Pharmaceutical Study of *Brahmighrita* by Three Different Modified Methods

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**ABSTRACT**

*Snehakalpana* is a secondary formulation of *bhaisajyakalpana*. *Brahmighrita* is such a snehakalpana which is very beneficial in the treatment of unmad, apasmaretc mental and convulsive disorder. *Acharyacharak* had mentioned *brahmighrita* in the context of apasmarchikitsa in chikitsasthan. Ingredients of *Brahmighrita* are *Brahmi* (*Bacopa monnieri*), *Vacha* (*Acorus clamus*), *kustha* (*Inularecemosa*), *Shankhapuspi* (*Convovulus pluricaulis*) ,*Puranghrita*.

**KEYWORDS**

*Snehakalpana*, *Brahmighrita*, *Brahmi* (*Bacopa monnieri*)

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INTRODUCTION

Snehakalpana is a secondary formulation of bhaisajyakalpana. It is a pharmaceutical procedure in which some fatty substances like ghrita or taila is prepared by adding some medicated paste of herbs and some liquid which has medicinal value, and cooked for some duration until the attainment of desired properties. Brahmigrita is such a snehakalpana which is very beneficial in the treatment of unmad, apasmaretc mental and convulsion disorder. The drug is widely prescribed by vaidyas as medhya drug (memory tonic) in children. It has a broad spectrum use in panchakarma for matravasti, shirapichu, nasya. Acharyacharak had mentioned brahmighrita in the context of apasmarchikitsa in chikitsasthan. He opines that the ghrita is “Unmadapasmaralaxmipaapnuta”

According to acharyacharak the ingredients of Brahmighrita are Brahmi (Bacopamonnieri), Vacha (AcorusClamus), kustha (Inularecemosa), Shankhapuspi(Convovulus pluricaulis), Puranghrita

Acharyacharak has mentioned the dravadraya as brahmiras or the fresh juice of brahmi. But when the fresh herb is not available our shastra permits that the dried plant decoction can be used as swaras. So, in the present study slight modification was done during the pharmaceutical procedure. The ghrita was also taken the normal one which is available in market instead of “puranghrita”.

AIMS AND OBJECTIVE

To prepare brahmighrita by 3 different methods, i.e.,
SAMPLE 1 (s1) –decoction prepared by dried Brahmi + Dried shankhapuspi (used as dravadraya in snehapaak)
SAMPLE 2(s2) - The dravadraya was prepared by decoction of dried Brahmi and shankhapuspi + fresh Brahmiswaras
SAMPLE 3 (s3) - Prepared by only fresh brahmiswaras
The amount of ghrita and kalkadravya are unchanged in every sample.

MATERIALS & METHODS

In this important part of the study, the detailed drug manufacturing procedure is explained. The three samples of the brahmighrita were prepared as per the classical method in the pharmaceutical laboratory of department of RasaShastra & Bhaisajyakalpana, NIA, Jaipur.

Equipments:
1) Stainless steel vessel: Diameter -14 inch, Height -7 inch
2) Heating device: Gas burner
3) Ladle made of stainless steel
4) Thermometer, cotton cloth, grinder, other large vessels for preparation of decoction etc.

**INGREDIENTS**

![Image of Shankhapspi, Vacha, Kustha powder]

**Table 1** Ingredients of Bramhighrita (s1)

<table>
<thead>
<tr>
<th>Seneha</th>
<th>Amount</th>
<th>Kalkadravya</th>
<th>Amount</th>
<th>Drava dravya</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goghrita</td>
<td>1 kg</td>
<td>Shankhapspi</td>
<td>50 gm</td>
<td>Dried brahmi</td>
<td>1.5 kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vacha</td>
<td>25 gm</td>
<td>Dried shankhapspi</td>
<td>500 gm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kustha</td>
<td>25 gm</td>
<td>Water</td>
<td>16 lit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bramhi fresh</td>
<td>100 gm</td>
<td>Total decoction</td>
<td>4 lit (1/4 th)</td>
</tr>
</tbody>
</table>

**Table 2** Ingredients of Bramhighrita (s2)

<table>
<thead>
<tr>
<th>Seneha</th>
<th>Amount</th>
<th>Kalkadravya</th>
<th>Amount</th>
<th>Drava dravya</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goghrita</td>
<td>1 kg</td>
<td>Shankhapspi</td>
<td>50 gm</td>
<td>Fresh brahmiswaras</td>
<td>2.4 lit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vacha</td>
<td>25 gm</td>
<td>Dried brahmi Decoction</td>
<td>1.6 Lit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kustha</td>
<td>25 gm</td>
<td>Bramhi fresh</td>
<td>4 lit</td>
</tr>
</tbody>
</table>

**Table 3** Ingredients of Bramhighrita (s3)

<table>
<thead>
<tr>
<th>Seneha</th>
<th>Amount</th>
<th>Kalkadravya</th>
<th>Amount</th>
<th>Drava dravya</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goghrita</td>
<td>1 kg</td>
<td>Shankhapspi</td>
<td>50 gm</td>
<td>Fresh brahmiswaras</td>
<td>4 lit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vacha</td>
<td>25 gm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kustha</td>
<td>25 gm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bramhi fresh</td>
<td>100 gm</td>
<td>Total</td>
<td>4 lit</td>
</tr>
</tbody>
</table>

**Fig 1** Shankhapspi, Vacha, Kustha powder

**Fig 2** Goghrita

Collection of drug
Dried brahmi, vacha, shankhapspi, kustha (Fig:1) were collected from the local market of jaipur (shriram herbals). Fresh brahmi plant was collected from the NIA, garden. The drugs were authenticated manually by experts of the dept of Dravyagun, NIA, Jaipur. Ghrita (Fig:2) was procured from the Pharmacy of NIA, Jaipur. The ingredients of the three sample and their amount are mentioned in the Table 1, Table 2 and Table 3, respectively.

The amount of *kalka, ghrita* was unchanged in all the 3 samples of *Bhramhighrita*. Only the modification of *dravadravya* was conducted.
Preparation of Drava dravya

S1:

2 Kg dried bramhi (Bacopamoneri) and 1kg shankhapsi was purchased from local market. After removal of foreign matter 1.5kg bramhi was obtained.

Bramhi, 1.5 kg and 500 gm shankhapsi were soaked overnight in 1lit water. The next morning kwath was prepared by reducing it to ¼ part. Total duration of kwath preparation was 4 hours. Finally 4 litter kwath was obtained. (The first sample of brahmighrita (Fig:3) was prepared by the above decoctions.

S2:

2.5 kg of fresh bramhi (Fig:4) was washed thoroughly for several times. Root was separated manually and again washed in running water.

After cleaning 2.2 kg fresh brahmi and 200 ml water was taken and made paste by the help of mixer grinder. Swaras was extracted 2.4 lit. During preparation of sample two (S2) 1.6 lit decoction of dried bramhi and shankhapsi was also added along with the fresh swaras. S2 was prepared by the above dravadravya.

S3:

The procedure was same with s2 but here the dravadravya was only the fresh brahmiswaras, which is expressed from 3.5 kg fresh brahmi. 500 ml water was added for juice extraction. Total 4L of brahmi juice (Fig:4) was obtained. Brahmi ghrita s3 was prepared as like as the s1 & s2 without changing the other procedure.

Preparation of Kalka dravya:

Fine powder of vacha, kustha, shankhapsi were powdered and and mixed with liquids (swaras/ kwath) to make a paste. 100gm fresh brahmi paste was added. Total 250 gm of kalka was prepared by mixing vacha, kustha, shankhapsi (Fig:5) powder and fresh brahmi kalka (Fig:6).
Preparation of ghrita:

Goghrita was taken in a stainless steel vessel and heated over gas in low flame. Paste (kalkadravya) was added to, and the liquid (dravadravya) was added. Ghritapwak was done according to the classical ghrita pwak method. The duration of pwak for each sample is 3 days.(4 hours/day). The pawk was done until the appearance of samayaksiddhilakshan of ghritapwak. The ghrita was strained through a cotton cloth.

OBSERVATIONS AND RESULTS

- During pwak the was observed 90°c -95°c in the first day, and 100°c -105 0c for last two days.
- Reduction of material was noticed 1 inch / hour (The stainless steel vessels were previously graduated)
- The snehasiddhi lakshans like phenashanti, sabdahinta of kalka, preparation of varti were perceived on the third day.
- The ghrita was strain in madhyampwak stage by observing the criteria of madhyampwak.
- The final yield of the brahmighrita preparation was described in the Table 4
- The organoleptic parameters are described in the table no 5

<table>
<thead>
<tr>
<th>Table 4 Final yield of Ghrita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
</tr>
<tr>
<td>Sample 1</td>
</tr>
<tr>
<td>Sample 2</td>
</tr>
<tr>
<td>Sample 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 5 Organoleptic parameters of Ghrita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
</tr>
<tr>
<td>Sample 1</td>
</tr>
<tr>
<td>Sample 2</td>
</tr>
<tr>
<td>Sample 3</td>
</tr>
</tbody>
</table>

DISCUSSION

Fresh Brahmi plant is not available in all the regional area of our country throughout the year. In some parts of India Centelaasiatica is also known as brahmi. The dried brahmi (Bacpamoneri) is abundantly available in local market of every state. In Sharangadharsamhita there was a reference
of preparing *swaras* by dry herbs. In the present study the decoction of *bramhi* and *shankhapuspi* was made by that principle. Again the third sample is more green and bitter than the other two samples, may be it has more chlorophyll content due to preparation with fresh juice of the *brahmi* plant.

**CONCLUSION**

Out of the three samples the 3\(^{rd}\) sample may be the best, as it was prepared by using the fresh *brahimiswaras*. The active principle of the drugs is present in *swaras* more than the decoction form. *Swarasis* guru than the other primary formulation\(^4\). It can be concluded that the third sample may be more efficacious. But whenever fresh *brahmi* is not obtainable, the first and second sample can be prepared. Further the 3\(^{rd}\) sample is not suitable for children for internal administration due to its bitter taste. It can cause vomiting in children due to its bitter taste and *vacha*. In the present study we also judiciously add a smaller amount of *vacha*, as it is itself a *vamanopag dravya*. The first and second sample was more palatable to the patient due to their less bitterness. It can be concluded that any of the above procedure can be performed during preparation of *brahmighrita* according to the availability of the raw material.
REFERENCES


