

A PHARMACEUTICAL STUDY ON MANJISHTADYA OINTMENT- A MODIFICATION OF MANJISHTADYA GHRITHA

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Received: 06-08-2016; Revised: 17-08-2016; Accepted: 26-08-2016

Abstract

Ayurveda needs immediate and extensive reorientation to gain scientific credibility, as this traditional old system of medicine if given the opportunity, is poised for an unprecedented expansion globally. This study focuses on the modification of a formulation Manjishtadya Ghritha into its ointment form. The formulation has been indicated for Agni Dagda Vrana in Chakradutta, Vrana Shotha Adhyaya. Literary review done through various sources like books, journals and internet revealed that, no modification studies have been carried out on this formulation yet. Hence an attempt was made to pharmaceutically modify Manjishtadya Ghritha into an ointment form which is an Anubhootha Yoga. The observations made during the preparation of the drug are discussed in this paper.

Key words: Manjishtadya Ghritha; Ointment.

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Cite This Article

Shilpa Sreedharan, Prashanth BK. A pharmaceutical study on Manjishtadya ointment – A modification of Manjishtadya ghritha. Ayurpharm Int J Ayur Alli Sci. 2016;5(8):104-108.

INTRODUCTION

Sneha Kalpana is one of the important and prime dosage forms in Ayurveda that has been emphasized in various conditions both for its internal and external application. Manjishtadya Ghritha is a formulation indicated for Agni Dagda Vrana in Chakradutta.^[1] Burn is a condition where necrosis of tissues takes place. Hence the medicine that is to be applied should be very effective, in repairing tissue damage. Malahara Kalpana is comparatively a recent formulation in the field of Ayurveda, which came by influence of Unani medicine. Malahara has many properties including Snehana (oleation), cleansing, Ropana (healing) etc, depending on the drugs used for preparation. Siktha taila is a mixture of beeswax and oil. It is soft, smooth ointment like substance used as an emollient or as a base in the preparation of different ointments. The modification was designed mainly on classical and conventional principle. Modification into ointment form was done by using the principle of Siktha taila (bees wax).^[2]

MATERIALS AND METHODS

Collection of raw drugs

Certified raw drugs were collected from Alva's Pharmacy, Mijar, Karnataka. All the raw drugs were identified and certified as genuine samples by the Department of Dravya Guna, Alva's Ayurveda Medical College, Moodbidri, Karnataka.

Pharmaceutical study

Both formulations, Manjishtadya ghritha and its ointment form were prepared in the P.G. Laboratory of Rasashastra and Bhaishajya Kalpana, Alva's Ayurveda Medical College, Moodbidri, Karnataka.

The pharmaceutical study was divided into 2 parts,

Practical No.: 1 - Preparation of Manjishtadya Ghritha

Practical No.: 2 - Preparation of Manjishtadya Ointment

Preparation of Manjishtadya ghritha

Reference: Chakradutta, Vrana Shotha Adhyaya

Materials used

All the drugs enumerated in the recipe (Table 1) have to be weighed and taken after ascertaining as genuine along with wide mouthed vessels, preferably stainless steel vessel with copper bottom was taken. Khalva yantra (mortar and pestle) is used for preparation of the Kalka (paste of drugs). A strong spatula with long handle is taken along with a clean cloth for filtering. A thermometer for recording the temperature is necessary. Gas stove was used as heating aid.

Procedure

1st day

Ghritha was taken in an iron vessel and heated on mild fire to remove the moisture content. The drugs were washed properly and pounded well in a Khalva yantra. Bolus of the Kalka was prepared by adding Jala (water). This Kalka was added to the heated Ghritha slowly with constant stirring for homogenous mixing. Four times of water was added to that of Sneha (ghee) and heated over Mandagni (mild fire) with continuous slow stirring for proper mixing

Observations

Heating was carried out for duration of 45min. Temperature in luke warm state before adding Kalka was 72°C and when Ghritha started

boiling it was 116°C. Initially, the colour was yellow and later it started turning reddish (after mixing Kalka and Jala). After the addition of Jala, there was continuous bubbling during the preparation. Ghritha was heated till the froth occurrence reduced a little and it was kept overnight. Temperature of Ghritha while stopping heating was recorded as 128° C. The colour changed from red to dark red.

2nd day

The heating process was continued till the Sneha Siddhi Lakshanas (proper cooking) were attained. After attaining all the Sneha Siddhi Lakshanas, the heating was discontinued and the Ghritha was filtered through a clean cloth. The filtered Ghritha was properly labeled and stored. Duration of heating was done for 2 hours 10 min and the temperature recorded was 81°C. Paka (cooking) was completed on the 2nd day of preparation. Total heating duration accounted for 2 hours and 55 min.

Completion test of Ghritha kalpana

Sneha Siddhi Lakshanas (proper cooking) was tested by the following methods

- Ghritha burns without any cracking sound in Fire test
- No cracking sound was observed when Kalka was put on fire.
- The consistency of Kalka was soft, not sticky, could be rolled into a Varthi (wick) form, blackish in colour and leaves finger prints on pressing.

The organoleptic characters of the prepared Manjishtadya ghritha are shown in Table 2.

Observations

Out of the total yield of 1200 g, only 1120 g were obtained as final product, with a loss of 6.6%. Temperature noted initially was 72°C.

When Ghritha started boiling, the temperature was 116°C. After the complete Paka, the temperature observed was 110°C.

Preparation of Manjishtadya ointment

No reference in classics as such. The concept of Malahara (ointment) with Siktha as base was adopted. Hence it is anubhuta yoga (folklore formulation). Ingredients and their quantity are mentioned in Table 3

Equipments required

Heating device – Gas burner with LPG cylinders, Mortar and pestle, Cotton cloth, Stainless steel ladle, Weighing machine, Thermometer are the necessary equipments required for the preparation of ointment.

Principle followed for the preparation of Manjishtadya ointment is the Siktha Taila preparation mentioned in Rasa tarangini text.^[3]

Procedure

Specified quantity of Tila taila (sesame oil) is taken in a dry, clean vessel and heated over low flame and temperature is noted. When temperature reaches 60°C, small pieces of Bees wax were slowly added to the vessel containing the Taila and stirred carefully until it dissolves completely. After complete dissolution of Bees wax, the contents were filtered through a clean cloth to separate insoluble particles possibly present in Siktha. The Siktha taila is then poured unto a mortar and the fine powder of the ingredients (Table 3) were added little by little. The contents were stirred continuously till it attains a homogeneous mixture and when properly cooled, shifted to sterile containers and stored.

Observations

The organoleptic characters of Manjishtadya ointment are mentioned in Table 4.

Table 1: Ingredients of Manjishtadya ghritha

Sl.No.	Ingredients	Family	Parts used	Quantity
1.	Manjishta – <i>Rubia cordifolia</i> Linn.	Rubiaceae	Roots	100g
2.	Chandana – <i>Santalalum album</i> Linn.	Santalaceae	Heart wood	100 g
3.	Moorva – <i>Marsedinia tenecissima</i> Wight and Arn	Ascleipedaceae	Root	100 g
4.	Go ghritha – Cow’s ghee			1200g
5.	Jala – Water			4.8 L

Table 2: Organoleptic characters of Manjishtadya ghritha

Colour	Orange
Taste	Bitter
Smell	Characteristic ghee smell

Table 3: Ingredients of Manjishtadya ointment

Sl.No.	Ingredients	Quantity
1.	Manjishta	83 g
2.	Chandana	83 g
3.	Moorva	83 g
4.	Bees wax	200g
5.	Tila taila	1000 ml

Table 4: Organoleptic characters of Manjishtadya ointment

Colour	Brown
Odour	Odour of Siktha Taila
Taste	Astringent
Consistency	Smooth, soft, semisolid

Time of commencement of practical was 03.00 p.m. The initial temperature of Tila taila was recorded to be 49°C. At 3.06 p.m., bees wax was added, the temperature being 62.3°C. Time at which Bees wax dissolved completely was noted to be at 03.18 p.m.

DISCUSSION

Preparation of Manjishtadya Ghritha

As per the reference, Manjishtadya Ghritha was prepared with 1 part of Go Ghritha, 1/4th part of Kalka (Manjishta, Chandana and Moorva) and 4 parts of water.

As per the reference of Vaidyaka Paribhasha Pradeepa,^[4] Paka was completed in 2 days.

There was continuous frothing or bubbling during the preparation due to which constant stirring was needed. In order to prevent spillage of Ghritha due to frothing wide mouthed large vessel was taken for preparation. The colour of the Ghritha was changing gradually after each stage of Paka which may be due to the chemical changes occurring in the Ghritha because of the ingredients.

The colour change probably is an indication of solubility of active principles more into Ghritha with the increased time duration of paka. The temperature at which Madhyama Paka was obtained was 110°C. The colour was reddish orange.

Preparation of Manjishtadya ointment

Manjishtadya ointment – a modification of Manjishtadya Ghritha yoga, contains the same drugs as mentioned in the Ghritha yoga. In the process of modification, Tila taila and bees wax were used as base. Tila taila is said to be best among the Taila varga. According to Yoga Rathnakara,^[5] Tila taila is best Vatahara (destroyer of Vata) among all taila and is capable of eradicating all disorders when processed with appropriate medicaments. It is having Madura (sweet), Tiktha (bitter), Kashaya (astringent), Ushna (hot) and Teekshna (potent) qualities. Beneficial in providing strength (Balya) and complexion (Kantidayee), pacifying Kandu (itching), Vrana (wound), Jantu (helminthic infections) suitable for young and aged people also. Sikhthaka (Bees wax) is Mridu (soft), Snigda (unctuous), Vranaropana (wound healing), Bhagnasandhanakara (joins fractures), pacifies Vata, Kushta (skin disorders), Visarpa (herpes), and Rakthadusti (vitiation of blood). Malahara preparations in general, have the properties like Snehana (oleation), ropana, etc. The cumulative effects of all these properties reflect in the wound healing activity.

CONCLUSION

With respect to the preparation of both the samples, it was seen that preparation of the ointment sample was comparatively easier and cost effective with regard to the manufacture of Ghritha sample. With respect to shelf life, it was seen that the ointment had a longer shelf life than the Ghritha . As modification is a necessary weapon for survival in today's era, keeping in mind the ease of application and removal in case of external applications, Manjishtadya ointment proves to be of better approval than Manjishtadya Ghritha.

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Source of Support: Nil

Conflict of Interest: None Declared