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A Retrospective Study of *Ghana Kalpana*

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ABSTRACT

Bhaishajya Kalpana is the branch of *Ayurveda* which primarily deals with different kinds of dosage forms & their therapeutic utility. The *Panchavidha Kashaya Kalpana* have great importance as they form the primary or basic dosage forms from which other secondary dosage forms are prepared. *Ghana Kalpana* is the modified form of *Kwath Kalpana* and is an exclusive contribution of ayurvedic science. Different varieties of *Ghana* are mentioned in various ayurvedic classics & they are most accepted varieties of ayurvedic dosage forms due to its easy administration, palatability & long shelf life. In this article an attempt has been made to have an understanding regarding the meaning of *Ghana*, general method of preparation & its various therapeutic indications.

KEYWORDS

Ghana Kalpana, Pharmaceuticals, Semisolid



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INTRODUCTION

Bhaishajya Kalpana is the branch of *Ayurveda* which primarily deals with different kinds of dosage forms & their therapeutic utility. *Ghana* is prepared by reducing the liquid portion of *kwath*, *swarasa* etc till it attains semisolid state. These preparations are usually used for internal administration. The history of preparation of *ghana* is seen from *charaka samhita*, may be with single drug or multiple drugs. The main concept behind the *ghana* preparation is re-boiling the prepared *Kwath*, *Swarasa* etc till its semisolid consistency. In some preparations *praksepaka dravyas* are added to this semisolid consistency before drying. Different varieties of *Ghana* are mentioned in various ayurvedic classics and they are one of the most accepted varieties of ayurvedic dosage forms due to its easy administration, palatability and long shelf life.

Definition:

When *Kwath*, *Swarasa*, *Hima*, and *Phanta* etc are boiled and reduced over mild fire to a semisolid consistency, then it is known as *Rasakriya*¹.

Stages of *ghana kalpana*:

1. *Phanitakrithi*: when *rasakriya* comes to a form of thicker liquid.
2. *Avaleha*: when it becomes semisolid.

3. *Ghana*: when pills can be made out of it.

LITERARY REVIEW

Charaka Samhita:

Rasakriya is solidified form of *Swarasa*, *Kwatha* etc². Preparations involving *Rasakriya/Ghana* mentioned in *charaka* are *Darvyadi Rasakriya*², *Khadiradi vati*², *Pippalyadi Rasakriya*³, *Krishnasarparasadi Rasakriya*³, *Dhatryadi Rasakriya*³ and *Kritavedhana Kalp*⁴.

Sushruta samhita:

According to *Acharya Sushruta*, *Phanita* is prepared by reducing *Kwatha* to a semisolid consistency. *Kwatha* is prepared by adding 8 or 16 parts of water; which is further reduced to 1/8th or 1/16th part to form *Phanita*⁵. Few *Phanita Kalpanas* mentioned in *Sushruta Samhita* are *Khadiradi leha*⁶ and *Salsaradivarga Kasaya*⁷.

Astanga sangraha/ Hridaya

We find the reference of 3 types of *Rasakriya* in the context of *Anjana Kalpana*⁸ in both the texts which is namely *Pinda*, *Rasakriya* and *Churna*.

Ghana referring in different classics:

In *Sharangdhara Samhita*, *Rasakriya* and *Ghana* is mentioned in *Avaleha Kalpanadhyaya* of *Madhyama Khanda*. It defines *Rasakriya* as the product obtained



after boiling the *Kwatha* continuously till it attains a semisolid consistency. Few of the preparations which are mentioned are as follows *Darvyadi Rasakriya*⁹ and *Babbul Rasakriya*¹⁰.

Acharya Bhavaprakash, Chakradatta and *Ayurveda Prakashakara* have described *Ghana Kalpana* in context of *Darvyadi Rasakriya* or *Rasanjana*. *Acharya Yadavji Trikamji* has mentioned about *Ghanavatis* prepared from single herb in his book *Siddha Yoga Sangraha* in the context of *Guduchi Ghana (Samshamani Vati)* for *Jwara*¹¹.

MATERIALS AND METHODS

The equipment's required in the method of preparation of *Ghana* includes the drug specified in the formulation, a wide mouthed stainless steel vessel, cotton cloth, spatula for mixing the medicine homogenously during preparation.

General method of preparation:

- Raw drugs for the preparation are washed and dried properly.
- According to the general method of preparation, 1 part of the drug and 16 parts of water was added which is then boiled and reduced to 1/8th part.
- Depending on the quantity and quality of the drug the ratio of water differs.

➤ After the reduction process, *Kwatha* is filtered.

➤ After filtration, the *Kwatha* is reboiled till it attains semisolid state which is then rolled into *Vati*.

➤ It is then preserved in airtight glass jars.

General precautions during *Ghana* preparation

➤ *Kashaya* drugs should be coarsely powdered and water should be potable.

➤ One should be very careful that the reduced drug material does not burn out.

➤ Continuous stirring towards the end of the preparation is very essential.

➤ The end product will be very much sticky and one needs to apply ghee to fingers while rolling the pills.

Dose:

The dose of *Ghana* is not clearly mentioned in our classics. In *Siddha Yoga Sangraha*, in the context of *Samshamani Vati*, The dose of *Ghana* is mentioned as 5 to 10 *vati* of 2 *ratti pramana* which is to be administered four to five times a day. So the dose of *Ghana* may be taken as 5-10g per day.

Anupana:

Water, milk etc. (according to the disease condition)

Shelf life: 1 year

Table 1 *Ghana Kalpana* mentioned in various *Chikitsaparakarana*

Name of <i>Ghana vati</i>	Ingredients	Indications
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<i>Samshamani vati</i>	<i>Guduchi</i> – 1 part <i>Jala</i> - 4 part	<i>Jirnajwara, vishama jwara, panduroga, rajayakshma & daurbalya.</i>
<i>Panchtikta ghana vati</i> ¹²	<i>Saptaparna</i> – 1 part <i>Guduchi</i> – 1 part <i>Kalmegha</i> – 1 part <i>Katuki</i> – 1 part	<i>Vishma jwara</i>
<i>Saptaparna ghana vati</i> ¹³	<i>Saptaparna</i> – 1part <i>Jala</i> – 8 parts	<i>Vishma jwara</i>
<i>Kutajaghana vati</i> ¹⁴	<i>Kutaja</i> – 4 parts <i>Jala</i> - 64 parts <i>Ativisha</i> – 1 part	<i>Atisara, grahani & jvaratisara</i>
<i>Sarpagandhaghana vati</i> ¹⁵	<i>Sarpagandha</i> – 10 part <i>Khurasani yavani</i> – 2 part <i>Jatamamsi</i> – 1 part <i>Bhanga</i> – 1 part <i>Jala</i> – 8 part <i>Pippali mula churna</i> – 1 part	<i>Anidra</i>

DISCUSSION

Ghana Kalpana, a secondary derivative preparation of *Kwath Kalpana*, is also one of the extraction methods in which maximum of water soluble as well as a little amount of water insoluble materials are extracted by *Kwatha* method which is then reheated till it attains solid form. Various references are found in ayurvedic classics for the preparation of *Ghana Kalpana* along with their method of preparation and consistency. As the active principle of herbal origin drugs varies geographically and seasonally, there is a need to have minimum quantity of active principle or marker compound in the extract for efficacy. Some of the advantages of this *Kalpana* are reduced dosage, increased shelf life and increased bioavailability. In recent times some modifications are also

carried out and a wide range of new formulations are figured from the *Panchavidha Kashaya Kalpanas*. *Swaras, Kalka, kwatha, Hima* and *Phanta* have some drawbacks like inavailability of drug, lesser shelf life, unpalatability, higher dose and chance of contamination. *Acharya Yadavji Trikamji* has mentioned about *Ghanavatis* prepared from single herb in his book *Siddha Yoga Sangraha* in the context of *Guduchi Ghana (Samshamani Vati)* for *Jwara*. It is one of the most common dosage form which has been employed in various disorders and is gaining popularity due to its easy administration, palatability and longer shelf life.

CONCLUSION

Ghana Kalpana plays an important role in pharmaceuticals of *ayurveda*, owing to many advantages like easy administration,



palatability, convenient form for dispensing and transporting, to keep the medicine potent for long time and also its quick action. In the current scenario where the availability of drug throughout the year remains a question; *Kalpanas* with longer shelf life like *Ghana* will be of great importance. Various researches carried out related to *ghana kalpana* has proven its efficacy in different clinical conditions.



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