

DEVELOPMENT OF INSTANT *UPANAHA* MIX AND ITS PHARMACEUTICAL
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ABSTRACT

Introduction- The word *Upanaha* means to tie or to bandage. It comes under *Bahirparimarjana chikitsa*. Step by step preparation of *Upanaha* is time consuming. Holding the point of patient compliance, an effort was done to modify the *Upanaha* into instant mix and carried out analytical study for further documentation. **Methodology-** Classical method of preparation of *Upanaha* (A concept of *salvana Upanaha* from *Sushruta Vatavyadhi Chikitsa*) was modified to Instant *Upanaha* mix by adding Carbopol gel, polyethylene glycol, methyl paraben, essential oil to it methodologically. **Observation & Result-** Instant *Upanaha* mix had brownish yellow colour with characteristic odour. Physico-chemical parameters were performed and analyzed. **Discussion-** Addition of Carbopol gel to classically prepared *Salvana Upanaha* mix made the formula watery. This might be because carbopol is unstable in salt containing formula. **Conclusion-** Considering the limiting factors of classical *Salvana Upanaha*, it was modified into Instant *Upanaha* mix. This pre-packed and preserved *Upanaha* packet should be heated in water bath and instantly used.

KEYWORDS: *Upanaha*, *Salvana Upanaha*, Instant mix, Carbopol.

INTRODUCTION

The word *Upanaha* means to tie or to bandage. *Upanaha* is one among four types of *sweda*.^[1] It comes under *Bahirparimarjana chikitsa*^[2] where, combination of medicinal drugs are prepared, made into poultice, heated and applied at the affected site. Then covered by a leaf and tied.

Step by step preparation of *Upanaha* is time consuming and proportion or quantity of drugs taken will not be same always. For minimizing the time taken for its preparation without compromising its efficacy advancement of *Upanaha* is required. Any science which has to face challenges has to be equipped with updated principles and practices.

Holding the point of patient compliances and user friendly an effort was done to modify the *Upanaha* into instant mix and carried out analytical study for further documentation.

METHODOLOGY

The total work was carried out in two phases as given below-

1. Pharmaceutical study
2. Analytical study

Pharmaceutical study

The raw material (Fig1) was procured from Anamaya Herbs, Udipi. The Authentication of all the raw drugs were done based on morphological features at the Department of Dravyaguna, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan.

Preparation of Instant *Upanaha* was done at Teaching Pharmacy, Department of Rasashastra and Bhaishajya Kalpana, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan.

Method of preparation of *Chincha*

As extraction of rasa from *chincha* is not possible, *Chincha* rasa was prepared by adding 2 parts of water and then rasa was extracted.^[3]

- 12L of *chincha* was measured, made into paste and added to a beaker.
- To this, 24L of water was added and left undisturbed overnight.
- Next day, this mixture was macerated and filtered.

Method of Preparation of *Upanaha*

Upanaha is prepared based on the concept of *Salvana Upanaha* mentioned in *sushrutha vatavyadi chikitsa*

where *vatahara Dravya*, *Sneha*, sufficient quantity of *saindhava lavana*, *amla rasa*, *anupamamsa* are ingredients.^[4]

Based on the *Dosha* involvement and the *Avastha* of the disease condition we can make the permutation and combination of *Dravya*. Here five *Ushna Veerya*, *Vatakaphahara Dravyas* were chosen along with *Amla Dravyas* like *Dhanyamla*, *Chincharasa*, *Nimbu Rasa*. Any *Upanaha* should not be *Ruksha*, *Ishath Snigdhattha* is must, so *Murchita taila* was added.

Table No. 1: Ingredients and Ratio of Instant *Upanaha* Mix.

SL NO	INGREDIENTS	QUANTITY
1.	<i>Atasi linum usitatissimum linn.</i>)	2500g
2	<i>Rasna (pluchea lanceolata)</i>	2500g
3	<i>Devadaru (cedrus deodara)</i>	2500g
4	<i>Haridra (curcuma longa)</i>	2500g
5	<i>Kushta (saussurea lappa)</i>	2500g
6	<i>Saindhava Lavana</i>	10000g
7	<i>Murchita taila</i>	1200ml
8	<i>Chincha Rasa (tamarindus indica linn)</i>	20 L
9	<i>Dhanyamla</i>	15 L
10	<i>Nimbu Rasa (citrus limon)</i>	1 L
11	Carbopol	1Kg
12	Methyl Paraben	327g
13	Essential Oil	600ml
14	Polyethylene Glycol	100g



Fig. 1: Raw Drugs.

1. *Atasi*2. *Rasna*3. *Devadaru*4. *Haridra*5. *Kusta*6. *Saindhava lavana*

Fig. 2: All Ingredients



Fig. 3: Prepared mixture.



Fig. 4: Instant Upanaha packet.

- Mentioned quantity of *Saindhava lavana* was added to heated *Murchitha taila* taken in a vessel and sauted for a while.
- All the medicinal powders mentioned in table were then added to the mixture and stirred.
- Later 13 litres of *Chincha Rasa*, 4 litres of *Dhanyamla* and 1litre of *Nimbu Rasa* were added and mixed homogeneously to make it into a paste, heated till the mixture became hot.
- Meanwhile on the otherside, gel was prepared by adding 1kg of Carbopol powder to 11 litres of *Dhanyamla* and 7 litres of *Chincha Rasa*.
- This was left undisturbed overnight for carbapol to imbibe the liquid and swell up.
- Next day gel was blended once to get a homogenous mixture.
- The gel was then added to *Upanaha* mixture and stirred well.
- The entire mixture was heated on low flame till the required consistency of not too runny nor to solid was attained. (Fig3)
- After cooling polyethylene glycol, methyl paraben and essential oil in mentioned ratios were added and mixed till it became homogeneous.
- Instant *Upanaha* mix of 200 gms were packed in an aluminium silver foil pouches and sealed. (Fig4)
- At the time of use the packet must be kept in boiling water for 5mins then applied to *kati* region.
- Instruction must be given to the patient to remove the *Upanaha* after 6 hrs.

Analytical Study

CCRAS has given guidelines for different dosage forms. So, in this study an attempt was made to prepare Instant *Upanaha* Mix and carry out its analytical study for further documentation.

Instant *Upanaha* mix was analyzed at QC lab attached to teaching pharmacy, SDM College of Ayurveda and Hospital, Hassan.

To establish preliminary quality control over a drug, analytical study is necessary. Hence Analytical study of Instant *Upanaha* mix was carried out.

Following analysis were carried out:

1. Organoleptic character:
 - a. Colour
 - b. Odour
 - c. Appearance
2. pH
3. Loss on Drying

Determination of pH^[5]

The pH meter was used which consists of a voltmeter connected with two electrodes i.e., standard electrode and special electrode. The pH meter was calibrated using 7 and 4 buffer solution. After calibration, sample was introduced and reading was noted.

Determination of loss on drying^[6]

10g of accurately weighed sample was taken in a tarred evaporating dish then dried at 105°C for five hours and weighed. The process of drying and weighing was continued at one-hour interval until the difference between two successive weighs corresponded to not more than 0.25% or 0.001g.

OBSERVATION AND RESULTS

Table 2: Organoleptic Characters.

Features	Instant Upanaha Mix
Colour	Brownish yellow
Odour	Characteristic odour
Touch	Cold granular
Appearance	Semi-solid paste

Table 3: Observation and result of Analytical Study.

Sl.No.	Parameters	Instant Upanaha
1.	pH	3.16
2.	Loss on drying	54.5%

DISCUSSION

Addition of Carbopol gel to classically prepared *Upanaha* mix made the formula watery. This might be because carbopol is unstable in salt containing formula. Hence the mixture was heated till the required semisolid consistency was attained.

Loss on drying value of instant *upanaha* is 54.5%. This indicates the formulation is having high moisture

content. Polyethylene glycol added to the mixture serves the purpose of sustaining moisture in the *Upanaha*. Hence, this does not need addition of liquid prior to the application at the site. p^H of instant *Upanaha* is 3.16 which suggests that the mixture is acidic. Skin p^H plays an important role in condition of skin. The acid mantle is key to skin's protective barrier.

CONCLUSION

Salvana Upanaha mentioned in *Vatavyadhi chikitsa* is a types of *Sagni sweda*. *Upanaha* must be prepared fresh at each time of application to the affected site. Advancement in science and technology, reducing man power, minimizing the time for its preparation without compromising its efficacy and global attentions are some of the key factors which support the new positive changes in the development of *panchakarma* therapies. So, it was modified into Instant *Upanaha* mix. This pre-packed and preserved *upanaha* packet should be heated in water bath and instantly used.

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