WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.453
Volume 13, Issue 19, 1025-1035. Research Article ISSN 2277–7105

RASNADI GHRITA FROM RIPE AND UNRIPE PULP OF BILVA

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Article Received on
12 August 2024,

Revised on 02 Sept. 2024,
Accepted on 23 Sept. 2024

DOI: 10.20959/wjpr202419-34072

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ABSTRACT

Sneha kalpana is one of the important dosage form in the ayurvedic medicament. It isused as both, externally and internally. This class of formulations is reported to treat avery wide range of diseases among patients of all age groups. Sneha kalpanas manufactured in ayurvedic pharmaceuticals are usedfor medical purposes as well as cosmatics purposes. Rasnadi Ghrita indicated in vata rogaadhikar is one such medicated ghrita, mentioned in Vangsen Samhita. pulp of bilva is used as one of the ingredients in this ghrita. two different sources of pulp of bilva are taken, to prepare two different samples of Rasnadi Ghrita and is studied. Sneha Kalpana is the widely used techniques in Ayurvedic drug industry to achieve solubility of both fat-soluble and water-soluble extractives into them. The Physio-chemical analysis of both the samples of Rasnadi Ghrita are analysed to show wether, which source of pulp will show their maximum solubility in ghrita or does both the pulp of bilva will show same properties or does they differ in their chemical properties. Some parameters likeboth the samples of Rasnadi Ghrita are found not rancid, Loss on Drying value of both sample is 0.0%, no much difference is found in their pH values. Hence, we can conclude that, can either(ripe or unripe) pulp of bilva can be used as a substitute drugin Rasnadi Ghrita.

KEYWORDS: Sneha kalpana, Medicated ghrita, Sneha murchana, Rasnadi Ghrita, RipePulp and Unripe Pulp of Bilva, Sneha Siddhi Lakshanas.

INTRODUCTION

SNEhA KALPANA is one of the widely used and preferred dosage forms of Ayurvedic system of medicine. It is a pharmaceutical procedure which is followed to produce an oleaginous medicament from the substances such as kalka, kwatha and drava dravya, as in specific proportions by subjecting them to a specified heating pattern and duration.

By this process, one can ensure transformation of the active therapeutic properties of the ingredients to the solvents, and hence, one can recover fat-soluble as well as water-soluble chemical constituents.

Classification of Sneha kalpana

Sneha kalpana is classified into various categories based on different parameters. Those includes as follows-

1) Based on the stage of paka; Ama paka, Mridhu paka, Madhyam paka and Dagadhapaka.
2) Based on the origin yonies(sources); Sthavar (plant origin), and jangam (animalorigin).
3) Based on the nature of the media; Ghrita, Taila, Vasa and Majja kalpa.

Go-Ghrita and Tila taila “are considerd and advised as one of the best snehas among all the jangama and sthavara sneha respectively.

4) Based on the types of utility, -Abhyanga, pana, nasya, karnapurana etc.

Chronological Appraisal of Sneha Kalpana

Samhita Periods

1) Charaka Samhita

Primary knowledge of sneha kalpana and its properties, sources of origin, types, etc, is clearly mentioned. Systematic method of preparations, types of snehapaka, proportions and siddhilakshans of sneha kalpana and their uses is discussed in this samhita. In charak viman sthana, seperately sneha siddhi lakshans is mentioned. Different kalpas of sneha kalpana are mentioned.

2) Sushruta Samhita

Sneha kalpna has been elaborately described in this samhita. Achaarya Sushruta was the first

to mention about sneha kashayas. Specific preparations such as Satdhauta Ghrita and Sahastrapaka taila are also described in this samhita. In chikitsa sthana types of snehs, process of preparing, sneha kasaya, sneha siddhi lakshans, types of sneha paka, use of sneha are elaborated.

3) Kashyapa samhita

Detailed explanations of sneha dravaya, sources, classification, properties and dose were mentioned.

4) Sharangadhara samhita

Acharya Sharangadhara has discussed details of sneha kalpna seperately in Madhyam Khand 9th chapter. This deals with method, proportions, uses, and types of paka and snehasiddhilakshans.

5) Bhaishajya Ratnavali

This clearly described about snehamurchhana, method of preparation of sneha kalpana.

Sneha kalpana is well known kalpana of ayurvedic medicament. Sneha preparations have better pharmokinetic action in comparison to other dosage forms of ayurveda because of the lipoid nature of the biomembrances, as lipid soluble substances readily permeate into the cells.

MATERIAL AND METHOD

The above research work is carried in following steps

1) Literary review
2) Pharmaceutical study
3) Analytical study

Pharmaceutical study

3 batches of rasnadi ghrita were prepared for the study as references of Vangsensamhita.

Apparatus used

Mixer -grinder, sieve, morter and pestle, gas with cylinder, aluminium vessel diameter-46cm, depth 26cm, wt 6.5 kg, spechula, musclin cloth, stainless stell vessel, thermometer, container, watch.

Requirements for Sneha kalpana

Sneha kalpana needs following constituents

1) **Kalka dravaya-** fine paste of medicinal plants should be taken as a kalka dravaya,
2) **Drava dravaya-** water, kwatha, swarasa kanji etc.
3) **Sneha dravaya -**mainly different types of fat containing media such as ghrita andtaila.

Procedure

1) **Before process**

a) Fisrt the raw materials should be taken of good quality, purity and strength.
b) Then the raw materials are dried for 4-7 days to remove some impurities and makeit free from moisture present in it which helps in better kalka formation.
c) Then it is crushed into small parts and then it is soaked in 1000ml of water overnight without disturbance.

2) **During the process**

a) The next day Murchitsamskar ghrita is taken in a clear, dry aluminium vessel
b) The overnight soaked kalka dravya is mixed into this ghrita and the drav dravyais added to the same ghrita containing vessel.
c) the mixture is stirred during the initial stage and then it is kept on madhyamagini for paka

3) **After some time duration**

a) Stirring of the mixture is done during whole process so that the kalka did not stickat the base of the vessel.
b) Some observations are noticed during the paka. Like colour of the sneha, smell, tasteetc.
c) Temperature at the initial stage is 90.5*c and temperature at snehasiddhi lakshans is 116.2*c
d) Sneha test are performed to obtain sneha siddhi lakshans.
e) About 8 hrs and 45 minute is take in the whole pharmaceutical process to obtain sneh siddhi lakshans.
f) Now the gas is turned off,
g) The obtained final product is filtered through cotton cloth and is kept safely.

Precaution

1-Before the process

a) The sneha must be pure, clear. fresh. go-ghrita

b) The sneha should be taken after performing Murchanasamskara.
c) The raw materials used must comply with its identity, purity, and strength.
d) Tailapatra should be wide- mouthed and of suitable size.

2-During the process

a) Madhyamagini should be maintained throughout the prosecc.
b) The mixture should be stirred in the initial stage for facilitation of homogenous mixture and stirring in the later stage to avoid sticking of kalka to the vessel resulting in carbonization.
c) Care should be taken to determine the proper stage of snehapaka.

3-After the process

a) To obtain maximum yield, the finished sneha should be filtered in little hot condition itself.
b) The vessel utilized for storage or packing sholud be free from moisture.

OBSERVATION

1) During the paka

a) The colour of the ghrita starts changing from yellow to light greenish yellow colour.
b) Specific smell of rasnadi ghrita.
c) Apperance of fumes seen.
d) Bubbles and Bubbles sound is seen.

2) After the paka

a) The colour if ghrita is dark yellowish colour.
b) The kalka dravya becomes soft.
c) The amount of the whole sample is decreased at the end of final product obtained.

Ghrita murchchhana

Ingredients of Ghrita Murchchana

Sr.no	Ingredients	Latin name	family	Parts used	quantity
1	Amalaki	Embelika officinalis	Euphorbiaceae	Pericarp	1 pala
2	Vibhitaki	Terminalia bellerica	Combretaceae	Pericarp	1 pala
3	Haritaki	Terminalia chebula	Combretaceae	Pericarp	1 pala

4	Haridra	Curcumalonga	Gingiberaceae	Rhizome	1 pala
5	nagarmotha	Cyprus rotandus	Cypraceae	Rhizome	1 pala
6	matulunga	Citrus medica	Ruttaceae		1 pala
7	Go ghrita				1 prastha
8	water				4 prastha

Findings of sneha siddhi lakshans of Sneha Murchchana

वर्तिक त् स्नेहकल्क : यदागुल्या ववमददति :	Sneha kalka attains " perfect wick "shape when rolled between thumb and index finger
शब्दहीनोअग्रीर्नक्षिप्त :	If apart of sneha kalka is put into the fire, no sound is produced indicating the loss of moisture in it
फे नोदगमस्तेले फे नशांर्तश्च सवपर्व	Foam appears in taila paka and it disappears in ghrita paka during completion of preparation
गांधवनरसो उत्पर्त :	Desired colour, taste and odour of the ingredients become appreciable as the preparation is properly done.

Table 1: Showing Temperature and Observation during Rasnadi ghrita preparation in different batch.

	Batch RSGrtUnPB	BatchRSGrtRpPB
Temperature free of moisture in the ghrita	125	120
Temperature at the timewhen kalka added	78-80	79.5-82
Temperature at time water added	55.8	59.3
Temperature observed at boiling point	98-110	112-114
Temperature at phensanti	95-98	98-100
Temperature at the time of mridu paka stage	112.6	114
Temperature at the time of madhyam paka	116.2	118.5
Temperature at filteration	54.2	52.8

Sneha siddhi lakshans of Rasnadi Ghrita

1	वर्तिक त् स्नेहकल्क : यदागुल्या ववमददति :	Sneha kalka attains " perfect wick "shape when rolled between thumb and index finger
2	शब्दहीनोअग्रीर्नक्षिप्त :	If apart of sneha kalka is put into the fire, no sound is produced indicating the loss of moisture in it
3	फेनशांर्तश्च सवपर्व	Foam disappears in ghrita paka during completion of preparation
4	गांधवनरसो उत्पर्त :	Desired colour, taste and odour ofthe ingredients become appreciable as the preparation isproperly done.

Sneha murchchhana

Kalka dravya

kalka+sneha+drav(jal)

final product (murchita ghrita)

Rasnadi ghrita

Kalka dravya

kalka+sneha+ drav(jal)

final product (rasnadi ghrita)

Shabd hino

Sneha siddhi lakshans

varti formation

Analytical study

Analytica study ie. the Organoleptic Parameters and the Physio-chemical parameters of both the samples of Rasnadi Ghita prepared from unripe pulp of bilva and the Rasnadi Ghrita prepared from ripe pulp of bilva were carried out by VASU Research Center, Vadodra, Gujarat.

Showing Organoleptic Characteres of Rasnadi Ghrita Preapared from Ripe Pulp of Bel and Rasnadi Ghrita Prepared from Unripe Pulp of Bel.

ORGANOLEPTIC ANALYSIS

Sample	colour	odour	texture	taste	consistency
Rasnadi Ghrite prepared from riprepulp of bel	Yellow- greenish	pungent	oily	katu	liquid
Rasnadi Ghrite prepared from unripre pulp of bel	Yellow - greenish	pungent	oily	katu	liquid

Showing different Physio-Chemical Parameters And Their Results of Rasnadi Ghrita Prepared from Ripe And Unripe Pulp of Bel

Physio -Chemical Analysis	Rasnadi Ghrita from Ripe Pulp of Bel	Rasnadi Ghrita from UnRipe Pulp of Bel
Rancidity	Not rancid	Not rancid
pH value	7.80	7.89
Specific Gravity	0.911	0.899
Viscosity	18.69	18.99
Refractive index	1.456	1.458
Loss on drying	0.0%	0.0%
Saponification value	224.36	217.17
Iodine value	36.92	35.69
Free fatty acids	8.66%	8.71%

RESULTS

1) When the ghrita is subjected to heat foam, disappears,
2) After adding kalka and water to ghrita, the colour of ghrita changes to some whatgreenish colour after some time of paka.
3) Bubbles and bubbles sound appears during sneha paka.
4) Smell of kalka dravya appears during paka.
5) Kalka attains perfect wick shape when rolled between thumb and index.
6) Kalka neither very hard nor very soft

DISCUSSION

1) Sneha kalpna is an effective and potent kalpanas which may contains water as well asfat - soluble active principles.
2) In the preparatios of any formulations some ingredients are used in their preparations.
3) The ingredients posesses some quality in them. like rasa, guna, virya, vipaka,
4) These rasa, guna, virya, vipak of dravya make the dravya potent and effevtive in uses.
5) Rasnadi ghrita contains 8 dravya or ingredients. namely-rasna, pushkarmula, chitrak, shigru, pipalli, pulp of bilva, gokhru. sendha namak and go-ghrita.
6) Pulp of bilva is selected as study because it is found in two different forms; 1) in theform of ripe pulp and 2) in the form of unripe pulp.
7) Two samples of Rasnadi ghrita were made from them to see their effect.
8) The physio-chemical parametres of both the sample are analysed.
9) It is seen that some parameters of both the samples are found to be same.
10) It is to be noted that the pulp of bilva used in either form does not changes theproperties of other ingredients.

11) Hence the efficacy of the ghrita is not soo much differ.
12) It is to be noted that some chemical compositions like tannin, phospholipids, are foundin both the pulp.

CONCLUSION

From the above research work following results are concludes -;

1. Rasanadi grita mentioned in the vatta rogaadhikar of vangsen samhita, is the research work taken for study.
2. There are 8 kalka dravya in the rasnadi ghrita namely- rasna, pushkarmula, chitrak, shigru, pippali, pulp of bilva, gokhru, senda namak
3. After the analytical findings of both the samples of rasnadi ghrita, they arecomparetively studied.
4. The colour of both samples of ghrita are yellow coloured viscous ghrita,
5. Their physio-chemical parameters like rancidity, both the ghrita are found to be notrancid.
6. The pH value of first batch of ghrita prepared from ripe pulp of bilva is 7.80 and the pH of second batch of ghrita prepared from unripe pulp of bilva is 7.89
7. The result on loss of drying test of both the samples are 0.00%.
8. The viscosity of both the samples of ghrite is found to be 18.69.
9. The refrctive index of ghrita prepared from ripe pulp of bilva is 1.46 and the refractive index of ghrita prepared from unripe pulp of bilva is 1.45.

The above parameters shows that, if the rasnadi ghrita is prepared from the ripe pulp ofbilva the efficacy of the ghrita, is same or not much differ as that rasnadi ghrita which isprepared from the unripe pulp of bilva.

The chemical compositions of both pulp of bilva are some what same, alkaloids, vitamins, sugars. tannin, are some what related to each other.

Pulp of ripe bilva can be used as a substitue in place of pulp of unripe pulp of bilva in the making of rasnadi ghrita. Concluded from above.

ACKNOWLEDGEMENT

I acknowledge Deppt. Of Rasashastra & Bhaishajya kalpana, Govt. PG, Ayurvedic College& Hospital, Varanasi for allowing me to work and perform this study. I would also like tothanks VASU research center, vadodra, gujarat for providing the authenticated result.

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