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Research Article

IMPORTANCE OF GHRITA MURCCHANA: PHYSICO-CHEMICAL ANALYSIS.

Sneha .M. Murgudkar[1],Swapnaja.G. Vaswade[1*], S.C.Bakare[2]
1. P.G.Scholar, 2. Professor and H.O.D.,
Department of Rasashastra & Bhaishajya Kalpana, Yashwant Ayurvedic College P.G.T. & R.C., Kodoli, Kolhapur.
*Corresponding Author: Dr. Swapnaja.G. Vaswade, email: swapnajavaswade27@gmail.com

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ABSTRACT:

In Ayurveda, Rasashastra and Bhaishajyakalpana is branch dealing with herbal, herbo-mineral and metallic preparation. Rasashastra is ayurvedic pharmaceutics dealing with rasoushadhi, while Bhaishajya kalpna dealing with herbal preparation. Bhaishajya kalpana includes basic preparations from PANCHVIDH KASHAY KALPANA (Swaras, Kalka, Kwath, Hima, Phanta) to many other advanced kalpanas like awaleha, Vati, Arka, Kshara, Sneha, Sandhan.

Sneha kalpna includes preparation of Siddha ghritas and tailas. Before using these Snehas , SNEHA MURCHHANA is a type of sanskara described in Bhaishajya ratnavali (Jwar Chikitsa). Taila Murchhana described for Gandha dosh while Ghrita Murcchana for Aam dosh nivaran. In this paper , attempt is made to review and put forth the concept of SNEHA MURCCHANA & Physico-chemical analysis of GHRITA MURCCHANA.

KEY WORDS: Sneha Murchhna, Aam & Gandh dosh nivaran, Ghrita Murcchana, Physico-chemical analysis.

INTRODUCTION:

Before preparing Sneha siddha Kalpana, sneha is supposed to undergo one particular sanskara called Sneha murcchana[1]. It is applicable for both 'Ghrita' & 'Taila' '(Til), Eranda taila & katua (sarshapa taila). The main aim of sneha murcchana is to remove the durgandha, amadosa in taila & ghrita resp. By murcchana sanskara some sneha gets good smell and colour, apart from these, because of murcchana sneha becomes capable to receive more active principle while the preparation of sneha paka and also by performing murcchana sanskara, the (virya potency) of the sneha is enhanced, Because of murcchana sanskara sneha will get the active principles of murcchana dravyas too.

Bruhat yog tarangini, Bhaishajya Ratnawali (Jwar Chikitsa) have described Sneha Murcchana.

Concept of MURCCHANA :-

When heat is given along with murcchana dravyas, fatty chains in sneha may get broken & active principles of murcchana dravyas may get attached to the chains, where the fatty chains are broken.

When sneha heated continuously (dagdha paka / same sneha used frequently like in frying procedure) its reactivity decreases, So may be because of this reason for sneha murcchana mrudu paka is described. So, after murcchana of sneha because of mrudu paka more active principles of murcchana dravys may get embedded in siddha sneha (e.g Triphala dravyas in Triphala Ghrita)

In this present study, ghrita murcchana is discussed as below,

[3]पथ्याधात्रीबिभीतैर्जलदरजनी मातुलुङ्.गद्रवैश्च,
सर्वैरेतेः सुपिष्टैः पलकपरिमितैर्मन्दमन्दानलेन।
आज्यं प्रस्थं विफेनं परिचपलगतं मूर्च्छयेद् वैद्यराजः

तस्मादामोपदोषं हरति च सहसा वीर्यवान सौख्यदायि॥

–भै.र.५/१२८५ (ज्वर चि.)

As per above reference from classical text Ghrita Murcchana was done. Some variations are observed in different texts in Murcchana Procedure. In Classics, no use of water is mentioned

MATERIAL METHODS[3]:

Equipments: - Gas stove, Wide mouth vessel, Spoons.

Ingredients:

- Haritaki - 2 Pala (100 gm)
- Bibhitaki – 2 Pala (100 gm)
- Aamalaki – 2 Pala (100 gm)
- Mustak – 2 Pala (100 gm)
- Haridra – 2 Pala (100 gm)
- Matulunga(Swarasa) – 2 Pala (100 gm)
- Goghrita (Prepared by Traditional Curd Method) –2 Prastha (1.6 kg)
- Jala – 6400 ml

Procedures:

Ghrita was taken in wide mouth vessel & heated slightly over Mandagni till the evaporation of water content, disappearance of foam & sound coming from Ghrita.

After that Haridra Churna & ¼ part of total water amount i.e. 1600 ml was added in Ghrita & Mandagni was given.

Mandagni continued till ¼ of water i.e. 400 ml was remained.

After that Matulunga (Citrus Medica) Swarasa (100 ml) & again ¼ of total water amount i.e. 1600 ml water was added.

When a little amount of water was remained, other all dravys (Triphala & Mustak) and remained all water i.e. 3200ml was added.

Mandagni was given till Sneha Siddhilakshana was achieved.

After that vessel was taken out from the fire & Ghrita was filtered of in the warm stage itself.

This Murcchita Ghrita was packed and then used for Siddha Ghrita preparation.

Precautions:

- Overflowing of Ghrita was avoided.
- During process continuously and carefully stirred otherwise kalka will be stick on to the bottom of the vessel.
- Mandagni was given.
- Mrudupaka was done.

OBSERVATIONS :

- Total time of heating = 8hrs
- Completion test of Ghrita Murcchana. (Siddhilakshana)

1.Ghrita – Fire test – Burns without any crackling sound.
2. Kalka – Fire test- No any crackling sound.
- Consistency – Soft,Non sticky
- Made in to varti form
- Also finger print is seen
- Colour –Blackish

RESULTS:

- ✓ Time in the preparation of Ghrita Murcchana - 8hrs
- ✓ Total quantity taken - 1.6 kg
- ✓ Total quantity remained – 1.5 kg
- ✓ Loss in % - 6.25

Observations & results of Pharmaceutical Study[4]:

Sample A – Goghrita (Prepared by Traditional Curd Method)
Sample B – Goghrita after Murcchana.

Organoleptic tests (Table 5)**–**

Consistency	- After 1 day semisolid.
Colour of ghrita	- Yellowish.
Taste	- Madhur amla.
Smell	- Characteristic smell of Haridra and Musta.

Analytical Tests Carried out for both samples are as below[4,5] (Table 2)**:-**

1. **pH** :
   The pH value of an aqueous liquid may be defined as the common logarithum of the reciprocal of the hydrogen ion concentration expressed in g, per litre which provides a useful practical means for the quantitative indication of the acidity or alkalinity of a solution.
2. **Moisture content (Loss on drying) @ 110⁰**
   Procedure set forth here determines the amount of volatile matter (i.e., water drying off from the drug).
3. **Specific gravity** :
   The specific gravity of a liquid is the weight of a given volume of the liquid at 25º (unless

otherwise specified) compared with the weight of an equal volume of water at the same temperature, all weighings being taken in air.

4. **Acid value** :
   The acid value is the number of mg potassium hydroxide required to neutralize the free acid in 1 g of the substance.
5. **Saponification Value :**
   The saponification value is the number of mg of potassium hydroxide required to neutralize the fatty acids, resulting from the complete hydrolysis of 1 g of the oil or fat.
6. **Iodine value**
   The Iodine value of a substance is the weight of iodine absorbed by 100 part by weight of the substance
7. **Refractive index:**
   The refractive index (n) of a substance with reference to air is the ratio of the sine of the angle of incidence to the sine of the angle of refraction of a beam of light passing from air into the substance.

Table 6

Sample	Colour	Consistency	Taste	Smell
A	Golden yellow	Semisolid	Madhur	Characteristic
B	Yellowish	Less semisolid than A	Madhuramlarasatmaka (matulung & haridra)	Characteristic smell of haridra & musta

Sample A – Goghrita (Prepared by Traditional Curd Method)
Sample B – Goghrita after Murcchana.

Table 7

Sr. No.	Tests	Sample A	Sample B
1.	**Ph**	5.16	4.94
2.	**LOD @ 110°c**	0.19	0.21
3.	**Sp. Gravity**	0.96	0.9602
4.	**Acid value**	0.86	1.05
5.	**Saponification value**	227.09	224.18
6.	**Iodine value**	35.48	33.54
7.	**Rf. Index**	1.4620	1.4622

DISCUSSION & CONCLUSION :

As per concept of Murcchana, When sneha heated continuously (dagdha paka / same sneha used frequently like in frying procedure) its reactivity decreases, So may be because of this reason for Sneha Murcchana mrudu paka is described. So, after Murcchana of sneha, because of mrudu paka more active priciples of murcchana dravyas may get embedded in siddha Sneha preparation.

Hence, Siddha ghrita prepared by using Murcchita ghrita may be more effective.

When heat is given along with murcchana dravyas, fatty chains in sneha may get broken & active principles of Murcchana dravyas may get attached to the chains, where the fatty chains are broken.

In this way, by using Murcchita Ghrita for Siddha Ghrita preparation we can get benefits of medicinal properties of dravys used for ghrita murcchana (like triphala, haridra)

Organoleptic tests shows difference in Consistency of Ghrita as Murcchita Ghrita stays in more liquid form than Goghrita

Analytical study as shown in the table, it is found that, there is no much variation in values. But it is noteworthy to find small range of variation on

the test like Acid value, Saponification value, Iodine value.

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