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Standardization of *Bindu Pramana* of *Nasya* with respect to commonly used *Taila Yogas*

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ABSTRACT

Mana Paribhasha has been elaborately explained in Ayurveda. Right from *Mana* of *Shadangas* to preparation of medicines and also up-to *Mana* of *Aushadhi* in *Panchakarma* procedures, *Mana Paribhasha* plays a vital role in every field. *Nasya karma* is one among the *pradhana Panchakarma*. Various *dravyas* like *Swarasa*, *Kalka*, *Kashaya*, *Churna* and *Sneha* are used in *Nasya*. Each type of *Nasya* has its own *Aushadha Pramana* mentioned in different classics, among which *Bindu pramana* is commonly explained by most of the *acharyas*. In this study an attempt is made to understand the classical concept of *Bindu Pramana* and to standardize the *Bindu pramana* of commonly used oils in *Nasya Karma* which are *Ksheerabala 101*, *Karpasastyadi Taila*, *Anu Taila* and *Shadbindu Taila* according to the classical definition of *Hemadri*.

Eighty healthy volunteers aged between 18-80yrs were taken for the study. Their index finger was measured for length and breadth up-to Proximal Interphalangeal Joint and *Bindu Pramana* of different *Tailas* was measured according to the classics. Observations were tabulated and results were drawn accordingly. One *Bindu Pramana* explained in Classics is not equal to one Drop, as we routinely practice.

KEYWORDS

Bindu Pramana, *Mana Paribhasa*, *Nasya Karma*, *Standardization*



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INTRODUCTION

Ever since our evolution, man has been measuring everything around him; be it Length, Volume or Weight etc and Ayurveda is no exception to it. *Mana Paribhasha* has been elaborately explained in Ayurveda. Right from *Mana* of *Shadangas* to preparation of medicines and also up to *Mana* of *Aushadhi* in *Panchakarma* procedures, *Mana Paribhasha* plays a vital role in every field. *Nasya karma* is one among the *pradhana Panchakarma*. It helps in elimination of *dusta doshas* from *Jatrurdwa*¹. When used in a right way, it does the *Indriya Prasadana*, *Prasanna twak*, ensures *Sukha Swapna*, mitigates *Palitya* and strengthens *Skanda*, *Greeva* and *Vaksha* etc. Various *dravyas* like *Swarasa*, *Kalka*, *Kashaya*, *Churna* and *Sneha* are used in *Nasya*. Each type of *Nasya* has its own *Aushadha Pramana* mentioned in different classics, among which *Bindu pramana* is commonly explained by most of the *acharyas*.

Dose/ *Mana* of *aushadha* becomes an important factor to achieve optimum efficacy in any *Panchakarma* procedure. Any change in the dose may either lead to *Atiyoga/ Ayoga* of that particular *Karma*. *Bindu pramana* is one such measurement where there is lots of confusion. In our routine practice, one *Bindu* is equal to one

drop, but *Acharya Hemadri* was the first person to clarify that one *Bindu* is not just equal to one drop but much more than that².

Concept of *Bindu Pramana*:

Acharya Susruta was the first person to coin the term *Bindu* in the context of Dose of *Sneha Nasya*³. Later authors like *Acharya Vagbhata*, *Acharya Sharangadhara* have defined the term *Bindu* and also used it as the unit of measurement for any medicine in liquid form used for *Nasya*.

Definition:

Bindu is defined as the total quantity of liquid medicine (*Sneha*, *Swarasa*, *Kashaya*, *Ksheera* etc.) collected that dribbles down when the first two digits of index finger (distal and middle phalanges) are dipped into it and taken out of the same⁴.

Acharya Hemadri clarifies that it is not the first drop that is to be considered as one *Bindu* but complete amount of liquid collected.

Measurement of *Bindu Pramana*:

For the first time, *Acharya Vagbhata* in *Sangraha* and *Hridaya* has classified *Sneha Nasya* depending on the dose of *Nasya* (*Bindu Pramana*) into two types which is *Marsha Nasya* and *Pratimarsha Nasya*⁵. Depending on the *Dosha* and *Bala* of the patient, *Acharya Vagbhata* has mentioned three different doses viz 10 *Bindu* (*Uttama*) 8 *Bindu* (*Madhyama*) & 6 *Bindu* (*Heena*) for *Marsha Nasya* and 2 *Bindu* for



Pratimarsha Nasya.

Acharya Sushruta has mentioned three different doses for *Sneha Nasya* i.e 8 *Bindu*, 1 *Shukti* and 1 *Panishukti* as the *Heena*, *Madhyama* and *Uttama Matra* respectively. *Acharya Dalhana* commented that 8 *Bindu* are to be instilled in each nostril as *Heena Matra*. He quantifies 1 *Shukti* as 32 *Bindu* and 1 *Panishukti* as 64 *Bindu*. Similar opinion is also mentioned by *Acharya Chakradatta*⁶, *Acharya Vangasena*⁷ and *Acharya Bhaavamishra*⁸.

Considering the above definition of *Bindu*, it is evident that *Bindu pramana* varies from person to person due to the variation in one's index finger and also the liquid used for *Nasya*, i.e the *bindu pramana* of *ksheera* is different from *bindu pramana* of *taila* etc, also some of the *taila yogas* are thicker in consistency when compared to others. Hence quantifying the *Bindu pramana* is essential, which was first done by *Acharya Sharangadhara*.

According to *Acharya Sharangadhara*, the dose of *Sneha Nasya* is 8 *Bindu*, 4 *Shana* and 8 *Shana* which are *Heena*, *Madyama* and *Uttama Matra* respectively. He also states one *Shana* is equal to eight *Bindu*.

1 *Shana* = 4 *Masha*⁹ = 4gm = approximately 4ml

Thus, One *Bindu* = 4/8 = 0.5ml

According to Ayurvedic Formulary of India, 1 drop = 0.05ml. 10 drops = 0.5 ml.

It can be stated from the above explanation that standardized quantity of one *Bindu* for *Nasya* is 0.5 ml (10 drops).

MATERIALS AND METHODS

Eighty healthy volunteers aged between 18-80yrs were selected for the study from Government Ayurveda Medical College, Bengaluru. Their index finger was measured for length and breadth up-to Proximal Interphalangeal Joint and *Bindu Pramana* of different *Taila* was measured according to the classics.

Materials:

Tailas used:

- Ksheerabala Taila 101* (Swadeshi Pharmacy)
- Karpasastyadi Taila* (Veda Pharmacy)
- Shadbindu Taila* (Oushadhi Pharmacy)
- Anu Taila* (Multani Pharmacy)

Instruments used:

- Beaker
- Dropper

Selection of Volunteers: The recruited volunteers were selected for the study irrespective of sex, religion, occupation, etc. Age Group: 18-80 yrs

Methods:

Grouping: The selected healthy volunteers were randomly divided and studied under 4 groups.

Parameters for assessments: Measurement



of index finger

a) Height of index finger up to Proximal Interphalangeal Joint

b) Circumference of index finger at Proximal Interphalangeal Joint

OBSERVATION AND RESULTS

The study was conducted in 80 subjects to assess the quantity of one *Bindu* of *taila* between age group 18 to 80yrs, irrespective

of sex, height, weight and dimensions of index finger. The observations and results were tabulated accordingly in table 1 (One *Bindu Pramana* of *Ksheerabala 101 Taila*), table 2 (One *Bindu Pramana* of *Shadbindu Taila*), table 3 (One *Bindu Pramana* of *Karpasastyadi Taila*), table 4 (One *Bindu Pramana* of *Anu Taila*) and overall average *Bindu Pramana* of these 4 *tailas* in table 5.

Table 1 One *Bindu Pramana* of *Ksheerabala 101 Taila* as mentioned by Acharya Hemadri

Sl. No.	Name	Age	Sex	Height of Index finger (in cms)	Circumference of Index finger (in cms)	<i>Ksheerabala 101</i>	
						drops	mL
1	A	35	F	4.5	5.4	11	0.45
2	B	43	F	4.5	5.5	13	0.65
3	C	40	F	3.9	5.2	10	0.40
4	D	58	F	5.1	6.7	14	0.75
5	E	70	F	4.2	5.6	15	0.80
6	F	52	F	4.8	5.5	8	0.35
7	G	25	F	4.5	5.6	10	0.45
8	H	44	M	5.2	6.3	12	0.50
9	I	68	M	5.0	6.2	14	0.55
10	J	42	M	4.5	5.9	13	0.80
11	K	47	M	5.2	6.4	12	0.75
12	L	34	M	5.0	6.9	14	0.65
13	M	20	M	5.5	6.2	13	0.65
14	N	30	F	4.7	5.8	14	0.50
15	O	44	M	5.0	5.8	12	0.55
16	P	26	F	4.5	5.4	10	0.50
17	Q	27	F	4.5	5.5	10	0.35
18	R	25	F	4.7	5.6	9	0.40
19	S	40	M	4.6	5.9	8	0.05
20	T	42	M	4.9	6.8	14	0.65
Average						11.80	0.54

Table 2 One *Bindu Pramana* of *Shadbindu Taila* as mentioned by Acharya Hemadri

Sl. No.	Name	Age	Sex	Height of Index finger (in cms)	Circumference of Index finger (in cms)	<i>Shadbindu Taila</i>	
						drops	mL
1	a	63	M	5.0	6.1	13	0.80
2	b	52	F	4.8	5.5	11	0.55



3	c	25	F	4.5	5.6	12	0.65
4	d	29	F	4.6	5.9	11	0.40
5	e	44	F	5.0	5.8	12	0.55
6	f	34	M	5.0	6.9	14	0.55
7	g	48	M	5.2	6.5	14	0.75
8	h	44	F	4.5	5.5	12	0.60
9	i	40	F	4.0	5.2	7	0.35
10	j	35	F	4.5	5.4	14	0.95
11	k	60	F	5.1	6.7	15	0.80
12	l	43	F	5.2	6.3	13	0.65
13	m	71	F	4.2	5.7	13	0.60
14	n	42	M	4.5	6.0	11	0.85
15	o	40	F	4.6	5.9	13	0.70
16	p	41	F	4.9	6.8	10	0.50
17	q	27	F	4.5	5.5	14	0.80
18	r	25	F	4.7	5.5	7	0.30
19	s	25	F	4.6	5.4	12	0.55
20	t	18	M	5.5	6.2	14	0.80
Average						12.10	0.64

Table 3 One Bindu Pramana of Karpasastyadi Taila as mentioned by Acharya Hemadri

Sl. No.	Name	Age	Sex	Height of		Circumference of		Karpasastyadi Taila	
				Index finger (in cms)	finger (in cms)	Index finger (in cms)	finger (in cms)	drops	mL
1	Aa	44	F	5.0	5.8	5.0	5.8	10	0.45
2	Ab	30	F	4.7	5.7	4.7	5.7	13	0.65
3	Ac	22	M	5.4	6.0	5.4	6.0	13	0.75
4	Ad	38	F	4.9	6.8	4.9	6.8	11	0.45
5	Ae	40	F	4.6	5.9	4.6	5.9	15	0.80
6	Af	25	F	4.7	5.6	4.7	5.6	10	0.50
7	Ag	26	F	4.5	5.4	4.5	5.4	13	0.60
8	Ah	27	F	4.5	5.5	4.5	5.5	11	0.45
9	Ai	35	M	5.2	7.0	5.2	7.0	13	0.60
10	Aj	45	M	5.2	6.3	5.2	6.3	15	0.65
11	Ak	43	F	4.5	5.5	4.5	5.5	14	0.70
12	Al	40	F	3.9	5.2	3.9	5.2	13	0.50
13	Am	58	F	5.1	6.7	5.1	6.7	19	1.05
14	An	72	F	4.2	5.6	4.2	5.6	16	0.75
15	Ao	34	M	4.8	5.6	4.8	5.6	14	0.70
16	Ap	68	M	5.0	6.2	5.0	6.2	13	0.70
17	Aq	42	M	4.5	5.9	4.5	5.9	14	0.70
18	Ar	47	M	5.2	6.4	5.2	6.4	14	1.00
19	As	52	F	4.8	5.5	4.8	5.5	13	0.80
20	At	25	F	4.5	5.6	4.5	5.6	14	0.75
Average								13.40	0.68



Table 4 One *Bindu Pramana* of *Anu Taila* as mentioned by Acharya Hemadri

Sl. No.	Name	Age	Sex	Height of Index finger (in cms)	Circumference Index finger (in cms)	of <i>Anu Taila</i>	
						drops	mL
1	Ba	40	F	4.6	6.0	16	0.85
2	Bb	43	F	5.0	6.8	15	0.80
3	Bc	23	F	4.5	5.3	11	0.55
4	Bd	28	F	4.5	5.6	11	0.55
5	Be	25	F	4.7	5.6	10	0.55
6	Bf	44	M	5.2	6.3	15	0.60
7	Bg	68	M	5.0	6.2	12	0.70
8	Bh	30	F	4.7	5.8	14	0.75
9	Bi	44	F	5.0	5.8	13	0.65
10	Bj	38	F	4.5	5.4	12	0.60
11	Bk	43	M	4.7	5.6	12	0.65
12	Bl	40	F	3.9	5.2	10	0.50
13	Bm	58	F	5.1	6.7	11	0.40
14	Bn	70	F	4.2	5.6	10	0.40
15	Bo	52	F	4.8	5.5	10	0.55
16	Bp	25	F	4.5	5.6	14	0.65
17	Bq	42	M	4.5	5.9	15	0.95
18	Br	47	M	5.2	6.4	13	0.85
19	Bs	34	M	5.0	6.9	12	0.60
20	Bt	20	M	5.5	6.2	14	0.60
Average						12.50	0.64

Table 5 Overall average *Bindu Pramana* of above 4 *Tailas*

<i>Taila</i>	Average Drops	Average mL
<i>Ksheerabala 101</i>	11.8	0.54
<i>Shadbindu Taila</i>	12.1	0.64
<i>Karpasastyadi Taila</i>	13.4	0.68
<i>Anu Taila</i>	12.5	0.64
Overall Average	12.45	0.625

DISCUSSION

Based on above observations made in the study, it can be understood that one *Bindu* is definitely not equal to one drop. Approximately, twelve drops were equal to one *Bindu* with respect to the above *taila* used in *Nasya*. Oils had different viscosity and hence minor differences were noticed in *Bindu Pramana* of each *Taila*. More the viscosity of oil, lesser the drops were

observed. In the above experiment, *Ksheerabala 101* was more viscous (as it had undergone 101 *Avartana*), when compared to other *tailas* hence the average drops of one *Bindu KB 101* were 11.8 drops = 0.54ml.

The average drops and quantity of oil calculated from these 4 oils were twelve drops and 0.6ml respectively. Thus, standardized *Bindu pramana* of these *taila yogas* = 0.6 ml = 12 drops.

CONCLUSION

- 1) One *Bindu* is never equal to one drop according to our classics.
- 2) Routinely practiced dose in *Nasya*



karma is twelve times lesser when compared to classical dose which may be the reason for Ayoga and hence we may not be achieving the desired results.

3) To avoid the misinterpretation of quantity of *Bindu*, measurement of *Bindu* for *Nasya* should be defined in milliliter while prescribing and in standard literature.

4) Quantity of one *Bindu* by classical method is approximately 0.62 ml.



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