been in practice since ancient time due to their safety and efficacy with the growing need for safer drugs attention has been drawn to their quality, efficacy and standards.

Bhaishajya Kalpana is a branch of Ayurveda that exclusively focuses on various aspects of preparation of medicines. It is known to establish the change in quality/property of the medicine

either by inducing new property of medicine or improving the existing one and finally making drug safe and more effective.

The *Pancha Vidha Kashaya Kalpana* forms the basic preparations of Ayurveda as has been mentioned in various diseases there arise a need to formulate certain secondary formulations which have longer shelf life and better presentations. Result of such a search led to designing forms like *Choorna, Vati, Leha, Sneha, Sandhana Kalpana* etc.

Sneha Kalpana is one of the important and prime dosage forms in Ayurveda that plays a significant role in the treatment aspect for both internal and external use.

Sneha Kalpana (oleaginous preparation) is preparation of various kinds of medicated oil and ghee. *Sneha Kalpana* (oleaginous preparation) are efficacious preparations having comparatively longer shelf life. It is one of the commonly prescribed Ayurvedic dosage form used in day-to-day practice and these have very wide range of therapeutic utility in all age group and almost all disease.

It is considered superior to other dosage forms due to its advantages such as increased absorption, extraction of fat soluble as well as a water-soluble active principle at a single formulation.

Viparita Malla Taila is one among the formulation mentioned in *Chakradatta Vranashota Chikitsa Adhyaya*. It contains eight ingredients – *Hingu, Langali, Chitraka, Lashuna, Visha (Vatsanabha), Sindhuvara (Nirgundi), Sharapunka, Kusta, Sarshapa Taila*. *Viparita Malla Taila* is known for its wound healing property.

Wound healing is the utmost concern and challenge among the clinical practitioners, poor healing bothers the patient and increases the burden of financial resources. This denotes need for cost effective management of wounds within the health care system.

Here is an attempt made for the modification of *Viparita Malla Taila* into *Malahara* (ointment). *Malahara* (ointment) *Kalpana* is appreciated well of its easy application and maximum retention in its site. Hence the study is undertaken to modify.

AIMS AND OBJECTIVES

To prepare *Viparita Malla Taila* as per classical Method.

To prepare the *Viparita Malla Taila* modified into Ointment form.

Preparation of *Taila* includes following steps

Poorva karma

- Procurement of raw drugs
- Authentication of raw drugs
- *Vatsanabha Shodhana*
- *Langali Shodhana*
- *Chitraka Shodhana*.

Pradhana Karma

Preparation of *Taila* according to classical method.

MATERIALS AND METHODS

1. All the raw drugs were collected from ALVA Pharmacy, Mijar, Karnataka.
2. *Sarshapa Taila* was collected from local market of Moodbidri.
3. All the raw drugs were authenticated by the department of Dravya Guna Alva's Ayurvedamedical college, Moodbidri.
4. Pharmaceutical study was conducted in the *Rasashastra* and *Bhaishajya Kalpana* lab of Alva's Ayurveda medical college, Moodbidri.

INGREDIENTS FOR THE FORMULATION VIPARITA MALLA TAILA

Sl. No.	Drugs	Botanical name	Family name	Parts used	Quantity
1	<i>Hingu</i> ^[2]	<i>Ferula northex</i> Boiss.	Umbellifereae	Resin	32g
2	<i>Langali</i> ^[3]	<i>Gloriosa superba</i> Linn.	Liliaceae	Root	32g
3	<i>Chitraka</i> ^[4]	<i>Plumbago zeylanica</i> Linn.	Plumbaginaceae	Root	32g
4	<i>Lashuna</i> ^[5]	<i>Allium sativum</i> Linn.	Liliaceae	Rhizome	32g
5	<i>Visha</i> ^[6] (<i>Vatsanabha</i>)	<i>Aconitum ferox</i> Wall.	Ranunculaceae	Root	32g
6	<i>Sinduvara</i> ^[7] (<i>Nirgundi</i>)	<i>Vitex negundo</i> Linn.	Verbenaceae	Stem	32g
7	<i>Sharapunkha</i> ^[8]	<i>Tephrosia purpurea</i> Linn.	Leguminosea	<i>Panchanga</i>	32g
8	<i>Kusta</i> ^[9]	<i>Saussurea lappa</i> Wall.	Asteraceae	Root	32g
9	<i>Sarshapa Taila</i> ^[10]	<i>Barassica nigra</i> L.	Cruciferae	Seed	1000ml
10	<i>Jala</i> (water)	-	-	-	4000ml

SHODHANA (PURIFICATION) OF VISHA DARVYAS

Sl. no.	Shodhana Dravya (material for purification)	Procedure
1	<i>Langali</i> ^[11]	<ul style="list-style-type: none"> Required quantity of <i>Langali Moola</i> were taken, weighed and kept immersed in <i>Gomutra</i> (cow urine) over night. Next day, this <i>Langali Moola</i> were taken out, washed in hot water and then kept for drying
2	<i>Chitraka</i> ^[12]	<ul style="list-style-type: none"> The roots of <i>Rakta Chitraka</i> were cut into smaller pieces and kept immersed in <i>Choornodaka</i> (lime water) for 24hrs Later the roots were taken out, washed in hot water, it was kept for drying and after proper drying it was packed properly.
3	<i>Vatsanabha</i> ^[13]	<ul style="list-style-type: none"> Well grown <i>Vatsanabha</i> was selected and cut into small pieces (<i>Chanaka</i> size). The drug pieces are then tied in a kora cloth and was made into a <i>Pottali</i>. The <i>Pottali</i> was hung in <i>Dola Yantra</i> and <i>Swedana</i> was done in <i>Godugdha</i> (cow milk) in moderate fire for 1 <i>Yama</i> (3hrs). After self-cooling, the <i>Pottali</i> was opened, pieces of <i>Vatsanabha</i> were taken out, washed with hot water and kept for drying.

Preparation of Viparita Malla Taila Type of procedure: *Taila Kalpana* Date of commencement: 21/03/2024 Date of completion: 22/03/2024.

Materials: measuring jar, weighing machine, stainless steel vessel, kora cloth, gas stove, spatula, *Khalwa yantra*.

Procedure**Method of preparation: DAY – 1**

- All the ingredients were weighed separately and kept aside.
- The *Kalka Dravyas* were pounded into coarse powder and made into a bolus.
- *Sarshapa Taila* was taken in a clean stainless-steel vessel kept over *Madhyamagni*.
- The bolus of *Kalka* was added to it, followed by addition of *Jala* and stirred to form a homogenous mixture.
- The heating was continued until the mixture started boiling, after which gas stove was turned off.
- The vessel was covered with a clean kora cloth, tied with thread and left over night.

DAY-2

- Next day, *Taila Paka* was continued in *Madyama Agni* with constant stirring.

- This procedure was done until the attainment of *Sneha Siddhi Lakshanas*.
- After checking *Sneha Siddhi Lakshanas*, the heating was stopped.
- *Taila* was filtered immediately through a clean cloth.
- The filtered *Taila* was measured and stored in an air tight container.

Completion test of Taila Kalpana

1. *Taila* – Fire test – frothy appearance
2. *Kalka* – Fire test – No cracking sound. Consistency – Soft,

Non-sticky

Made into *Varti* form Also finger print is seen.

OBSERVATION AND RESULTS

OBSERVATIONS DURING VARIOUS STAGES OF TAILA PAKA

DAYS	STAGES OF TAILA	TIME DURATION		TEMPERATURE IN °C	OBSERVATIONS
1 ST DAY	Like warmadding <i>Kalka</i> (after	After 10min		42 ⁰ C	Yellow colour of <i>Taila</i> frothy surface <i>Kalka</i> floats on the surface Smell of <i>Katu Taila</i> Smell of <i>Hingu</i> and <i>Lashuna</i>
	After addition of <i>Jala</i>	After 15min		64 ⁰ C	Bubbling was seen Smell of <i>Katu Taila</i> and <i>Hingu</i>
	Started boiling	After 35min		126 ⁰ C	Brown colour Initiation of boiling so <i>Kalka</i> started floating
2 ND DAY		After 15min	1hr	128 ⁰ C	Brown floating colour <i>Kalka</i> was
	<i>Amapaka</i>	After 45min	2hr	128 ⁰ C	Profuse bubbling <i>Kalka</i> was completely mixed in <i>Taila</i>
	<i>Mrudu Paka</i>	After 15min	3hr	133 ⁰ C	Yellowish green colour <i>Taila</i> started separating from <i>Kalka</i> Appearance of froth was seen
	<i>Madhyama Paka</i>	After 55min	3hr	146 ⁰ C	Yellowish green coloured <i>Taila</i> separated completely from <i>Kalka</i>
	<i>Khara Paka</i>	After 20min	4hr	148 ⁰ C	<i>Kalka</i> was rough to touch with no moisture

RESULTS

Quantity taken: 1000ml

Quantity obtained: 740ml

Loss: 260ml.

Preparation of *Viparita Malla Taila* Ointment

Type of procedure: ointment preparation Date of commencement: 25/03/2024 Date of completion: 25/03/2024.

Materials: measuring jar, weighing machine, stainless steel vessel, kora cloth, gas stove, spatula etc.

Ingredients

1. *Viparita Malla Taila*: 300ml
2. *Madhuchista* (bees wax): 60g.

Bees wax and *Viparita Malla Taila* taken in the ratio 1:6 (60g:300m)

Procedure

- Specified quantity of *Viparita Malla Taila* was taken in a clean vessel and heated over low flame and temperature was noted.
- When temperature reached 60 C, small pieces of Bees wax were added to the vessel containing the *Taila* and stirred until it dissolves completely.
- After complete dissolution of bees wax the contents were filtered through a clean kora cloth to separate insoluble particles possibly present in *Siktha*.
- The contents were stirred continuously to form a homogeneous mixture.
- It was then poured to sterile containers and was kept undisturbed until the attainment of ointment consistency.

OBSERVATIONS

- Time of commencement of practical- 2:30 p.m.
- Initial temperature of *Viparita Malla Taila*- 49 C
- Addition of bee's wax time recorded- 2:35 p.m.
- Temperature at which bees wax was added- 620C
- Time at which bees wax melted completely- 2:48 p.m.
- Time taken for getting solidified after shifting to container – 22min.

Results

Initial quantity taken: 360ml

Quantity of ointment obtained: 320ml

Loss: 40ml.

Organoleptic characters of the formulations

Parameters	<i>Viparita Malla Taila</i>	<i>Viparita Malla Taila</i> ointment
Colour	Yellowish	Yellowish
Odour	Pungent	Pungent
Consistency	Smooth, unctuous	Semisolid
Texture	Soft, smooth	Soft, smooth, greasy

INGREDIENTS



Hingu



Langali



Chitraka



Vatsanabha



Sharapunka



Nirgundi



Lashuna



Kusta



Sarshapa Taila

VATSANABHA SHODHANA*Ksheera and Vatsanabha**Dola Yantra Swedana*

Kept for drying

CHITRAKA SHODANA*Choornodaka and Chitraka**Chitraka Moola* soaked in *Choornodaka* for 24hrs*Chitraka Moola* kept for drying**LANGALI SHODHANA***Langali Moola*Soaked in *Gomutra*

Kept for drying

Preparation of Vipartia Malla Taila

All ingredients measured and kept ready

Addition of *Taila*Addition of *Kalka*



Adding *Drava Dravya*
(*Jala*)



Noticing temperature



Boiling in *Madhyama*
Agni



Phenodgama



Varti formation



Fire testing for moisture



Filtering



Final product

PREPARATION OF VIPARITA MALLA TAILA OINTMENT



Sikta and *Viparitha Malla*
Taila kept ready



Melting *Sikta* and
Viparita Malla Taila



Filtering



Kept in water for cooling



Final product

DISCUSSION

Preparation of *Viparita Malla Taila* was carried out according to the reference from *Chakradatta Vranashota Chikitsa Adhyaya*. The procedure and ratio of drugs for the preparation was not mentioned in the reference. So, general ratio of *Taila* preparation was carried out. All the ingredients were collected from the Alva pharmacy, Mijar, Karnataka. First *Shodhana of Visha Dravyas* (*Langali, Chitraka, Vatsanabha, Hingu*) was carried out to remove the toxicity from those drugs. First *Taila* was prepared and then prepared *Taila* was modified into ointment form.

As per Sharangadhara Samhita, *Sneha Paka* should not be completed within single day. So *Viparita Malla Taila* was completed in two days. Ingredients used for the preparation of *Viparita Malla Taila* are *Hingu, Langali, Chitraka, Lashuna, Visha (Vatsanabha), Sinduvvara (Nirgundi), Sharapunkha, Kusta* and *Sarshapa Taila*.

Kalka is prepared by taking 32 gram each of the ingredients *Hingu, Langali, Chitraka, Lashuna, Vatsanabha, Nirgundi, Sharapunka, Kusta*, in *Yavakuta Churna* form *Kalka* is prepared by adding required quantity of water.

For the preparation of *Viparita Malla Taila* the quantity of *Jala* was 4000ml, *Kalka* 250g and oil 1000ml in ratio of 1:4:16. *Sarshapa Taila* was taken in stainless steel vessel and heated on mild fire to remove the moisture content. The bolus of *Kalka* was added to the heated *Taila* slowly with constant stirring for homogeneous mixing. Next *Jala* was added to *Sneha* and heated over *Madhyama Agni* with continuous stirring for proper mixing. The prepared *Kalka* seemed to be bulky, as the roots of *Chitraka, Sharapunka* was fibrous which probably increased the bulk. After heating the *Taila* for 15 mins, bubbles were seen over the surface of the oil which indicated that it had reached the boiling stage. Heated till reduction of bubbling and

stove was switched off and it was kept overnight. On second day the heating process was continued until *Sneha Siddhi Lakshana* were attained. The quantity of *Taila* obtained was 740ml; there was loss of 260ml in the final product. *Taila* was yellowish in colour and was having pungent odour which may be due to presence of *Hingu* and *Lashuna* in it.

For the preparation of *Viparita Malla Taila* ointment, *Madhuchista* (bees wax) was selected as ointment base. Fusion method was adopted here for preparation to attain homogenous mixture and kept undisturbed to attain ointment consistency. The ratio of *Madhuchista* (bees wax) and *Viparita Malla Taila* was 1:5. 60g of *Madhuchista* (bees wax) and 300ml of *Viparita Malla Taila* was taken to prepare ointment.

The *Madhuchista* (bees wax) was taken in stainless steel vessel and was heated in water bath till it attained 60⁰C, at which it liquefied. At the same time *Viparita Malla Taila* was also heated indirectly in a water bath. Then the liquefied *Madhu chista* (bees wax) and heated *Viparita Malla Taila* were poured into another container, the mixture was stirred well for homogenous mixing and it was kept undisturbed to obtain ointment consistency. Final output of the preparation was 320g and there was loss of 40g in preparation. Yellowish soft and smooth semisolid ointment was obtained.

CONCLUSION

Present pharmaceutical study was focused on evolvement of an easy preparation of *Viparita Malla Taila* ointment, which is quick and cost effective. The therapeutic potential can be encouraged for market values and better adaptability by the patients.

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