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Research Article

A PHARMACEUTICAL STUDY OF AN AYURVEDIC FORMULATION- *VACHADI CHURNA*

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ABSTRACT

Vachadi Churna is a herbo-mineral formulation mentioned in the classical text called *Susruta Samhitha* for the management of *Yuvana pidaka.* It contains *Vacha, Lodhra, Saindhava Lavana* and *Sarshapa* as ingredients. *Vachadi Churna* is in *Churna* form (powder) which should be mixed with water and applied on the affected area. The pharmaceutical procedures adopted in this preparation are *Churna nirmana* and *Lepa.* In the present study, *Churna* of *Vacha, Lodhra, Saindhava Lavana* and *Sarshapa* were taken in a *Khalwa yantra* and homogenously mixed to prepare *Vachadi Churna.* The procedures were conducted step by step in accordance with classical references and established Standard Operating Procedures (SOPs). Process loss and total yield were carefully recorded. Pharmacological action of the *Vachadi Churna* is discussed in brief.

INTRODUCTION

Pharmaceutical study is the study of drug manufacturing. *Rasashastra* and *Bhaishajya Kalpana* is the branch of Ayurveda. As like any other medical system, success of Ayurveda treatment also depends upon quality of medicine prescribed to the patient. *Rasashastra* deals with pharmaceutical processing and the therapeutic use of metals and minerals.

Bhashajya Kalpana is the pharmaceutical branch which deals with *Aushada nirmana*. This includes *Panchavidha Kashaya Kalpana* and their *Upakalpana*, *Sneha Kalpana, Malahar Kalpana* etc.

Lepa Kalpana is one modified dosage form used in the treatment of various skin disorders (*Kushta).*

Vachadi Churna as a *Lepa* is used for the treatment of *Yuvana Pidaka* i.e., acne. Ingredients of this formulation are *Vacha, Lodhra, Saindhava Lavana* and *Sarshapa*[1].

The preparation was done as per the reference sited in the classics. *Churna* of *Vacha, Lodhra, Saindhava Lavana* and *Sarshapa* were prepared following standard operating procedure and the process involved from the purchase of drug to packing was documented in a step-by-step procedure.

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MATERIALS AND METHODS

Literature Review

All the data was collected from classical texts and pharmaceutical procedures involved in the preparation of *Vachadi Churna* were carried out in PG Department of *Rasa Shastra* and *Bhaishajya Kapana,* S.V Ayurvedic College, T.T.D, Tirupati.

Total pharmaceutical study was carried out in 2 stages

1. *Vacha Churna nirmana*
   Lodhra Churna nirmana
   Saindava Lavana Churna nirmana
   Sarshapa Churna nirmana
2. Preparation of Homogenous mixture of *Vachadi Churna*

Vacha Churna nirmana

Reference: *Sharangadhara Samhita Madyama khanda* 6/2

Materials: Rhizome of *Vacha* – 500g

Principle/Method: Pounding and filtering.

Apparatus: *Khalwa yantra*, stainless steel vessel, cloth, weighing machine.

Procedure: *Vacha* rhizomes were taken in a *Khalwa yantra* and pounded well. The pounded material was sieved through a cloth to obtain fine powder.

Observation: Fine powder of *Vacha* was obtained.

Precautions

- Care should be taken to avoid spillage while pounding.
- Sieving should be done properly to get fine powder.

RESULT

Table 1: **Result of preparation of *Vacha churna***

Initial weight	Final weight	Loss in weight	Loss in percentage
500g	300g	200g	40%

Probable reason for loss in weight:

Vacha has a higher amount of fibre content, hence more waste was observed while preparing the fine powder.

Lodhra Churna nirmana

Reference: *Sharangadhara Samhita Madyama khanda* 6/2

Materials: *Lodhra* bark – 500g

Principle/Method: Pounding and filtering.

Apparatus: *Khalwa yantra*, stainless steel vessel, cloth, weighing machine.

Procedure: *Lodhra bark* was taken in a *Khalwa yantra* and pounded well. The pounded material was sieved through a cloth to obtain fine powder.

Observation: Fine powder of *Lodhra* was obtained.

Precautions

- Care should be taken to avoid spillage while pounding.
- Sieving should be done properly to get fine powder

Table 2: **Result of preparation of *Lodhra churna***

Initial weight	Final weight	Loss in weight	Loss in percentage
500g	350g	150g	30%

Probable reason for loss in weight

Loss was incurred due to spillage during pounding.

Saindava Lavana Churna nirmana

Reference: *Sharangadhara Samhita Madyama khanda* 6/2

Materials: *Saindava lavana - 500g*

Principle/Method: Pounding and filtering.

Apparatus: *Khalwa yantra*, stainless steel vessel, cloth, weighing machine.

Procedure: *Saindava lavana* was taken in a *Khalwa yantra* and pounded well. The pounded material was sieved through a cloth to obtain fine powder.

Observation: Fine powder of *Saindava lavana* was obtained.

Precautions

- Care should be taken to avoid spillage while pounding.
- Sieving should be done properly to get fine powder.

Table 3: **Result of preparation of *Saindava lavana churna***

Initial weight	Final weight	Loss in weight	Loss in percentage
500g	490g	10g	2%

Probable reason for loss in weight

Loss was incurred due to spillage during pounding.

Sarshapa Churna nirmana

Reference: *Sharangadhara Samhita Madyama khanda* 6/2

Materials: *Sarshapa seeds – 500g*

Principle/Method: Pounding and filtering.

Apparatus: *Khalwa yantra*, stainless steel vessel, cloth, Weighing machine.

Procedure: *Sarshapa seeds* were taken in a *Khalwa yantra* and pounded well. The pounded material was sieved through a cloth to obtain fine powder.

Observation: Fine powder of *Sarshapa* was obtained.

Precautions

- Care should be taken to avoid spillage while pounding.
- Sieving should be done properly to get fine powder.

Table 4: **Result of preparation of *Sarshapa churna***

Initial weight	Final weight	Loss in weight	Loss in percentage
500g	350g	150g	30%

Probable reason for loss in weight

Loss was incurred due to spillage during pounding.

Preparation of *Vachadi churna*

Reference: *Sushruta samhitha, Chikitsa sthana, Kshudra roga chikitsa*

Materials

1. *Vacha churna* - 500*g*
2. *Lodhra churna* - 500g
3. *Saindhava lavana churna* - 500g
4. *Sarshapa churna* - 500g

Principle: *Churna Kalpana*

Apparatus: *Khalwa yantra*, weighing machine, spoon, air tight container.

Procedure: Fine powders of *Vacha, Lodhra, Saindhava,Sarshapa* were taken in clean *Khalwa yantra* and mixed well to form a homogenous mixture. Then it was preserved in an airtight container.

OBSERVATION: Light brown colored *Vachadi churna* was obtained.

Precaution: Care should be taken during mixing to avoid spilling of the drug.

Table 5: Result of preparation of *Vachadi churna.*

Initial weight	Final weight	Loss in weight	Loss in percentage
2000 g	2000 g	-	0%

Vacha

Vacha Churna


Lodhra ***Lodhra Churna***


Saindava Lavana ***Saindava Lavana Churna***


Sarshapa ***Sarshapa Churna***


Preparation of Homogenous Mixture ***Vachadi Churna***

Pharmaceutical study was carried out for the preparation of *Vachadi churna* in two stages to obtain the contents in desired form.

Ingredients of this *Churna* are *Vacha, Lodhra, Saindhava Lavana* and *Sarshapa.*

The pharmaceutical procedures adopted in this study are *Churna nirmana*[2] and *Mardana*.

अत्यन्तशुष्कं यद्द्रव्यं सुपिष्टं वस्त्रगापितम् I तस्याच्चूणं रजः क्षोद्दस्तन्मात्राकर्षसंपमता II

Churna nirmana plays key role in this formulation, because efficacy of the drug depends on fineness of the powder. Fine powder is mixed with water and applied over the skin. *Mardana* is important for the preparation of homogenous mixture of drugs. Fine powders of *Vacha, Lodhra, Saindhava Lavana* and *Sarshapa* were taken in a clean *Khalwa yantra* and mixed well to form a homogenous mixture and preserved in an air tight container.

Vachadi churna* as *Lepa: Topical applications are very useful in *Yuvana Pidaka.*

शरीरावयवौस्थैषु विसर्पपिदकादिषु ।
यथादोषं प्रदेहादि शमनम् स्याद्विशेषतः ।।(Ch.Ch.30/299)

According to Aacharya Charaka external applications are useful in skin ailments.

In Ayurveda the topical applications are known as *Lepa* and this come under the broad heading of *Bahiparimarjana chikitsa.*

द्रव्यमार्धम् शिलापिष्टं शुष्कं वा सद्रवं तनु ।
देहे प्रलेपनार्थं तल्लेप इत्युच्यते बुधैः II (D.G.ut)

Either *Ardra dravya* (freshly collected drug) or *Shuska dravya* (dry drug in powder form along with water) are ground well and made into a paste and are used for external applications are called *Lepa*.

How to apply: *Vachadi churna* mix with water, sufficient quantity of water, made into paste and gently applied over effected area.

Action of chief ingredients

- ***Vacha*[3]** has *Katu, Tikta rasa, Laghu tikshna guna, Ushna virya* and *Katu vipaka.* Cures diseases produced by *Vata* and *Kapha, Krimihara, Lekhaniya* and *Vamaka.*

  It has anti-oxidant and anti-inflammatory properties[4]
- ***Lodhra*[5]** has *Kashaya rasa, Laghu ruksha guna, Sheeta virya* and *Katu vipaka.* It is *Kaphapitta shamaka* in nature, *Vrana ropaka, Rakta shoshaka, Kushtaghna, Shotahara.* It is also used in *Rakta vikaras.*

  It has anti-bacterial, anti-oxidant, anti-inflammatory and anti-microbial properties[6].
- ***Saindhava Lavana*[7]** has *Lavana rasa, Snigdha, Laghu guna, Anushna virya* and *Madhura vipaka.* It alleviates *Tridosha* and has *Rechaka* and *Vrana hara* properties.

  It has wound healing property, anti-septic and anti-inflammatory properties. [8]
- ***Sarshapa*[9]** has *Katu rasa, Snigdha guna, Ushna virya* and *Katu vipaka.* It is *Kustaghna, Krimighna, Kandughna* and *Twak dosha hara* in nature.

  It has anti- bacterial, anti-inflammatory and anti-microbial properties.[10]

CONCLUSION

Pharmaceutical standardization is important for the establishment of an efficient drug. *Lepa* is meant for external applications. The pharmaceutical procedures involved in this study are *Churna nirmana* and *Mardana. Churna nirmana* procedure helps in size reduction thereby making the drug more bioavailable. The ingredients of *Vachadi churna* are having *Kushtaghna, Sleshma Rakta Pitta prashamana, Ropana, Krimighna, Kandughna, Shoshana* properties which are beneficial for the management of *Yuvana Pidaka*.

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