A REVIEW STUDY OF PARPATI KALPANA: AN EFFECTIVE PHARMACEUTICAL FORM

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ABSTRACT
Rasashastra deals with Parada and it is considered to be the heart of Rasashastra. Ayurveda, incorporates many of the Herbo-mineral-metallic pharmaceutical preparations prepared out of the Parada namely Khalviya Rasayana, Parpati Rasayana, Pottali Rasayana and Kupipakwa Rasayana respectively. Parpati Rasayana Kalpanas are the most popular among the Processing’s of Mercury and are widely used. These are therapeutically effective mineral and Metallic formulations; including both Sagandha and Nirgandha Parada Yukta yogas. The Name “Parpati” is given to this preparation because of its form and the method of preparation as it is made in the form of thin flakes (Papada). Parpati is a thin Flake like preparation consisting of Parada, Gandhaka and other drugs which are developed from Parada. Parpati Rasayanams have high therapeutic value, potency, less toxicity and cost effective preparations. So, considering detailed review of Parpati Kalpana preparations is done. So, in this paper an honest attempt has been made to have a systematic overview of Parpati Kalpana.

KEYWORDS: Rasashastra, Parada, Gandhaka, Parpati Kalpana.

INTRODUCTION
Introduction of Mercury, Metals and minerals in the therapeutics started almost a new era, it was accepted much earlier that everything in the world can be used as a medicament and use of same minerals were also in practice in the age of classics i.e., up to 400 AD. But later on one of the great exponents of Indian Medicine, Nagarjuna (800 AD) devoted his entire life and energy to develop Rasashastra. With his effort Mercury, Metals and Minerals became
very popular tools of therapy. The compounds prepared with Mercury are considered to be the best. It is also observed that when the herbal drugs combined with mercurial compounds or with sulphur their activities may last very longer period. The Rasagranthas clearly indicate that Mercury on account of its very powerful Yogavahi properties, when mixed with other substances, increases their properties immensely and their shelf life period for indefinite period. These properties are exhibited in compound form such as Khalviya Rasayana, Parpati Rasayana etc. The Sanskrit word “Parpati” denotes a thin flake like preparation. “Parpati” indicates a preparation which is thin, brittle and has a shape of thin Papad (flake). By heating Kajjali (HgS) is transformed into a thin, flat preparation. In practice though it possesses a thin, flat shape, it is first powdered and then used for medicinal purpose. The texts like “Rasatarangini” also mention “Parpati” as “Parpatika”, meaning the same. Parpati is a thin flake like preparation which is developed from “Pota Bandha”, consisting of Parada, Gandhaka and other drugs. It may be Dhatu-Bhasmas or Kashthaushadis.¹

The use of Parpati was found beneficial for alleviating associated symptoms of Grahani as well as various other diseases like Rajayakshma, Kustha, and Gulma etc. In the chronic phase of Rajayakshma where the need of anti-tubercular therapy arises there Gold alone or along with Silver, Copper, Iron etc. proves highly beneficial. With the above idea a number of Parpatis are derived in subsequent periods such as a Tamra Parpati, Panchamruta Parpati, Swarna Parpati, Loha Parpati, and Vijaya Parpati etc.

AIMS AND OBJECTIVES
To review the importance of Parpati Kalpana with its pharmaceutical aspects.

METERIALS AND METHODS
Apparatus: Khalvayantra, Palika Yantra, Ladle, Valuka Yantra, Cow Dung, Kadali Patra(leaves of Musa sapientum Linn), Angar Kosthi.

Procedure
Take equal quantity of Shuddha Parada (mercury) and Gandhaka (sulphur) in Khalva yantra and prepare Kajjali, till it becomes as Kajjalabhasa, Slakshnata, Anjana sadrusa sukshma, Rekhapurnata, Varitaratv, and Loha Pareeksha and Agnipariksha. Then it is put in Palika yantra smeared with Ghee. Apply slow heat directly or preferably through Valuka yantra.
After melting the whole mixture is poured on Kadali Patra smeared with ghee and place on the cow dung mass.

Then cover the content with another Kadali Patra and little amount of fresh Gomaya is spread over it then pressed gently and allowed it to cool and flakes of Parpati are taken out. Colour and appearance of the Parpati depends upon the kind of ingredients used in the pharmaceutical preparation. With the pressing of Kadali Patra, the impression should be seen on the Parpati prepared.

After the completion of the procedure, the flakes are kept for drying and powdered and preserved in an air tight glass bottle/jar.[2,3]

**Precaution**

Slow or moderate heat is required. If the heat is increased, Kajjali in palika Yantra catch fired and start burning.

Pouring and pressing should be done quickly.

**Observation**

Black colored thin sheet of Parpati may be obtained.

It breaks with cracking sound.

**Types of Parpati:** Again on the basis of ingredients-Parpati are of 2 types.

**Sagandha Parpati:** Containing Parada and Gandhaka eg: Rasa Parpati, Gagan Parpati, Tamra Parpati, Swarna Parpati, Loha Parpati, Bola Parpati, Panchamrita Parpati, Vijaya Parpati, Mandoor Parpati, Mani Parpati, Pranada Parpati etc.

**Nirgandha Parpati:** Without Parada and Gandhaka eg: Sweta Parpati, Malla Parpati, Sital Parpati etc.

**Parpati pakas:** While describing Parpati preparations, 3 pakas have been mentioned in the texts.

**Mridu paka:** In this paka, Parpati remains safe and may not break easily on bending.

**Madyama paka:** In this paka Parpati is broken easily and glitters like Roupya in the broken place.
Khara paka: In this stage the product cannot be converted in to Parpati form and powder form. It loses its actual luster. It is not indicated for therapeutic purpose. But exceptionally Rudra Parpati is only one Parpati prepared by Kharapaka.

Precautions
Gandhaka is highly combustible substance. Hence should not be prepared on Teevragni as there are chances of catching fire.

Some amount of Sneha is to be smeared to the iron pan and Kadali Patra used for preparation. Kajjali is heated up to semisolid form or till it becomes Pankavatta.

Press Kajjali immediately after transferring on to the Kadali Patra which is spread over bed of Gomaya.

Doses and Rules for Parpati Kalpana intake
In our classics we can get many references regarding matra (dose) and how to use Parpati preparations internally, but basically there are 2 types of Parpati intake regimens.
1. Samanya prayoga
2. Kalpa or Vardhamana prayoga.

Samanya Prayoga
A dose of 1-2 Ratti (125-250 mg) mixed with fried Jeerak and Hingu in divided doses. In case of Unmada and Apasmara the starting dose mentioned is 8 Ratti (1gm) per a day.

Kalpa Prayoga or Vardhamana Prayoga: - Many references we can get from our classics, these are highlighted below:-

1. Reference from Rasa Tarangini: - Starting dose 2 Ratti (250 mg) and increased gradually up to 10 Ratti (2500 mg)[4]

2. According to Acharaya Chakrapani: - Started from the dose of 2 Ratti (250 mg) and then increased gradually up to 12 Ratti (3000 mg).[5]

Description of Vardhaman Prayoga(increasing dose)
Should be administered in 2 Ratti dose (250 mg) initially and then increase it by 1 Ratti (125 mg) daily or alternate days till 10 Ratti (2500 mg) is reached. This dose should be continued till the ailment is cured and then the dose may be reduced by 1 Ratti (125 mg) daily till it
becomes again 2 Ratti (250 mg). This is a common procedure to be followed for all types of Parpati while using as Kalpa Prayoga. In this way it takes around 40 days for a Kalpa Prayoga usage. Depending upon the severity of disease and strength of the patient, it can be used for 36 days, 40 days, 60 days or 96 days. This 36/40/60/96 day’s scheduled period is called as Mandala/Chakra. The quantity of Parpati consumed when used for 36 days chakra is 188 Ratti (23.5 gm) for 40 days 310 Ratti (38.75gm), 60 days – 480 Ratti (60gm), 90 days – 768 Ratti(96gm). Now which type of Mandala is to be used for the patient depends upon the physician to decide. If needed, it can be repeated for 2, 3 or more times as per requirement.\[16-8\]

1. Pathya
In Rasa Tarangini there are list of drugs mentioned which are to be taken during Parpati sevan, they are, Kakamachi (Black night shade), Patola (Pointed gourd), Pugiphal (Betel nut), Ardrak (Ginger), Kadalipuspha (Banana flowers), Brinjal, Old Shalidhanya, Godugdha with Sharkara.

2. Apathya
In Rasa Tarangini there is mentioning of avoidance of river water or well water for drinking during Parpati Kalpana medication as it increases the severity of disease. Patient is advised to drink plenty of Takra (Buttermilk). There are certain things which are contraindicated like Amla sevana (Intake of Sour things), Shita Jala Snana (Bathing with cold water), sita vayu sevana (Exposure to cold winds), krodha (Anger), chinta (Tension/Stress), usna dravya sevena (Intake of hot substances), tikta dravyas (bitter drugs) like Nimba (Neem), sweet substance like Guda (Jaggery), Anupa mamsa (Aquatic/frozen meat), stree sambhasana (Sexual activities) etc. According to Acharaya Chakrapani, after intake of Parpati preparation the patient should chew lots of betel nut in a day. On 3rd day patient is allowed to take meat, ghee, milk but avoid Vidahi anna, sexual intercourse, banana root, mustard oil, small fish and aquatic birds. The patient should take water after waking up in early morning.\[19-21\]

**OBSERVATION**

Table: Showing various parameters for standardization of Rasaparpati & its stages

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Starting states</th>
<th>Mridu Paka</th>
<th>Madhya Paka</th>
<th>Khara Paka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistency</td>
<td>Fine, smooth powder</td>
<td>Soft on touch</td>
<td>Little Soft on touch</td>
<td>Reddish powder</td>
</tr>
<tr>
<td>Temperature</td>
<td>32°c +2°c</td>
<td>116°c-120°c</td>
<td>120°c - 124°c</td>
<td>124°c &amp; above</td>
</tr>
<tr>
<td>Colour</td>
<td>Black</td>
<td>Shining black</td>
<td>Like peacock feather</td>
<td>Reddish</td>
</tr>
<tr>
<td>Breakable</td>
<td>-</td>
<td>Not Easily</td>
<td>Easily</td>
<td>Turns into powder</td>
</tr>
<tr>
<td>Total Loss</td>
<td>-</td>
<td>4gm</td>
<td>5gm</td>
<td>7gm</td>
</tr>
</tbody>
</table>
Table: Showing inference of physical analysis of prepared Rasaparpati & its stages

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Inference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>colour</td>
<td>black</td>
</tr>
<tr>
<td>2.</td>
<td>smell</td>
<td>sulphurous</td>
</tr>
<tr>
<td>3.</td>
<td>Appearance</td>
<td>blackish</td>
</tr>
<tr>
<td>4.</td>
<td>touch</td>
<td>smooth</td>
</tr>
<tr>
<td>5.</td>
<td>taste</td>
<td>Tasteless</td>
</tr>
<tr>
<td>6.</td>
<td>Clarity</td>
<td>No clarity</td>
</tr>
<tr>
<td>7.</td>
<td>Opalescence</td>
<td>No opalescence</td>
</tr>
</tbody>
</table>

CONCLUSION
There are several types of scaly preparations where mercury and Sulphur has been used as the base and one another substances have been added to have different action. In addition, there are some scaly preparations which does not contain Mercury and Sulphur, i.e Shweta Parpati and Malla Parpati. Nomenclature of the Parpati is done mainly after the chief ingredient added to Rasa Parpati, for example if iron is added then it is called Lauha Parpati and if copper it is Tamra Parpati etc. Few formulations were nomenclature basing upon number of the chief ingredients i.e. if five ingredients are there then it is Panchamrita Parpati and seven ingredients then it is Saptamrita Parpati. Few names have been also proposed on the basis of their special indications and efficacy i.e. Kusthanta Parpati. So it becomes a necessity of a user to give the full reference of the Parpati before trial.

Of course, with incorporation of new technology a clinical study is more possible than ever which may start new era as a whole and use of Parpati in particular. Later on Iron, Copper, Tin, Zinc, Lead, Silver and Gold have been added out of the metals from time to time in different preparations. In addition precious stones and Jewels i.e. Diamond, Pearl, Ruby, Neelam etc. have been also included as ingredients of the Parpati. A large number of herbs have been also used as ingredients in the preparation of different Parpaties having special indication. Most commonly used herbals are Trikatu, Bhringraja, Shigru, Nirgundi, Chitraka,
Zeeraka, Dhatura, Bakuchi, Vacha, Kupilu SwaRasa or docoction. In addition to that many herbs have been advised to be taken as Anupana depending upon the disease to be treated. The therapeutic action of Parpati is concerned, basically it has been recommended for the ailment of the G.I.T e.g. Agnimandya, Amlapitta, Atisara, Grahani and worms of G.I.T. It has been also claimed to be useful for every disease if used with different type of Anupana. The pharmaceutical study suggests the one should be very careful regarding identification of particular stage of paka, because the time between different stages of paka is quite short, especially when the amount of preparation is small. The physical and chemical characters of different stages of Rasa Parpati were examined & found that trituration & temperature variation causes difference in % of Hg. & Sulphur in compound & Free State as compared to Kajjali.

REFERENCES
3. Acharya Chakrapani kritta Cakradutta, Parpati kalpa, Chapter 4, vs. 85-91. Ibid.
5. Acharya Chakrapani kritta Cakradutta, Parpati kalpa, Chapter 4, Vs. 85-91.