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A COMPARATIVE PHARMACEUTICAL STUDY OF VATARI GUGGULU AND SIMHANADA GUGGULU WSR to PRACTICAL DIFFICULTIES

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ABSTRACT

Introduction: In this modernized era *vati kalpana* of ayurvedic pharmaceutics plays an important role, owing to many advantages like accuracy of dosage, palatability, stability, convenient form for dispensing and transportation. *Guggulu* has its own therapeutic properties And it is also used as binding agent during the preparation of *Vatis* (pills). *Simhanad guggulu* and *Vatari guggulu* are two such *Vatika* formulations having similar ingredients and they are indicated in *Amavata*

Aim and objectives: To prepare Vatari guggulu and Simhanada guggulu in the department of R.S. &B.K., IPGT & RA and to evaluate practical difficulties while preparing this formulation with classical ratio and modified ratio.

Material & Methods: Procurement of standard drugs to make *Vatari Guggulu* and *Simhanad Guggulu*. Preparation of this both formulations according classical ratio and method as they contain same ingredients .Tried to make *Simhanada guggulu* in a classical manner in all possible ways like changing in sequence of adding ingredients, with different temperature pattern but without changing the ratio.

Observation and Discussion: There was no practical difficulty faced during preparation of *vatari guggulu* but while preparing *simhanad guggulu* with different methods none of this method gives the *Vataka* form of *simhanada Guggulu* which is the prime need of this era. But with modification in the ratio of ingredients of *Simhanad guggulu* and *Vatari guggulu* are two such *Vatika* formulations having similar ingredients and they are indicated in *Amavata* we can make vataka .

Conclusion: As per demand of era *vati kalpana* is the most suitable form in the *Ayurvedic* clinical practice. As described in our classics we can make *Vataka* of *Vatari guggulu* but not in *Simhanada guggulu*. To make *Vataka* form of *Simhanad guggulu* we need modified in the classical ratio of ingredients without adding or removing any ingredient from it.

KEYWORDS : Vatari Guggulu,Simhanada Guggulu, Triphala, Gandhaka

INTRODUCTION

In Ayurvedic pharmaceutics though several types of kalpanas(fomr) are being used, vati kalpana plays an important role, owing to many advantages like accuracy of dosage, palatability, stability, convenient form for dispensing and transportation. Though preparations of many formulations are mentioned in classics of Ayurevda, we may face many difficulties and have to take many precautions during the pharmaceutical procedure. Pharmaceutics have vital role in the maintaining shelf life and potency of the final product. There arise the necessities of standard operative procedure. Simhanad guggulu and Vatari guggulu are two such Vatika formulations having similar ingredients and they are indicated in Amavata Chikitsa. But when we go to market sample for Simhanada guggulu with same reference we find modification in the ratio of ingredients of this formulation. So the current study concentrates on its pharmaceutics with special reference to the practical difficulties faced during the preparation. Analytical study was also carried out along with it.

Aim and objectives

To prepare Vatari guggulu and Simhanada guggulu in the department of R.S. &B.K., IPGT & RA as they both contains the same ingredients and to evaluate practical difficulties while preparing this formulation with classical ratio and modified ratio.

Material & Methods:

Drug procuring and authentication:

Vatari guggulu and Simhanad guggulu are polyherbal formulations consist of 6 ingredients like Guggulu (Commifora mukul), Gandhaka(Sulphur), Eranda taila (castor oil), Amalaki (Embilica offincinale), Bibhitaki (Terminalia bellerica) and Haritaki (Terminalia chebula). Specific morphological parts of the plants are used in the formulation. The raw material was procured from the pharmacy of Gujarat Ayurveda University; Jamnagar after the authentification was done in pharmacognosy lab of IPGT & RA. Principal ingredient Guggulu is taken in purified form Gandhaka was also taken in purified form.

Preparation of drug:

Both Simhanad guggulu and Vatari guggulu are having same ingredients like Triphala, Guggulu, Gandhaka and Earnada taila, but their ratio of ingredients and method of preparation are different.

Table No.1 Vatari Guggulu[ii]

Sanskrita name	Scientific name	Part used	Quantity (as per classics)	Quantity (in gms)	Form
Haritaki	Terminalia chebula	Fruit	All ingredients taken in a equal quantity	250 gms	Powder
Bibhtaki	Terminali bellerica	Fruit		250 gms	Powder
Amalki	Embelica offincinale	Fruit		250 gms	Powder
Guggulu	Commifora mukul	Olio gum resin(fro m stem)		250 gms	
Gandhak	Sulphur			250 gms	Powder
Errand taila	Ricinus communis	Seeds		250 gms	Liquid

Shoditha guggulu was made into small pieces by pounding method. Then it was dried in oven. Later grinded well to make it fine powder. Then this powder was mixed with powder of other ingredients like triphala and Shoditha Gandhaka with the help of a grinder. This was shifted to ullukhala yantra and pounded thoroughly with 250 g of eranda taila in regular interval (10 ml every 10 minutes). Pounding was continued for 4hrs, until mixture became a bolus like soft mass and did not stick to the ulukhal yantra. [Table No. 1]

Table No. 2 Simhanad guggulu

Sanskrit name	Scientific name	Part used	Quantity(as per classics)	Quantity(converted into
Haritaki	Terminalia chebula	Fruit	(Make decocotion of these three drugs.) 3 pala	144 gm yavkuta+ 16 times water reduce to 1/16(144 gm in liquid form)
Bibhtaki	Terminali bellerica	Fruit		
Amalki	Embelica offincinale	Fruit		
Guggulu	Commifora mukul	Olio gum resin(from stem)	1 pala	48 gm
Gandhak	Sulphur		1 pala	48 gm
Errand taila	Ricinus communis	Seeds	1 kudav	192 gm

According to this reference we need 3 pala (144 gms) of triphala kashay made in loha patra. Shudhdha gandhak 1 pala (48 gms) in powder form, shudhdha guggulu 1 pala(48 gms), and eranda taila 1 kudav (192 gms).

In this ratio eranda taila obtains highest quantity that is 4 times more than gandhak and guggulu. So maybe we cannot get vati form. To solve this issue we took trial in different batches and ratio was reduced to ¼ for all ingredients.

We have tried this classical formulation in 6(Method 1 -6) {Explain theses method [table No 2]} different batches with 6 different methods like different heating pattern, changing in sequence of adding ingredients, different form of triphala kwath. In this all 6 batches we took ingredients in same quantity like shudhdha Guggulu-12 gms, shudhdha Gandhaka-12 gms (Powder form), Eranda taila- 48 gms, Triphala in different form-36 gms.

Method 1:
Triphala kwath was subjected to make in iron vessel. Shu Gandhaka was added in Triphala kwath and boiling should be continued and not to burn all water content of Triphala kwath. Add shu Guggulu followed by Eranda taila immediately after adding Shu Gandhaka. All procedure was done below 100℃.

We got uniform mixture of above content but it remains in semi solid (like avaleha) form at room temperature so we cannot make vati from this.

End product we got is the emulsion of all this material.
Dose fixation is major difficulty of this form, so this end product is not practically accepted now days.

Method 2:
In this method we took freshly prepared Triphala Ghana.all other ingredients were taken in same sequence and same form as mentioned in table no-2.All ingredients were subjected to mix all ingredients with help of khlav yantra by trituration method.

We got uniform mixture while triturating.

We keep this mixture for 24 hours in room temperature but after 4 hours layers get separated in this end product. After 10 hours all ingredients get separated.

Improper mixing of ingredients was the problem faced during this method.

Method 3:
In this method we made Triphala kwath with Triphala churna and didn't filter it. For making Triphala kwath with Churna took only 4 times of water and reduce it to 1/4.

We got uniform mixture of till it heated with fire. After getting semisolid consistency we remove it from fire.

We keep this mixture for 24 hours in room temperature but after 6 hours layeres get separated in this end product. After 16 hours all ingredients are separated layers.

Layer sepration procedure is slow in this method in compare to Triphala Ghana method.

Method 4
During this method we change in sequence of mixing the ingredients. In prepared Triphala kwath we add Guggulu ant boil them with low flame. Guggulu dissolved and became concentrated. Then we add Gandhaka powder and mix it with continue stirring. It became a bolus like mass. In the ed we add Eranda taila .

In this bolus like mass Eranda tial in this much quantity was not mixed well and it remains separate from other ingredients.

Method 5
In this method we add Gandhaka last and cooked on fire till it become moisture free. Gandhaka was melted on fire in this mixture. Temperature was noted till 125℃ during heating.

As Gandhaka was melted during cooking it again come in solid form as mixture gets cool down. After some hour we found small lumps of again solidified Gandhaka and Guggulu was also smell like burnt.

Particle size was not equal in this end product and it seems like khar paka

Method 6
In this method first we made Eranda taila warm and add Gndhaka powder into it Gandhak is complete melted in the Eranda taila. Temperature was raised till 235℃. Than Guggulu and Triphala kwath was added and it was heated till it gets moisture free. Gandhak is now in the molten stage. So it should be taken internally in humans or not it is question for further research.

Method 7- Modification in the formulation

Table No.3 Simhanad Guggulu (modified)

Sanskrit name	Scientific name	Part used	Quantity(as per classics)	Quantity(converted into grams)
Haritaki	Terminalia chebula	Fruit	(Make decocotion of these three drugs.) 3 pala	1500 gm yavkuta+ 16 times water reduce to 1/16 (1.5 ltr in liquid form)
Bibhtaki	Terminali bellerica	Fruit		
Amalki	Embelica offincinale	Fruit		
Guggulu	Commifora mukul	Olio gum resin(from stem)	1 pala	500 gm
Gandhak	Sulphur		1 pala	500 gm
Errand taila	Ricinus communis	Seeds	1/2 pala	250 gm

To avoid the above mentioned difficulty trial drug was prepared with slight modification as mentioned in Chakradtta.

The proportion of Eranda taila was reduced to its 1/8 part mentioned from the original reference.

Triphala kwath was made by riphala yavkua mentioned in above quantity. Eranda taila and Guggulu were mixed with the Triphala kwath and boiled in the low flame. Gradually Guggulu dissolvedand became concentrated. Regular stirring was done to avoid the burning. When it became bolus like soft mass then taken out from fire and left for self cooling. Gandhaka powder was added at 80℃ and mixed well and vati of about 500 mg was prepared manually dried and preserved.

Observation and Discussion

1.4 kg of Vatari Guggulu(500 mg each) was prepared manually preserved. No practical difficulty faced during preparation of this formulation pharmaceutically.

In Simhanada Guggulu as quantity of Eranda taila is very high during first method of preparation we got end product in semi solid (like avleha) form, from which we could not prepare Vatika which was prime requirement of era. This was not convenient for dose fixation. When we tried with Sudhdha Guggulu, Eranda taila was boiled in low flame when it became solid mass; it was cool down and Gandhaka powder was added and well mixed. About 500 mg pills were made manually and dried (method-2) and kwath prepared by Triphala churna (Method-3) which was not filtered, Uniform mixing of end product could not stay for long periode. When we change sequence (method-4) and add Eranda taila in the end it could not mix with the other ingredients and remains separate so it should never add in the end of all ingredients. This all methods were done at less than 100℃.

Gandhaka powder added in last (method-5) and heated on little higher temperature it was melted and mixed with other ingredients but when it gets cool down at room temperature Gandhka was again crystallized and particle size of Gandhaka is changed(not uniform). Guggulu was also burnt. When cooked Gandhak with Eranda taila at 235℃ it comes into its molten stage and remains same. Sulphur in molten state should be used internally or not is question so this method was also not adopted.

After trying by these methods we were not able to make vataka of Simhanad guggulu as per original reference. So, we decide to make modification in the ratio of Erand taila as per previous work or we can modified ratio according to later text book Bhavprakash samhita in which Guggulu is 3 times more than in tha Chakradatta.

CONCLUSION

As per demand of era vati kalpana is the most suitable form in the Ayurvedic clinical practice. As described in our classics we can make Vataka of Vatari guggulu but not in Simhanada guggulu. To make Vataka form of Simhanad guggulu we need modified in the classical ratio of ingredients without adding or removing any ingredient from it.

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