PHARMACEUTICAL STUDY ON JWARAKESARIKA RASA

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ABSTRACT

Rasashastra is a branch of Ayurveda which deals with minerals, metals etc and its formulations. Rashaoushadhis are more potent and is administered in smaller dose. Jwarakesarika rasa is one such formulation which is explained in Rasendra sara sangraha. Though many formulations are indicated in Jwara chikitsa, this Jwarakesarika rasa is a rare preparation and is given importance in treating Jwara. Hence, in order to know the details of this formulation, this study has been undertaken.

KEYWORDS: Jwara, Rasaaushadhi etc

INTRODUCTION

Rasashastra literally means the science of mercury, it is one of the important branch of ayurveda dealing with minerals, metals and its formulation along with parade and with plant & animal products. Jwarakesarika rasa is one such formulation which is explained in Rasendra sara sangraha. Though many formulations are indicated in Jwara chikitsa, this Jwarakesarika rasa is a rare preparation and is given importance in treating Jwara.

Pharmaceutical Study of ‘Jwarakesarika Rasa’ was Designed as Below:

Its preparation included following steps:

- Shodhanaof Parada
- Shodhanaof Gandhaka
- Preparation of Kajjali
- Shodhana of Vatshanabha
- Shodhana of Jayapala
- Preparation of Triphala choorna
- Preparation of Trikatu choorna
- Bhavanawith Bhringaraja swarasaswara
- Preparation of ‘Jwarakesarika Rasa’

PARADA SHODHANA

Procedure

- Parada was triturated with Haridrachoodna for 15 hours till all the globules of paradagot completely homogenous to Haridra.
- Then sufficient quantities of Kumari rasa was added and triturated till it become paste and chakrikas were
prepared.

- After chakrikas is dried, it was placed in Urwapatana yantra sandhi bandana and dried.
- And subjected for Urwapatana karma for 6 hours.
- Parada gets collected in the upper pot, and the purified Parada from the inner surface of the upper pot are collected.

**Results**

- Total quantity of Parada taken for Shodhana: 300 g
- Total quantity of Parada obtained after Shodhana: 260 g
- Amount of loss 40 g

**GANDHAKA SHODHANA**

**Procedure**

- 250 gm powdered Gandhaka was taken in a steel vessel and equal quantity of Goghrita i.e 250 gm was added into it and heated on mandagni.
- 1 litre of Godugdha was taken in steel vessel and a piece of cloth was tied to cover the mouth of vessel, the mixture was poured into vessel containing Godugdha through the cloth.
- A solid mass of Gandhaka was washed thoroughly in hot water and kept for drying.
- Then again dried Gandhaka was powdered and the same procedure was repeated 3 times.
- Each time fresh Goghrita and Godugdha was taken.
- Then Gandhakawas was washed with warm water, dried and powdered.

**Results**

- Total quantity of Gandhaka taken for Shodhana in two batches: 500 g
- Total quantity obtained after Shodhana: 450 g
- Amount of loss 50 g

**PREPARATION OF KAJJALI**

**Procedure**

- ShuddhaGandhaka was triturated alone in khalva yantra till it was sukshma and slakshna and collected in container.
- Shuddha Parada and ShuddhaGandhakawere were taken in equal quantity in khalva yantra.
- Mardana was done till Parada was completely disintegrated in gandhaka.
- Trituration was continued till a smooth, fine, jet black, lustreless powder was obtained.

**Results**

- Weight of Raw material – Shodhita Parada: 250 g
- ShodhitaGandhaka: 250 g
Weight of Kajjali obtained 470
Amount of loss 30 g

**VATSANABHA SHODhana**

Procedure

- Dry roots of Vatsanabha weighing 300 gms were taken and cut into pieces and soaked in water to make it soft.
- Then Vatsanabharoots was tied in a clean cloth to make it pottali.
- Pottali was completely immersed in the vessel containing godugdha and care was taken that pottali was not in contact with the bottom of vessel and swedana was done by applying heat for 6 hours.
- After swangasheetata, pottali was removed, Vatsanabha pieces were washed in warm water to remove the creamy layer of milk which was present during Swedana process.
- Later shodithaVatsanabha was dried and powdered.

**Results**

- Total quantity of Vatsanabha taken for Shodhana: 300 g
- Total quantity obtained after Shodhana: 260 g
- Amount of loss: 40 g

**JAYAPALA SHODhana**

Procedure

- Jayapala seeds weighing 300 grams were taken and outer coating was removed. Each seed was dissected longitudinally through raphae and made into two equal halves. The tongue like cotyledons with radicle was removed completely.
- The weight of seeds after dehusking was 200 gms.
- These seeds were taken in a cloth measuring 12 inches in length and breadth.
- A wooden stick was taken and pottali was tied to it at the centre by means of thread. Then it was kept across the mouth of the earthen pot and pottali was made to hang inside the pot without touching any surface.
- 1 litre of milk was poured into the pot to immerse pottali completely. This pot was then placed over the stove and subjected to mild fire for 3 hours. During the process, level of milk was maintained by adding required amount repeatedly.
- This process of swedana in dolayantra with milk was repeated for 3 times.
- After 3rdswedana procedure, when the seeds are cooled by its own, it was collected from the pottali and dried under hot sun.
- Later it was powdered and collected in an air tight container.
Results

- Total quantity of Jayapalataken for Shodhana: 300 g
- Total quantity obtained after Shodhana: 150 g
- Amount of loss: 150 g

**PREPARATION OF TRIPHALA CHOORNA**

Procedure

- Initially, each ingredient of Triphala without seeds was cleaned well to remove the physical impurities.
- All the ingredients were weighed separately and powdered separately.
- Each powder was then sieved through #80 mesh sieve and weighed again.
- Then, all the powders were taken in equal quantity and mixed well.

Results

- Weight of Triphala before powdering : 150 g
- Weight of Triphala after powdering : 120 g
- Amount of loss: 30 g

**PREPARATION OF TRIKATU CHOORNA**

Procedure

- Initially, each ingredient of Trikatu was cleaned well to remove the physical impurities.
- All the ingredients were weighed separately and powdered separately.
- Each powder was then sieved through #80 mesh sieve and weighed again.
- Then, all the powders were taken in equal quantity and mixed well.

Results

- Weight of Trikatu before powdering : 150 g
- Weight of Trikatuafter powdering : 130 g
- Amount of loss: 20 g

**PREPARATION OF JWARAKESARIKA RASA**

- All the ingredients of Jwarakesarika rasa were weighed separately and taken in following proportions:
  - Samaguna Kajjali - 50 gms
  - ShuddhaVatsanabha - 25 gms
  - ShuddhaJayapala - 25 gms
- Triphalachurna - 25 gms each
- Trikatuchurna - 25 gms each
- Total - 250 gms

First Kajjali was prepared by taking equal quantity of Shuddha Parada and Shuddha Gandhakain khalva yantra and trituration done till Kajjali siddha lakshanas was seen. To this Kajjali, add equal parts of powders of Shuddha Vatsanabha, Shuddha Jayapala, Triphala (Haritaki, Vibhitaki, Amalaki) and Trikatu (Shunti, Marica, Pippali)

All of them was mixed and triturated well by adding Bhrungarajaswarasa in the khalva yantra.- Vatis of one gunja pramana (125 mg) was prepared.

Then, it is stored in air tight glass container.

DISCUSSION ON PHARMACEUTICAL STUDY

The practical aspect of parada and other substance present in this formulation has much more importance in comparison to their theoretical aspects in Rasashastra. The pharmaceutical study was carried out.

Shodhana of Parada

- Mardana of ashuddha Parada with Haridrachoorna and Kumariswarasa.
- This process involves Murchana which removes Naisargika and SapthakanchukaDoshas.
- Urdhwa patana sanskara removes Naga and Vangadosha. Kumari and Haridra are good shodhanadrayya.
- Haridra has vishahara property according to Charaka. Shodhana was done with the mixing of haridrachoorna in to parada, the surface tension of Hg molecules may be decreased with continuous trituration leading to disintegration and loss of some impurities occurs in the process of urdhwapatana as well as after washing in hot water.
- According to our classics, Kumari and Haridra are used in both Samanya and VisheshaShodhana of Parada. Because Kumari has Malahara property, whereas Haridra has both Naga and VangaDoshahara property. Due to UrdhwapatanaSamskara, there will be sublimation of Parada upwards because of low melting point than Naga-Vanga. As Naga &Vanga has high melting point, it settles at the lower pot and get rid of Naga-VangaDosha and it can be implemented for Sarvadoshanivaranartha.

Shodhana of Gandhaka

- GandhakaShodhana has been explained in various texts using different media for Shodhana by different methods. The most common method is by melting Gandhaka with Ghrita and Dalana through the cloth in a vessel containing Goksheera.
- While melting Gandhaka with Ghrita, fat soluble impurities may be removed.
- When melted Gandhaka was poured into the vessel containing Goksheera through cloth smeared with Ghrita, physical impurities and other water soluble and remaining fat soluble impurities may be eradicated.
- Physical impurities may adhere to the cloth when filtered through it.
- Detoxification done by Goksheera whose components may be binding some of the impurities
• Goksheera was taken as a media as it is an antidote for Sulphur poisoning and also it is Rasayana and Sheetaveerya that may counteract Ushna and Teekshnagunas of Gandhaka.

• The remaining which are bounded but not removed is washed by hot water. Shodhana process is similar to sublimation by granulation. When Sulphur was heated, it passes through the cloth and gets condensed in the milk.

• The changes in the color of Gandhaka are physically visible before and after the process.

**Preparation of Kajjali**

• The gradual color change of Kajjali from ash color to complete black may indicate the gradual process of mixing Parada with Gandhaka.

• The absence of luster may indicate the physical absence of free mercury.

• The slow and consistent pressure might set a uniform process so that a physical mixing is established between Mercury and Sulphur.

• The duration of trituration of Kajjali may depend upon the quantity of the ingredients taken, pressure given and on the weight of the peshana used for Tritutation.

**Vatsanabha Shodhana**

• Cutting of Vatsanabha tuber into small pieces increases the penetrability of any liquid where it is dipped.

• There is possibility that these toxic ingredients may be dissolved and ooze out in solution. Mostly Godugdha are used for Shodhana because of their VishaghnaPrabhava. The Gunas of Godugdha are contrast of Visha.

• Boiling the drug in milk may help in dissolution of water-soluble toxic substances, to reduce the harmful effects of a drug and to potentiate its beneficial effects.

**JayapalaShodhana**

• Most of the authors have told regarding Shodhana as Swedana in Dolayantra with Godugdhafor 1to 3 yama. According to Y.R,RBh, RPu, Gomayaras is used for swedana.

• The author of R.S.S. has told Keshayantra instead of Pottali.

• The authors of R.S.S. and R.T. have mentioned 1/8th part of Tankana to that of Jayapalabeeja is taken, during Swedana.

• According to Rasayansara, Mahishamala, Gomaya, Gomutra, Godugdha and Nimbuswarasa are used for Shodhana.

• Every author has told to remove outer capsule and inner raphe of Jayapalabeeja before subjecting it to Swedanain Dolayantra with milk.

• To get rid of excess oil in the Jayapalabeeja, it was washed with hot water and later it should be kept in between two cloths and pressed.

• The antidotes of Jayapala are told to be Lemon juice, milk and Tankana, Coconut milk etc.
According to modern text Jayapala is an irritant or stimulant or contact purgative and it has the active principle crotonoleic acid which is composed of croton resin and inactive fatty acid.

Preparation of Triphala Choorna

As per the reference of AFI, Choornas were prepared. For the preparation of Triphala Choorna, raw materials viz., Haritaki, Vibhitaki & Amalaki were taken in equal quantities.

Raw materials were weighed initially and powdered separately. After that, each powder was filtered through #80 mesh sieve and each powder was weighed again. Later on, prescribed powders were mixed well.

Weight of ingredients might vary after powdering due difference in the content of fibre in each drug. Hence, weighing the powders after filtering but before mixing is essential to get equal quantities of each powder in the preparation of Triphala Choorna.

Preparation of Trikatu Choorna

As per the reference of AFI, Choornas were prepared. For the preparation of Trikatu Choorna, raw materials viz., Shunthi, Maricha and Pippali were taken in equal quantities.

Raw materials were weighed initially and powdered separately. After that, each powder was filtered through #80 mesh sieve and each powder was weighed again. Later on, prescribed powders were mixed well.

Weight of ingredients might vary after powdering due difference in the content of fibre in each drug. Hence, weighing the powders after filtering but before mixing is essential to get equal quantities of each powder in the preparation of Trikatu Choorna.

BHRUNGRAJA SWARASA BHAVANA

Whole plant is used for the preparation of swarasa.

Bhrungaraja is Krimihara Dravya acts as anti-infectious which imparts its qualities to the compound.

The Tikta rasa of Bhrungaraja was more persistent even after bhavana.

The quantity of bhavanadravya was completely immersed with the mixture of drugs.

CONCLUSIONS

Jwarakesarika Rasais is a Herbo-mineral classical Khalvi Rasayana preparation.

Khalvirasayana is a unique scientific pharmaceutical method to bind herbal ingredients to the metallo mineral ingredients without direct Agnipaka. Hence, it has less instrumentation, but based on Bhavana principle.

Thereby, the ingredients will form a mono molecular compact form.

REFERENCES

