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Pharmaceutico - Analytical Study of Hinguleshwara Rasa

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Abstract :

Hinguleshwara rasa is one of the Kharaliya rasayana (medicine prepared in mortar and pestle). It was prepared by taking Shodhita Hingula, Shodhita Vatsanabha (*Aconitum ferox*) and Pippali (*Piper longum*) in equal quantity and performing mardana (trituration) with required quantity of water. The vati (tab) of 62.5 mg was prepared.

Physico-chemical analytical results of Hinguleshwara rasa show 21.73% Hg and 6.44% Sulphur. The pH of 1% solution was found to be 6.58 and the disintegration time was 16 minutes.

Keywords : Hinguleshwara Rasa, Hingula, Vatsanabha, pippali, mardana

Introduction :

Hinguleshwara Rasa¹ is a herbomineral preparation which is exclusively indicated in *Amavata* because the herbal constituents nullify the untoward effects of the minerals and increase the potency of the minerals forming the herbomineral complex. Hingula is a compound of parada and gandhaka. *Parada* and *Gandhaka* are most renowned rasa dravyas in the field of Rasashastra as well as Ayurveda. Being main ingredients of this formulation, it can give miraculous results in Amavata. There are several preparations listed in Ayurvedic Classics for Amavata like guggulu preparations and gold preparations which are costly and the list of ingredients is confusing. Comparatively, Hinguleshwara Rasa has few ingredients, is cost effective, and easy to prepare. Hence, it is taken for study.

Materials and Methods :

For the study, raw materials like GrahyaHingula², GrahyaVatsanabha³ were collected from the market. Herbal drugs like Pippali⁴ were collected from market and all the collected raw materials were authenticated from experts in the

subjects of Rasashastra & Dravyaguna. Qualitative and quantitative analyses were carried in Bangalore Drug Test House.

Method :

The homogenous mixture of shoditaHingula⁵, shoditaVatsanabha⁶ and Pippalichurna was prepared by adding required quantity of water and performing mardana.

The vati⁷ of 62.5 mg or ½ Ratti was prepared by smearing hands with goghruta and kept for drying in shade.

Then, the Hinguleshwara Rasa prepared was subjected to qualitative and quantitative analyses.

The results obtained were categorized under these headings:

1. Observational
2. Analytical

1. Observational Results :

Table No. 1 : Results of Hingula Shodhana

Ingredients In quantity	Bhavana dravya ardrakaswasa in ml	Mardana in hours	Results in gms	Remarks gain in gms
Hingula200 gms.	100	6 ½	205	5
	100	6	212	7
	100	6	218	6
	100	5	224	6
	100	6	229	5
	100	6	235	6
	100	7	242	7

Table No. 2 : Effect on weight of *hingula*

Draya	Quantity of Hingula before shodhana (in gms)	Quantity of Hingula after shodhana (in gms)
Hingula	200	242

Table No. 3 : Effect on weight of Vatsanabha

Draya	Quantity of Vatsanabha before shodhana (in gms)	Quantity of Vatsanabha after shodhana (in gms)
Vatsanabha	400	300

Table No. 4 : Effect on weight of Vatsanabha during churnikarana.and organoleptic character

Draya	Before in gms	After in gms	Loss in gms	Observation
Vatsanabha	300	250	50	Colour – Grey. Smell – Gomutragandha. Touch – Fine. Taste – Tikta.

Table No. 5 : Effect on weight of pippali during churnikarana.and organoleptic character

Draya	Before in gms	After in gms	Loss in gms	Observation
Pippali	250	200	50	Colour – Dark greenish. Smell – Aromatic. Touch – Fine. Taste – Pungent.

Table no. 6 : Organoleptic features of Prepared Hinguleshwara Rasa

Features	Hinguleshwara Rasa
Colour	Reddish
Smell	Faint odour
Touch	Smooth

2. Analytical Results :**A) Qualitative analytical results⁸****Determination of pH -**

The pH value of the sample was determined using a digital pH meter. One percent solution was prepared, as the sample was dry and solid in the form of pills. The pills were powdered. One gram of the sample was weighed

accurately and dissolved in 100ml of water and pH was noted in the digital pH meter.

pH: 6.58

Determination of disintegration time :

Procedure: One pill was introduced into each tube of the disintegration apparatus. Disc was added to each tube. The assembly was suspended in a beaker containing water at 37⁰C and the apparatus was operated. The time was noted down with the help of stopwatch. The time taken for all the tablets to disintegrate completely is disintegration time.

Disintegration time : 16 minutes

Loss on drying :

Procedure: Digest pure quartz sand that passes through Sieve No. 40 and then through Sieve No. 60 with hydrochloric acid wash, acid free, dry and ignite and preserve in a stoppered bottle. Place 25-30gms prepared sand and short glass rod in a nickel or stainless steel dish of about 55 ml diameter and 40 mm depth fitted with cover. Dry the cover dish thoroughly and cool in desiccator.

Pipette out some quantity of drug to yield about 1gm of dry matter mix with a few ml of water and transfer quantitatively to the dish containing prepared sand with aid of water. Mix the sample thoroughly with the sand.

Dry at a temperature not more than 110⁰C under pressure not more than 50 mm of Hg. Make trail washing at 2 hour intervals towards the end of drying period until successive weighings do not differ by more than 2 mg. Calculate the total solid from the loss of weight on drying.

Loss on drying: 5.84%

Determination of total ash :

Procedure: Take 2gms accurate weighed, ground drug in a previously traced silica dish, previously ignited and weighed. Scatter the ground drug in a fine even layer at the bottom of the dish. Incinerate by gradually increasing the heat not exceeding dull red heat (450⁰C) until free from carbon. Cool and weigh. Calculate the percentage of ash with reference to the air-dried drug.

Total ash: 7.10%

Table No. 7 : Qualitative analysis of prepared Hinguleshwara Rasa

Parameters tested	Hinguleshwara Rasa
pH	6.58
Disintegration time	16 min
Loss on drying	5.84%
Total ash	7.10%

Table No. 8 : Showing Quantitative Assay of prepared Hinguleshwara Rasa by AAS (Instrumental) method & by Gravimetric method.

Elements	Hinguleshwara Rasa
sulphur	6.44%
mercury	21.73%

Discussion :

Shodhana was carried for Hingula with 7 bhavanas of ardrakaswarasa. One of the advantages of bhavana is to reduce the material into smaller or finer particles, which makes it easy for absorption in the gastro intestinal tract. After bhavana, the weight of the Hingula increased from 200gm (before shodhana) to 242gm (after shodhana) as ardrakaswarsa contains fibrous matter and starch.

After the shodhana procedure, vatsanabha lost its weight, that is, before shodhana (400gm) to after shodhana (300gm). It is due to removal of layers and drying. Before the preparation, the weights of ingredient were 600 gms. After the preparation they weighed 580 gms. It was found that there was a loss of 20 gms after the preparation. The loss may be due to procedures like mardana. This brought about a partial change of toxins Aconitine and Pseudoaconitine into far less poisonous substance Benzyl aconitine and Vertaroyla aconite.

Ama and vata are the root cause of Amavata. Ama circulates all over the body causes srotovarodha and gets lodged in sandhis and contributes a disease amavata.

The ingredients of Hinguleshwara rasa are shodhita Hingula, shodhitaVatsanabha and Pippali. Among these, two dravyas are having properties of katurasa, katuvipaka and ushna veerya. Pippali is having katu rasa, anushna sheeta veerya and madhura vipaka. All these are having kapha-vatahara. They do the deepana-pachana and relieve srotovarodha and pacify vata, hence, breaking of ama and vata complex.

Conclusion :

It can be concluded that the pharmaceutical processing of Hinguleshwara Rasa is easy and very economical. All the analytical results of Hinguleshwara Rasa are well within the safety limits as mentioned in standard Ayurvedic Pharmacopeia of India.⁹

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