



## Research Article

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### PRAYOGIKA DHUMAVARTI: NIRMANA AND STANDARDIZATION

Arathy Shyam<sup>1</sup>, Meenu M<sup>1</sup>, Neetha R B<sup>1</sup>, Thulasi TV<sup>\*1</sup>, Rahul H<sup>2</sup>

<sup>1</sup>PG Scholar, Dept of PG studies in Panchakarma, MVRAMC, Parassinikadavu, Kannur, Kerala, India

<sup>2</sup>Associate Professor, Dept of PG studies in Panchakarma, MVRAMC, Parassinikadavu, Kannur, Kerala, India

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\*Corresponding author

E-mail: thulasishh@gmail.com

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#### ABSTRACT

Ayurveda, the great science which is widely practised has several aspects which are still unexplored. Dhumapana is one among them. Even though Dhumapana is a method which has many health benefits it is least explored. Classics explain the different types of Dhumavarti and their method of preparation which is least considered now a days. Prayogika Dhumavarti is one among them which has preventive, promotive and curative aspect, which can be given daily without much complications. Considering all these aspects it was found worth to standardise the method of preparation of Prayogika Dhumavarti. Eladi Gana mentioned for Prayogika Dhumavarti from Susruta Samhita Chikitsa Stana was used for the preparation. Mainly 2 groups of Dhumavarti were prepared- one with hay and other with bamboo as base. Altogether 21 samples were made. Observations were noted during preparation and burning of the Dhumavarti samples. Character of smoke was observed on igniting the samples for 10, 20 and 30 seconds. After thorough observation it was found that the sample C (using Ishika with 5 coats of 12g medicine pasted without using cloth) was most concurrent with classics and most significant. In order to obtain the desired properties of Dhuma, it is worth to ignite varti for 30 seconds after smearing ghee.

**KEYWORDS:** Dhumapana, Prayogika Dhumavarti, Standardization

#### INTRODUCTION

“That which used develops - that which is not used wastes away” famous quote of Hippocrates.

Dhumapana is a very effective procedure (Karma) explained in Ayurveda. Studies prove that Dhumapana has preventive, promotive and curative aspect. The classification of Dhumapana according to different Acharyas is as follows.

**Table 1: Types and classification**

Charaka <sup>1</sup>	Susruta <sup>2</sup>	Vagbhata <sup>3,4</sup>	
Prayogika	Prayogika	Snigdha	Samanam
Vairechanika	Vairechanika	Madhyamam	Brimhanam
Snaihika	Snaihika	Teekshanam	Sodhanam
	Kaasaghna		Vamaka
	Vaamaniya		Vranagna

Different types of Dhumapana are mentioned in Ayurvedic classics, using Dhumavarti made with specific drugs according to the need of action. It can be advised at different stages of treatment. One of the important type mentioned is Prayogika Dhumapana. Here in this attempt Eladi Gana mentioned under Prayogika Dhumapana category by Susruta Acharya has been selected.

#### Prayogika Dhumapana

Prayogika Dhumapana is a classification of Dhumapana which can be given daily without much complications. So one can use it as Dinacharya independently or as a part of a Panchakarma procedure (as Purvakarma as well as Paschatkarma). Acharyas explain Prayogika Dhumapana to use in different Kalaas (time) like after bath, food, vomiting, sneezing, brushing teeth, Nasya, Anjana, after completing sleep<sup>5</sup>. It is advised to use maximum 3 times in a day<sup>6</sup>.

As per Ayurveda Prayogika Dhumapana has much importance in one's life. Prayogika Dhumavarti can be undoubtedly used for

both Swastha and Atura and can be promoted for general practise without the fear of complications. Unfortunately it is not widely practiced. Hence we considered a Prayogika Dhuma Yoga for the preparation. Nowadays we are least concerned about the method of preparation of Prayogika Dhumavarti which is explained in classics. Ashtanga Sangraha and Susruta Samhita gives detailed explanation of method of preparation of Dhumavarti, still there is difference of opinion between them. Considering all these aspects we made an attempt to standardize the preparation of Prayogika Dhumavarti.

#### MATERIALS AND METHODS

Eladi Gana except Kushta, Tagara mentioned for Prayogika Dhumavarti from Susruta Samhita Chikitsa Stana was selected<sup>7</sup>. Among these drugs some were unavailable like kunduruka, kunkuma, Sukti, Sriveshtaka and all others were identified and authorised by Dravyaguna department of MVR AMC. The drugs were thoroughly washed and dried in sunlight. The dried drugs were powdered. It was made into paste by grinding it for 5 days.

Detailed method of preparation of Dhumavarti is explained in Ashtanga Sangraha and Susruta Samhita. Susruta Samhita clearly narrates 'dvadasangula Sarakandam' (12A length) for this preparation. Comparing this with other books this Sarakandam was decided as bamboo stick, whereas in Ashtanga Sangraha, base is Ishika grass (hay)<sup>8</sup>. Thickness of Dhumavarti is said as Anguli parinham (Thumb circumference) by all Acharyas.

Acharya Susruta explains Sarakandam should be covered with Kshauma for 8A length and to apply the medicine over the cloth, whereas Ashtanga Sangraha says direct application of medicine over Ishika grass.

Considering the difference of opinion in Samhitas we prepared 2 types of Dhumavarti. Type 1 with hay and Type 2 with bamboo stick. These 2 types were again divided as stick covered with and without gauze. For each group, 3 samples were taken. Groups

included Varti with single base layer of gauze and other with 5 layers of medicine pasted gauze.

For those samples which have hay as the base, care was taken to keep them overnight as explained in classics. For samples with bamboo stick, smooth surfaced bamboo with average thickness and less number of nodes were selected.



Fig 1: Raw drugs kept for drying



Fig 2: Ishika kept overnight in water

**With Ishika**

- A. Hay covered with 1/5<sup>th</sup> of cloth and 12g of medicine – same 5 coats.
- B. Hay covered with Single layer cloth and 5 coats of medicine each 12g.
- C. Hay without cloth and 5 coats of 12g medicine.
- D. Hay without cloth and 5 coats of 3gm medicine.

**With Bamboo stick**

- E. Bamboo stick with 1/5<sup>th</sup> cloth and 12g of medicine- same 5 coats
- F. Bamboo stick with 1/5<sup>th</sup> cloth and 3g of medicine-same 5 coats
- G. Bamboo stick with single layer cloth and 5 coats of medicine each 12g.

In all these groups medicine was pasted and dried in shadow, and was repeated for 5 times. After drying of 5<sup>th</sup> layer Ishika and Bamboo stick was carefully removed. Each sample was labelled separately and preserved.



Fig 3: Bamboo with single layer cloth (12g)-1st day



Fig 4: Hay with single layer cloth (12g)-1st day



Fig 5: Bamboo with single layer cloth (12g) 2nd day



Fig 6: Hay with single layer cloth (12g)-2<sup>nd</sup> day



Fig 7: Bamboo with 12g medicine-after 5 coats



Fig 8: Hay with 3g medicine after 5 coats

Table 2: Details of drugs used for Dhumavarti<sup>9, 10, 11</sup>

Sl no	Sanskrit name	Scientific name	Family	Kulam	Part used	Properties
1	Ela	<i>Elettaria cardomomummaton</i>	Zingiberaceae	Ardraka	Seed	Laghu, Ruksha Sita, KaphaVata-Hara
2	Jatamanji	<i>Nardostachys grandiflora DC</i>	Valerianaceae	Tagara	Root	Laghu, Snigdha Sita, Bhutagna
3	Dhyamaka	<i>Cymbopogon martini(Roxb)wats</i>	Poaceae	Yava	Leaf	Laghu, Ruksha, Tikshna Ushna KaphaVata Hara
4	Twak	<i>Cinnamomum verum presl</i>	Lauraceae	Karpura	Stem bark	Laghu, Ruksha, Tikshna Ushna, VataPitta Hara
5	Patra	<i>Cinnamomum tamala</i>	Lauraceae	Karpura	Leaf	Laghu, Tikshna Ushna, KaphaVata Hara
6	Nagapushpa	<i>Mesua ferrea</i>	Clusiaceae	Nagakesara	Flower+ kesara	Laghu, Ruksha Ushna, Durgandhanasanam
7	Priyangu	<i>Callicarpa macrophylla</i>	Verbenaceae	Nirgundi	Flower	Guru, Ruksha Sita
8	Harenuka	<i>Vitex negundo</i>	Verbenaceae	Nirgundi	seed	Laghu, Ruksha Ushna, VataKapha Hara
9	Vyagranakha	<i>Capparis zeylanica</i>	Capparidaceae	Karira	Root, leaf	Laghu, Ruksha Ushna KaphaVataHara, Sothahara
10	Chanda	<i>Costus speciosus</i>	Zingiberaceae	Ardraka	Rhizome	Laghu, Ruksha Sita, KaphaPitta Hara
11	Stauneyaka	<i>Clerodendrum infortunatum</i>	Verbenaceae	Nirgundi	Leaves	Laghu, Ushna KaphaVata Hara
12	Sriveshtaka	<i>Pinus roxburghii</i>	Pinaceae	Devadaru	oleoresin	Laghu, Snigdha Ushna, Kapha Hara
13	Chocha	<i>Cinnamomum verum</i>	Lauraceae	Karpura	Bark	
14	Choraka	<i>Angelica glauca</i>	Umbelliferae	Satapushpa	Root	Laghu, Ruksha Ushna, KaphaVata Hara
15	Guggulu	<i>Commiphora mukul</i>	Bursaceae	Guggulu	Resinus gum	Laghu, Ruksha Ushna, Tridosha Hara
16	Sarjarasa	<i>Vateria indica</i>	Dipterocarpaceae	Sala	gum	Snigdha Sita, VataPitta Hara
17	Turushka	<i>Liquidamber orientalis</i>	Hamamelidaceae	Silhaka	Balsam	Snigdha, Laghu Ushna, VataKapha Hara,
18	Agaru	<i>Aquilaria agallocha</i>	Thymeleaceae	Agaru	Fragrant resinous wood	Laghu, Tikshna Ushna, VataKapha Hara
19	Sprikka	<i>Anisomeles malabarica</i>	Lamiaceae	Tulsi	Whole plant	Medhya VataKapha Hara
20	Usira	<i>Vetiveria zizanioides (linn) Nash</i>	Poaceae	Yava	Root	Ruksha, Laghu Sita, KaphaPitta Hara
21	Badradaru	<i>Cedrus deodara</i>	Pinaceae	devadaru	Stem	Laghu,Snigdha Ushna, KaphaVataHara, Kasahara
22	Punnaga	<i>Celastrus paniculatus</i>	Celastraceae	Jyotishmati	Flower	Tikshna Ushna, KaphaPitta Hara

Samples of each group were ignited separately and their properties were noted. Uniform conditions were maintained such as ventilation, ignition time, etc. throughout the trials.

#### OBSERVATION

During the preparation of Dhumavarti, same methods were followed for all the samples up to pasting of the medicine. After

drying also, the same process of testing were carried out for all samples.

Following observations were noted during the whole process up to burning of the samples:-

#### During the preparation of Dhumavarti

It was difficult to grind the drugs of Poaceae family into fine paste even with motorized mortar. Pleasant aromatic smell was observed while grinding the raw materials itself. 3g and 12g

coatings were done on different samples of Dhumavarti – wherein, 3g paste was insufficient for coating the desired length and 12g paste was found sufficient. Assessing the classical measurements of Dhumavarti, it was found that sample with 12g coating was the most concurrent, while that with 3g coating was found to be very thin. No major difference or difficulty was noted to remove the stalk (Ishika and Bamboo) after drying in any of the samples. Dhumavarti samples with bamboo had chances of breaking due to presence of nodes while comparing with the other.

**During burning of the Dhumavarti samples**

Observations were made by burning the Dhumavarti for 10seconds, 20 seconds and 30 seconds. Dhumavarti burned for 30 seconds had steady, thicker and whitish smoke which lasted for more than 8 minutes. Dhumavarti lighted after smearing Ghritha were having smell of Ghritha initially and had Prolonged smoke. Samples which were made with gauze had a slight charred smell. There was no significant difference in characteristics of Dhuma irrespective of samples with hay and bamboo.

**Table 3: Organoleptic characters**

Results of Organoleptic tests:		
1	Appearance	Hollow pipe
2	Colour	Greenish brown
3	Touch	Rough
4	smell	Aromatic



**Fig 9: Smoke generated**

**Table 4: Observations**

Group	Thic kness	Burned for 10secs		Burned for 20 secs		Burned for 30secs		Burned with ghee for 10secs	
		Duration	Observation	Duration	Observation	Duration	Observation	Duration	Observation
A	5.5c m	>15min	Thread like smoke	>15min	Thicker smoke	>15min	Steady smoke+ Slight Charred smell	1min37 secs	smoke with smell of ghee
B	7.1c m	10 secs	Thread like smoke	2 min 30 secs	Good smoke.	2 min 30secs	Steady smoke	-	No smoke obtained
C	6cm	10 secs	Thread like smoke.	10 secs	Thread like smoke	>15min	Smoke were more whitish	1min21sec	smoke with smell of ghee
D	4.1c m	30 secs	Lesser smoke	4 min	Thicker and more whitish smoke	8min	More whitish smoke	1min 25secs	smoke with smell of ghee
E	7cm	1min	Lesser smoke	>15min	Thicker smoke	>15min	Steady smoke	31 secs	Thread like smoke
F	4cm	40 secs	Lesser smoke	2 min	Thread like smoke	10min	Thread like smoke	20 secs	More thinner smoke
G	7cm	-	No smoke	3 min	Thread like smoke	>15min	Less coloured Smoke	30secs	Thread like smoke

**DISCUSSION**

Grinding of medicines was convenient as the drugs were categorised and dried separately in the beginning itself. In both groups, with base Hay and Bamboo, each coat with 12g of medicine was found most concurrent with measurements mentioned in classics. It was nearly 7cm in thickness which matches an Angushta circumference.

While pasting the medicine (kalka) it was observed that it is very inconvenient to get a consistent Varti over a dry hay. So the hay (Ishika) was kept overnight in water and then the kalka was smeared on the next day. Bamboo stick with smooth surface, average thickness and minimum number of nodes were selected for the purpose, hence it was convenient while removing Dhumavarti from it.

It is observed that Varti which was ignited for 30 seconds provided thicker, steady and continuous smoke. The Varti with more cloth (sample A, E) had a charring smell while fuming, whereas the Varti with lesser cloth had more medicinal aroma.

All the Varti sample was kept for 6 months and we haven't observed any sort of damage. While igniting the samples which were kept for 6 months we have observed very similar smoke as before.

**CONCLUSION**

In current scenario even though there are many Dhumavartis the choice of practitioners is only Haridra Varti. It is the need of the hour to explore such Vartis. But Prayogika Dhumavarti explained in the classics is easy to prepare, with less complication and possess wide range of action. It was found that the sample C (using Ishika with 5 coats of 12g medicine pasted without using cloth) was most concurrent with classics and most significant. In order to obtain the desired properties of Dhuma, it is worth to ignite varti for 30 seconds after smearing ghee. It was found that the medicinal quality of Dhumavarti sustained up to six months even without any special care.

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