



Research Article

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STANDARDIZATION OF NASYA DOSE BY BINDU PRAMANA WITH MAHASAHACHARADI TAILA AND PRASARINI TAILA

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ABSTRACT

Panchakarma therapy has a very important role in maintaining health of a person and eradication of diseases. The success with Panchakarma therapies can be achieved not only through correct assessment of the patient and the medicines used but also the dose of the medicine. Shirovirechana is also one among the Pancha shodhana therapy. Dose for this therapy is very specific and is explained in the classics on the basis of Bindu Pramana. However, standardization of this dose had not been made yet. This paper deals with classical concept of Bindu Pramana and standardization of Mahasahacharadi taila and Prasarini taila in Ashta Bindu Pramana Matra. The objective is to standardize the process of measurement of Madhyama Bindu Pramana Matra of Prasarini taila and Mahasahacharadi taila. Healthy 50 individuals consisting of therapists of JSS Ayurveda Hospital and students of JSS Ayurveda Medical College of either gender aged between 20 years to 35 years were selected and purposively assigned into Group A and Group B. Both the group consisted of same the 50 subjects. Results were observed and tabulation of data with a statistical commentary based on percentages of different observations was made. Study shows variation in quantity of Madhyama Bindu Pramana Matra and differs from patient to patient. Bindu Pramana varies from subject to subject. Analysis of the results showed that Bindu is not equivalent to drop.

Keywords: Standardization, Dose, Nasya, Bindu.

INTRODUCTION

Ayurveda is a science of life that explains established methods of living a healthy life that in turn helps achieve longevity. Pancha shodhana therapies, explained in the Ayurveda Classics are used for removing the body toxins. These therapies go to the root cause of the problems and correct the imbalance of Tridosha in the body. Shodhana Nasya Chikitsa is also one of the Pancha shodhana. The administration of medicines through nasal route is called Nasya¹. However, based on Gunas of medicine used in this procedure, we can experience different outcomes and hence it has been classified differently. Shirovirechana² or Shodhana Nasya is one of it. This treatment is specific treatment for Kapha Dosh³ in Urdhvajatrugata Vikara. Medicines used in this treatment could be of various forms like Swarasa, Kwatha, Kalka, Choorna, Sneha etc. All these medicaments have a basic common quality of Ushna and Tikshna Guna and thus act as Kaphahara. However dose for this therapy has to be precisely selected owing to its Gunas and is engaged in patients only after proper assessment of Roga and Rogi Bala.

Definition of Bindu

Bindu is the unit of Ayurveda measurement. It is defined as the quantity of Drava Dravyas (Liquid medicaments i.e. Sneha, Swarasa, Kashaya etc) that dribbles down, when the first two intra phalanges of the index finger are dipped into medicine, taken out and collected⁴.

Hemadri the commentator of Sushruta Samhita has said "not just the first drop is one Bindu, but it is the total quantity that dribbles down from the index finger when immersed in the medicaments and taken out". This should be considered as one Bindu⁵.

Vagbhata has assigned three different doses for Marsha Nasya as Dasha Bindu, Ashta Bindu and Shat Bindu as Uttam, Madhyama, and Heena Matra respectively⁶.

According to Ayurvedic Formulary of India, the dose of Nasya is explained as follows:

1 Drop = 0.05 ml, 10 Drops = 0.5 ml, 1 Bindu = 10 Drops

Owing to different opinions from authors on the dose for Nasya and to formulate a standardized dose for Shodhana Nasya this study was selected and conducted with Prasarini Taila and Mahasahacharadi Taila for Madhyama Matra Pramana.

Aim and objectives

To standardize the process of measurement of Madhyama Bindu Pramana Matra of Prasarini Taila and Mahasahacharadi Taila

MATERIALS AND METHODS

Healthy individuals consisting of therapists of JSS Ayurveda Hospital and students of JSS Ayurveda Medical College were taken for the study. Guidelines were given to all the subjects regarding the trial and consent was taken before the study. The present study was carried out in accordance with ethical principles by following International conference of Harmonization-Good Practices Guidelines (ICH-GCP).

Materials used

Prasarini Taila⁷, Mahasahacharadi Taila⁸, Dropper, Vessels, Measuring Pipette.

Study design: It was a purposive open labelled comparative observational study.

Sample size

Minimum of 50 subjects of either gender were selected and purposively assigned into Group A and Group B. Both the group consisted of same 50 subjects.

Selection criteria

- Patients aged between 20 years to 35 years were selected.
- This being an observational study in healthy individuals and since this study did not require any internal intervention on subjects, no other selection criteria were taken.

Subjective Parameters for Assessments

- Measurement of two phalanges of Right index finger
- Length and Diameter of index finger.
- Circumference of the index finger

Grouping

Same 50 selected subjects were assigned into 2 groups.

Group A: Prasarini Taila

Oil was made lukewarm by heating in a hot water bath. Subjects were made to sit on a comfortable chair. Their hands were wiped and dried for any moisture present on the fingers. They were asked to dip their two phalanges of their right index finger and remove the finger over empty bowl kept next to it. The subjects were made to hold their finger above the bowl for 10 seconds. The amount collected in the bowl constituted one Bindu. The procedure was repeated for 8 times, thus constituting 8 Bindu. The Madhyama Pramana of Marsha Nasya (according to Vagbhata) of Prasarini Taila was thus finally calculated.

Group B: Mahasahacharadi Taila

Oil was made lukewarm by heating in a hot water bath. Subjects were made to sit on a comfortable chair. Their hands were wiped and dried for any moisture present on the fingers. They were asked to dip their two phalanges of their right index finger and remove the finger over empty bowl kept next to it. The subjects were made to hold their finger above the bowl for 10 seconds. The amount collected in the bowl constituted one Bindu. The procedure was repeated for 8 times, thus constituting 8 Bindu. The Madhyama Pramana of Marsha Nasya (according to Vagbhata) of Mahasahacharadi Taila was thus finally calculated.

Table 1: Assessment Parameters of Subjects

S. No.	Age	L.I In cm	L.D.I In cm	C.I In cm	PT in 10 sec (ml)	PT in 80 sec (ml)	MST In 10 sec (ml)	MST In 80 sec (ml)
1	30	7.4	5.3	4.9	1	11	0.6	12
2	32	7	5	4.8	0.8	12	0.7	11
3	26	7	5	4	0.6	10	0.7	10
4	25	6	5	3.6	0.4	8	0.4	7
5	23	6	5	4	0.4	9	0.4	9
6	23	6.5	5	4.4	0.7	10	0.7	11
7	25	7	5	5	0.6	11	0.6	10
8	25	7.1	5.1	5.7	0.9	12	0.8	11
9	23	7	5.3	4.5	0.6	10	0.6	9
10	24	6.5	5	4.3	0.7	10	0.7	9
11	25	6.8	5	4.2	0.6	10	0.6	10
12	25	6.5	5	4.3	0.5	8	0.5	7
13	22	7.4	5.5	5	0.6	11	0.6	12
14	24	7	5	4.5	0.5	10	0.5	10
15	27	6.5	5.2	5.2	0.5	11	0.5	10
16	28	6.5	5	4	0.6	8	0.6	9
17	23	6.5	4.5	4.5	0.7	10	0.7	12
18	23	7	5	4.5	0.8	10	0.8	11
19	23	6.5	5	4	0.7	12	0.8	12
20	22	6	5	4	0.7	11	0.7	9
21	23	6.5	5.5	4	0.6	10	0.7	11
22	23	6.8	5	4	0.8	11	0.8	12
23	23	7	5.5	4.5	0.9	11	0.9	9
24	22	6.5	5	4.5	0.5	10	0.5	11
25	23	7.5	5	5	0.7	10	0.8	10
26	24	7.5	5.5	5	0.9	11	1	10
27	23	7.5	6	5.7	0.8	15	0.9	15
28	23	7	5.5	5.6	0.9	13	0.9	11
29	23	7.4	6	5.7	0.8	11	0.8	12
30	23	7.8	6	5	0.9	14	0.9	13
31	22	7.6	6	5.3	0.5	10	0.6	11
32	23	7.5	6	5	0.9	13	0.9	13
33	32	7.1	5.5	4.5	0.9	13	0.9	14
34	34	7	6	5	0.9	16	0.9	15
35	30	6.4	5.5	4.2	0.9	15	0.7	12
36	23	7	5.7	4.8	1.2	14	1.1	12
37	24	6.8	6	4.5	0.7	14	0.7	14
38	24	7	5.5	5	0.8	16	0.7	15
39	24	7	5.2	4.5	0.8	12	0.8	14
40	25	7	5.5	5	0.8	14	0.9	14

41	34	7.5	6.1	5	0.8	14	0.8	14
42	29	7	6	5	1.2	15	1.2	14
43	28	7.2	6	5	0.8	13	0.7	14
44	34	7.5	6	5	1.6	20	1.7	18
45	23	8.1	6.7	5.3	1.1	15	0.9	14
46	23	7.3	5.7	5.6	0.9	14	0.9	14
47	24	7.7	6	5	1	15	1.1	14
48	28	7.8	6	5	1.6	16	1.5	15
49	28	6.5	4.3	5.5	0.8	14	0.9	14
50	29	7.5	5.5	5.7	1.4	15	1.1	16

L.I. - Length of Index Finger, L.D.I. - Length of Dwtitarjini (2 Phalanges) of index Finger, C.I. - Circumference of Index Finger, P.T. - Prasarini Taila, M.S.T- Mahasahacharadi Taila

RESULTS

Table 2: Mean value of 1 Bindu for 10 seconds and 80 seconds in Group A

Prasarini Taila	Mean	Standard Deviation	N
For 10 seconds	0.8060	0.26140	50
80 seconds (8 Bindu)	12.1600	2.51818	50

From the above data the mean value of 1 Bindu for 10 seconds was found to be 0.8 ml and for 1 minute 20 seconds was found to be 12 ml.

Table 3: Mean value of 1 Bindu for 10 seconds and 80 seconds in group B

Mahasahacharadi Taila	Mean	Standard Deviation	N
For 10 seconds	0.7940	0.24529	50
80 seconds (8 Bindu)	11.9200	2.36333	50

From the above data the mean value of 1 Bindu for 10 seconds was found to be 0.7 ml and for 1 minute 20 seconds was found to be 11.9 ml.

DISCUSSION

This Bindu Pramana varies from subject to subject. It is dependent on the length of the index finger, length of two phalanges from tip of the index finger and circumference of the index finger. Among the 50 subjects the length of the index finger varies from minimum of 6 cm to the maximum of 8.1 cm. Similarly the length of two phalanges from the tip of the index finger varies from minimum of 4.3 cm to the maximum of 6.7 cm. Circumference of the index finger among the 50 subjects varied from minimum of 4 cm to the maximum of 5.7 cm. Result varied from subject to subject. Prakriti was not assessed in this study. However, Prakriti assessment if done, could have answered the varied outcomes found in this study.

Factors affecting Bindu Pramana

a) Heating of the oil

Viscosity is physical property of liquids and is defined as resistance to flow or friction between adjacent layers of fluid. Temperature changes the viscosity of liquids. An increase in temperature decreases the cohesion between molecules of liquid thus decreases viscosity. Hot oil because of its low viscosity and thus would flow very easily and might change the overall quantity. Thus only lukewarm oil of about temperature of 50⁰ C was taken for the study. This is the temperature of the medicated oils used normally for Nasya Karma.

b) Timing of Bindu Pramana

One Bindu Pramana of Prasarini Taila varied from 0.4 ml to 1.6 ml and for Ashta Bindu Pramana varied from 8 ml to 20 ml. In Mahasahacharadi Taila one Bindu Pramana varied from 0.4 ml to 1.7 ml respectively and for Ashta Bindu Pramana it varied from 7 ml to 18 ml respectively. The reason for the difference could

not be identified. Prakriti of the subjects which was not recorded in this study could have explained the cause of this variation.

CONCLUSION

Madhyama Bindu Pramana for Prasarini Taila was 12 ml while that of Mahasahacharadi Taila was 11.9 ml. This dosage of 12 ml and 11.9 ml can be divided as 6 ml each (approx) for both the tailas and could be instilled in each nostrils as Madhyama Bindu Pramana.

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