



## Research Article

### A COMPARATIVE CLINICAL STUDY IN THE MANAGEMENT OF AMAVATA W.S.R TO RHEUMATOID ARTHRITIS THROUGH *KSHARA VASTI* AND *VAITARANA VASTI* ALONG WITH *SHAMANUSHADHI*

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**KEYWORDS:** *Amavata*, Rheumatoid Arthritis, *Kshara Vasti*, *Vaitarana Vasti*, *Simhanada Guggulu*, *Rasna Saptak Kwatha*.

#### ABSTRACT

*Amavata* is a crippling condition where simultaneously aggravated *Vata* and *Ama* associated with each other settles in *Sandhis* and produce *Sandhishoola*, *Sandhishotha*, *Sparshaasahitwa*, which is similar to Rheumatoid Arthritis. The present study has made an attempt to find an effective Ayurvedic treatment modality through *Kshara Vasti* and *Vaitarana Vasti* along with *Shamanoushadhi*. A total of 30 Patients were randomly divided in two groups with 15 patients in each group. In Group A, *Kshara Vasti* and in Group B, *Vaitarana Vasti* was given in *Yoga Vasti* schedule followed by *Shamanoushadhi* *Simhanada Guggulu* 500mg twice and *Rasna Saptak Kwatha* 40ml as *Anupana* for 45 days in both the groups with 1 month follow-up period.

Both Group A and Group B provided highly significant results in all parameters of assessment but *Kshara Vasti* showed better improvement in the symptoms of the disease *Amavata*. 63.33% of patients got marked relief, 30% of patients got moderate relief. 56.66% of patients got marked relief in grip strength and 66.66% of the total number of patients got marked relief in tenderness.

All the patients of both the groups responded well after *Kshara Vasti* and *Vaitarana Vasti* and the result were highly significant. The sustained affect of *Vasti* was very clearly evident after administration of *Vasti* along with *Shamanoushadhi*. Hence the modalities of our treatment can be recommended to all the patients of *Amavata*.

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#### INTRODUCTION

*Amavata* is a condition where simultaneously aggravated *Vata* and *Ama* associated with each other settles in *Sandhi* and produce *Sandhishoola*, *Sandhishotha*, *Sparshaa sahitwa*, etc and ultimately stiffness of the joints, causing the temporary or permanent disability of joints and it hampers daily working capacity and runs a chronic course. In modern medicine a lot of similarity is seen with Rheumatoid arthritis.

In early stages only the joint involvement can be seen with features like *Angamarda*, *Aruchi*, *Alasya*, *Jwara* and *Angashoonata* etc. But if it is not treated with systemic treatment procedures, then

through the *Madhyama Roga Marga*, it will lead to cardiac damage and further complications like involvement of gastro- intestinal, cardiovascular, nervous, urinary and respiratory systems are also encountered.

The prevalence rate is 0.5 - 1% of the adult, worldwide and in India the prevalence rate is 0.1 - 0.4% with women affected 3 to 5 times as often as men. It is 3 times more common in smokers than non smokers particularly in men.<sup>[1]</sup>

The *Samshodhana* and *Samshamana* treatment is commonly used in all the diseases. *Samshodhana* indicates the *Dosha* eliminating

process, whereas *Samshamana* gives knowledge regarding the palliative procedure of dosha inside the body. For *Amavata*, Acharya Chakradatta has given emphasis on a therapeutic programme in terms of *Chikitsa sutra* instead of single therapy for complete cure, without reoccurrence or to manage this disease.

*Langhanam Swednam Tiktam Deepnani Katuni Cha Virechnam Snehanam Bastasyashama Maruthe Saindhavadya Anuvasasya KsharaVasti Prashasyate.* (Cha. Da. 25/1) [2]

According to Ayurvedic physiology *Pitta* and *Kapha* is dependent on *Vata* as it governs their functions. [3] *Vasti* eradicate morbid *Vata* from the root along with other *Dosha* and in addition it gives nutrients to the body tissue. [4] Therefore, *Vasti* therapy covers more than half of the treatment of all the disease [5], while some authors consider it as the complete remedy for all the ailments. Therefore, *Vasti* is considered the best remedy for morbid *Vata*, but according to Sushruta, it can also be used in *Kaphaja* and *Pittaja* disorders by using different ingredients [6].

For the present study on *Amavata*, as *Shodhana* therapy *Kshara Vasti* and *Vaitarana Vasti* has been chosen, which are mentioned in *Chakradatta Niruha adhikara* [7] and *Vangasen Vastikarmadikara* [8] respectively. *Shaman* therapy *Simhanada Guggulu* and *Rasna Saptak Kwatha* has been mentioned by Bhaishajya Ratnavali [9] which is common in both groups.

#### Definition [10,11]

Rheumatoid Arthritis (R.A.) is an autoimmune disease in which the immune system of the body attacks its own tissues i.e., here own cartilage and joint linings (synovial membrane) characterized by persistent inflammation of peripheral joints with associated systemic features. It is characterized by inflammation of the joints, which causes swelling, pain and loss of function.

The incidence of occurrence is increasing now a day because of the altered food habits and modern life style. The onset is more frequent during 4<sup>th</sup> and 5<sup>th</sup> decade of life with 80% of patients developing the disease between the ages of 35 to 50 years. The incidence of Rheumatoid Arthritis is 3 cases per 10,000 populations per annum. Onset is uncommon under the age of 15 and from then the incidence rises with the age until the age of 80. [12]

#### Objectives

1. To evaluate and compare the efficacy of *Kshara Vasti* and *Vaitarana Vasti* in the management of *Amavata*.

2. To evaluate the efficacy of *Simhanada Guggulu* along with *Rasna Saptak Kwatha*.

#### MATERIALS AND METHODS

##### The following materials were used in the Clinical Trial

1. *Agnitundi Vati* [13]
2. *Kshara Vasti* [14]
3. *Vaitarana Vasti* [15]
4. *Brihat Saindhavadi Taila* [16]
5. *Simhanada Guggulu* [17]
6. *Rasna Saptak Kwath* [18]

##### Methods of Collection of Data

- a. Patients attending OPD and IPD of PG Department of Kayachikitsa, Ayurveda Mahavidyalaya Hospital, Hubli was made and patients fulfilling the criteria of diagnosis as per the Performa were selected for the study.
- b. Clinical evaluation of patients was done by through history, physical examination, and laboratory tests.

##### Inclusion Criteria

1. The *Amavata* cases are diagnosed on the basis of signs & symptoms described in Ayurvedic classics.
2. Patients of age group between 20-60 yrs, of both sexes.
3. Disease chronicity less than five year duration.
4. Patients fit for *Vasti karma*.

##### Exclusion Criteria

1. Uncontrolled metabolic disorders such as Diabetes or Hypertension.
2. Chronicity of disease more than 5 years with any joint deformity.
3. Steroid dependent Patients, with cervical or Ankylosing spondylosis or S.L.E.
4. Pregnancy

##### Subjective Parameters

1. *Sandhi Shoola* (pain)
2. *Sandhi Shotha* (swelling)
3. *Stabdata* (morning stiffness)

##### Objective Parameters

1. R.A
2. E.S.R
3. *Sparshaasahitwa* (tenderness)

##### Sample Size

Minimum of 30 Patients diagnosed as *Amavata* were selected incidentally and randomly categorized into 2 groups consisting of 15 Patients in each group.

**Group A**

*Amapachana* with *Agnitundi Vati* 250mg thrice daily half an hour before food with *Ushnodaka* as *Anupana* till *Nirama Lakshanas* seen. *Kshara Vasti* in *Yoga Vasti* was also scheduled for 8 days. *Simhanada Guggulu*, 500mg tablet twice daily before food was given internally with *Rasna Saptak Kwatha* (48ml) as *Anupana* for 30 days. *Pathya Ahara* and *Vihara* were advised to all the Patients. The duration if the study was 38 days and there was follow up of 1 month.

*Amapachana* with *Agnitundi Vati* 250mg thrice daily half an hour before food with *Ushnodaka* as *Anupana* till *Nirama Lakshanas* seen. *Vaitarana Vasti* in *Yoga Vasti* was scheduled for 8 days. *Simhanada Guggulu*, 500mg tablet twice daily before food was given internally with *Rasna Saptak Kwatha* (48ml) as *Anupana* for 30 days.

*Pathya Ahara* and *Vihara* were advised to all the Patients same as group A. The duration if the study was 38 days and there was follow up of 1 month.

**Group B**

**Table 1: Data Related to Administration of Vasti**

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8
Type of Vasti								
Dose								
Time of Administration								
Time of expulsion								
Retention time								
No. of evacuation								
Any other features								

**OBSERVATIONS**

In the present study, 30 Patients were registered. 15 Patients were treated under group A, and 15 Patients under group B.

**Table 2: Showing Age Wise Distribution of 30 Patients of Amavata**

Age	Group A (n=15)	%	Group B (n=15)	%	Total	%
20-30	4	26.66%	1	6.66%	5	16.66%
31-40	4	26.66%	7	46.66%	11	36.66%
41-50	6	39.99%	5	33.33%	11	36.66%
51-60	1	6.66%	2	13.33%	3	9.99%

**Table 3: Gender Wise Distribution of 30 Patients of Amavata**

Sex	Group A (n=15)	%	Group B (n=15)	%	Total	%
Male	7	53.33%	5	33.33%	12	40.00%
Female	8	46.66%	10	66.66%	18	60.00%

**Table 4: Religion Wise Distribution of 30 Patients of Amavata**

Religion	Group A (n=15)	%	Group B (n=15)	%	Total	%
Hindu	8	53.33%	10	66.66%	18	60.00%
Muslim	7	46.66%	5	33.33%	12	40.00%
Others	0	-	0	-	0	-

**Table 5: Marital Status Wise Distribution of 30 Patients of Amavata**

Marital Status	Group A (n=15)	%	Group B (n=15)	%	Total	%
Bachelor	2	13.33%	0	-	02	6.66%
Married	13	86.66%	13	86.66%	26	86.66%
Widow	0	-	2	13.33%	02	6.66%
Divorcee	0	-	0	-	0	00%

**Table 6: Educational Status Wise Distribution of 30 Patients of Amavata**

Education	Group A (n=15)	%	Group B (n=15)	%	Total	%
Illiterate	1	6.66%	1	6.66%	02	6.66%
Primary	4	26.66%	11	73.33%	15	49.99%
Higher Secondary	6	39.99%	3	19.99%	09	29.99%
Graduate	4	26.66%	0	-	04	13.33%
Post graduate	0	-	0	-	0	00%

**Table 7: Occupation Wise Distribution of 30 Patients of Amavata**

Occupation	Group A (n=15)	%	Group B (n=15)	%	Total	%
Laborer	2	13.33%	2	13.33%	04	13.33%
Student	2	13.33%	0	-	02	6.66%
Housewife	6	39.99%	9	59.99%	15	49.99%
Teacher	1	6.66%	0	-	01	3.33%
Office-worker	0	-	1	6.66%	01	3.33%
Farmer	1	6.66%	2	13.33%	03	9.99%
Business	3	19.99%	1	6.66%	04	13.33%

**Table 8: Vyasana Wise Distribution of 30 Patients of Amavata**

Vyasana	Group A (n=15)	%	Group B (n=15)	%	Total	%
Alcoholism	2	13.33%	0	-	2	6.66%
Tobacco	4	26.66%	5	33.33%	9	29.99%
Supari/pan	0	-	2	13.33%	2	6.66%
Smoking	3	19.99%	2	13.33%	5	16.66%
No Vyasana	10	66.66%	9	59.99%	19	63.33%

**Table 9: Emotional Status Wise Distribution of 30 Patients of Amavata**

Emotional status	Group A (n=15)	%	Group B (n=15)	%	Total	%
Tension	7	46.66%	11	73.33%	18	59.99%
Anxiety	2	13.33%	0	-	02	6.66%
Depression	1	6.66%	1	6.66%	02	6.66%
Anger	0	-	0	-	0	-
None of the above	5	33.33%	3	19.99%	08	26.66%

**Table 10: Cardinal Feature Wise Distribution of 30 Patients of Amavata**

Cardinal Feature	Group A (n=15)	%	Group B (n=15)	%	Total	%
Sandhishoola	15	100%	15	100%	30	100%
Sandhishotha	15	100%	15	100%	30	100%
Sandhistabdata	15	100%	15	100%	30	100%
Sparshaasahitwa	15	100%	15	100%	30	100%

**Table 11: Distribution Based On General Symptoms of 30 Patients of Amavata**

Other symptoms	Group A (n=15)	%	Group B (n=15)	%	Total	%
Angamarda	15	100%	15	100%	30	100%
Shoonatanga	4	26.66%	4	26.66%	8	26.66%
Shoola	12	79.99%	13	86.66%	25	83.33%
Aruchi	11	73.33%	12	79.99%	23	76.66%
Trushna	6	39.99%	7	46.66%	13	43.33%
Alasya	8	53.33%	9	59.99%	17	56.66%
Gaurava	7	46.66%	6	39.99%	13	43.33%
Jwara	6	39.99%	5	33.33%	11	36.66%
Apaka	3	19.99%	2	13.33%	5	16.66%
Praseka	3	19.99%	3	19.99%	6	19.99%
Utsahahani	5	33.33%	5	33.33%	10	33.33%
Vairasya	3	19.99%	1	6.66%	4	13.33%
Daha	2	13.33%	4	26.66%	6	19.99%
Bahumootrata	0	-	2	13.33%	2	6.66%
Kukshi katinya	0	-	1	6.66%	1	3.33%
Kukshi shoola	2	13.33%	1	6.66%	3	9.99%
Aanaha	1	6.66%	3	19.99%	4	13.33%
Aantrakoojana	2	13.33%	2	13.33%	4	13.33%
Chardi	4	26.66%	4	26.66%	8	26.66%
Nidraviparyaya	10	53.33%	11	73.33%	21	69.99%
Bhrama	0	-	0	-	0	-
Murcha	0	-	0	-	0	-
Hridgraha	5	33.33%	4	26.66%	9	29.99%
Vitvibandha	13	86.66%	11	73.33%	24	79.99%
Jadhya	1	6.66%	3	19.99%	4	13.33%

**Table 12: Distribution Based on Rheumatoid Factor of 30 Patients of Amavata**

R.A. factor	Group A (n=15)	%	Group B (n=15)	%	Total	%
Positive	06	39.99%	06	39.99%	12	39.99%
Negative	09	59.99%	09	59.99%	18	59.99%

**Table 13: Distribution of Pain Based on Joint Involvement of 30 Patients of Amavata**

Joints	Group A (n=15)	%	Group B (n=15)	%	Total	%
<b>Upper extremities</b>						
Shoulder	07	46.66%	05	33.33%	12	39.99%
Elbow	09	59.99%	06	39.99%	15	49.99%
Wrist	15	100%	14	93.33%	29	96.66%
MCP	10	66.66%	09	59.99%	19	63.33%
PIP	15	100%	15	100%	30	100%

<b>Lower extremities</b>						
Knee	06	39.99%	09	59.99%	15	49.99%
Ankle	08	53.33%	11	73.33%	19	63.33%
MTP	06	39.99%	04	26.66%	10	33.33%
PIP	05	33.33%	06	39.99%	11	36.66%
Others	0	-	0	-	0	-

**Table 14: Distribution of Swelling Based on Joint Involvement of 30 Patients of Amavata**

Joints	Group A (n=15)	%	Group B (n=15)	%	Total	%
<b>Upper extremities</b>						
Shoulder	03	19.99%	02	13.33%	05	16.66%
Elbow	04	26.66%	04	26.66%	08	26.66%
Wrist	13	86.66%	11	73.33%	24	79.99%
MCP	05	33.33%	06	39.99%	11	36.66%
PIP	14	93.33%	12	79.99%	26	86.66%
<b>Lower extremities</b>						
Knee	03	19.99%	08	53.33%	11	36.66%
Ankle	07	46.66%	09	59.99%	16	53.33%
MTP	03	19.99%	02	13.33%	05	16.66%
PIP	05	33.33%	04	26.66%	09	29.99%
Others	0	-	0	-	0	-

**Table 15: Distribution of Stiffness Based on Joint Involvement of 30 Patients of Amavata**

Joints	Group A (n=15)	%	Group B (n=15)	%	Total	%
<b>Upper extremities</b>						
Shoulder	07	46.66%	05	33.33%	12	39.99%
Elbow	09	59.99%	06	39.99%	15	49.99%
Wrist	15	100%	14	93.33%	29	96.66%
MCP	10	66.66%	09	59.99%	19	63.33%
PIP	15	100%	15	100%	30	100%
<b>Lower extremities</b>						
Knee	06	39.99%	09	59.99%	15	49.99%
Ankle	08	53.33%	11	73.33%	19	63.33%
MTP	06	39.99%	04	26.66%	10	33.33%
PIP	05	33.33%	06	39.99%	11	36.66%
Others	0	-	0	-	0	-

**Table 16: Distribution of Tenderness Based on Joint Involvement of 30 Patients of Amavata**

Joints	Group A (n=15)	%	Group B (n=15)	%	Total	%
<b>Upper extremities</b>						
Shoulder	03	19.99%	02	13.33%	05	16.66%
Elbow	04	26.66%	04	26.66%	08	26.66%
Wrist	13	86.66%	11	73.33%	24	79.99%
MCP	05	33.33%	06	39.99%	11	36.66%

PIP	14	93.33%	12	79.99%	26	86.66%
<b>Lower extremities</b>						
Knee	03	19.99%	08	53.33%	11	36.66%
Ankle	07	46.66%	09	59.99%	16	53.33%
MTP	03	19.99%	02	13.33%	05	16.66%
PIP	05	33.33%	04	26.66%	09	29.99%
Others	0	-	0	-	0	-

**RESULTS**

**Table 17: The Effect of Vasti on Sandhi Shoola**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	3.26	2.13	34.69 %	0.83	0.21	5.26	<0.001	Highly significant
Group B ( <i>Vaitarana Vasti</i> )	3.06	2.2	28.26 %	0.63	0.16	5.24	<0.001	Highly significant

**Table 18: Showing the Effect of Shamanoushadhi (Duration = 30 days) after Vasti on Sandhi Shoola**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	2.13	0.46	78.25 %	0.72	0.18	8.91	<0.001	Highly significant
Group B ( <i>Vaitarana Vasti</i> )	2.2	0.53	75.75 %	0.72	0.18	8.91	<0.001	Highly significant

**Table 19: Showing the Effect of Total Therapy on Sandhi Shoola**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	3.26	0.46	85.71 %	0.86	0.22	12.58	<0.001	Highly significant
Group B ( <i>Vaitarana Vasti</i> )	3.06	0.53	82.60 %	0.83	0.21	11.76	<0.001	Highly significant

**Table 20: Showing the Effect of Vasti on Sandhi Shotha**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	2.13	1.53	28.12 %	0.50	0.13	4.58	<0.001	Highly significant
Group B ( <i>Vaitarana Vasti</i> )	2.13	1.66	21.87 %	0.51	0.13	3.5	<0.01	Significant

**Table 21: Showing the Effect of Shamanoushadhi (Duration = 30 days) after Vasti on Sandhi Shotha**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	1.53	0.26	82.60 %	0.45	0.11	10.71	<0.001	Highly significant
Group B ( <i>Vaitarana Vasti</i> )	1.66	0.4	76.00 %	0.45	0.11	10.71	<0.001	Highly significant

**Table 22: Showing the Effect of Total Therapy on Sandhi Shotha**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	2.13	0.26	87.50 %	0.74	0.19	9.72	<0.001	Highly significant
Group B ( <i>Vaitarana Vasti</i> )	2.13	0.4	81.25 %	0.70	0.18	9.53	<0.001	Highly significant

**Table 23: Showing the Effect of Vasti on Stabdata**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	1.4	0.60	57.14 %	0.41	0.10	7.48	<0.001	Highly significant
Group B ( <i>Vaitarana Vasti</i> )	1.4	0.86	38.09 %	0.51	0.13	4.00	<0.01	Significant

**Table 24: Showing the Effect of Shamanoushadhi (Duration = 30 days) after Vasti on Stabdata**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	0.6	0.26	55.55%	0.48	0.12	2.64	<0.02	Significant
Group B ( <i>Vaitarana Vasti</i> )	0.86	0.46	46.15%	0.50	0.13	3.05	<0.01	Significant

**Table 25: Showing the Effect of Total Therapy on Stabdata**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	1.4	0.26	80.95%	0.51	0.13	8.5	<0.001	Highly significant
Group B ( <i>Vaitarana Vasti</i> )	1.4	0.46	66.66%	0.45	0.11	7.89	<0.001	Highly significant

**Objective Parameters**

**Table 26: Showing the Effect of Vasti on Sparshaasahitwa**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	2.33	1.26	45.71%	0.70	0.18	5.87	<0.001	Highly significant
Group B ( <i>Vaitarana Vasti</i> )	2.00	1.26	36.66%	0.45	0.11	6.2	<0.001	Highly significant

**Table 27: Showing the Effect of Shamanoushadhi (Duration = 30 days) after Vasti on Sparshaasahitwa**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	1.26	0.26	78.94 %	0.65	0.16	5.91	<0.001	Highly significant
Group B ( <i>Vaitarana Vasti</i> )	1.26	0.4	68.42 %	0.63	0.16	5.24	<0.001	Highly significant

**Table 28: Showing the Effect of Total Therapy on Sparshaasahitwa**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	2.33	0.26	88.57%	1.03	0.26	7.75	<0.001	Highly significant
Group B ( <i>Vaitarana Vasti</i> )	2.00	0.4	80.00%	0.82	0.21	7.48	<0.001	Highly significant

**Table 29: Showing the Effect of Vasti on Grip strength**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	2.66	2.2	17.50%	0.51	0.13	3.5	<0.01	Significant
Group B ( <i>Vaitarana Vasti</i> )	2.4	2.06	13.88%	0.48	0.12	2.64	<0.02	Significant

**Table 30: Showing the Effect of Shamanoushadhi (Duration = 30 days) after Vasti on Grip strength**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	2.2	0.53	75.75%	0.89	0.23	7.17	<0.001	Highly significant
Group B ( <i>Vaitarana Vasti</i> )	2.06	0.66	67.74%	0.63	0.16	8.57	<0.001	Highly significant

**Table 31: Showing the Effect of Total Therapy on Grip strength**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	2.66	0.53	80.00%	0.74	0.19	11.11	<0.001	Highly significant
Group B ( <i>Vaitarana Vasti</i> )	2.4	0.66	72.22%	0.70	0.18	9.53	<0.001	Highly significant



**Table 32: Showing the Effect of Total Therapy on E.S.R Values**

Groups	BT mean	AT mean	% of Relief	SD	SE	't'	P	Remarks
Group A ( <i>Kshara Vasti</i> )	63.33	37.66	40.52%	4.95	1.27	20.07	<0.001	Highly significant
Group B ( <i>Vaitarana Vasti</i> )	69.66	46	33.97%	6.39	1.65	14.32	<0.001	Highly significant

**Table 33: Effect of Total Therapy on RA Factor**

RA factor	B.T.	%	AT	%
<b>Group - A</b>				
Positive	6	39.99%	6	39.99%
Negative	9	59.99%	9	59.99%
<b>Group - B</b>				
Positive	8	53.33%	8	53.33%
Negative	7	46.67%	7	46.67%

**Table 34: Effect of Total Therapy on General Symptoms with respect to number of Patients**

General Symptoms	Group A (n=15)				Group B (n=15)			
	n	B.T	A.T	% of Relief	n	B.T	A.T	% of Relief
<i>Angamarda</i>	15	15	6	60%	15	15	7	53.33%
<i>Shoonatanga</i>	4	4	0	100%	4	4	0	100%
<i>Shoola</i>	12	12	6	50%	13	13	7	46.15%
<i>Aruchi</i>	11	11	0	100%	12	12	0	100%
<i>Trushna</i>	6	6	0	100%	7	7	0	100%
<i>Alasya</i>	8	8	2	75%	9	9	3	66.66%
<i>Gaurava</i>	7	7	1	85.71%	6	6	2	66.66%
<i>Jwara</i>	6	6	0	100%	5	5	0	100%
<i>Apaka</i>	3	3	0	100%	2	2	0	100%
<i>Praseka</i>	3	3	0	100%	3	3	0	100%
<i>Utsahahani</i>	5	5	3	40%	5	5	3	40%
<i>Vairasya</i>	3	3	0	100%	1	1	0	100%
<i>Daha</i>	2	2	0	100%	4	4	0	100%
<i>Bahumootrata</i>	0	0	0	-	2	2	0	100%
<i>Kukshi katinya</i>	0	0	0	-	1	1	0	100%
<i>Kukshi shoola</i>	2	2	0	100%	1	1	0	100%
<i>Aanaha</i>	1	1	0	100%	3	3	0	100%
<i>Aantrakoojana</i>	2	2	0	100%	2	2	0	100%
<i>Chardi</i>	4	4	0	100%	4	4	0	100%
<i>Nidraviparyaya</i>	10	10	3	70%	11	11	3	72.72%
<i>Bhrama</i>	0	0	0	-	0	0	0	-
<i>Moorcha</i>	0	0	0	-	0	0	0	-
<i>Hridgraha</i>	5	5	2	60%	4	4	2	50%
<i>Vitvibandha</i>	13	13	2	84.61%	11	11	2	81.81%
<i>Jadhya</i>	1	1	0	100%	3	3	1	66.66%

### Effect on the General Symptoms

100% relief was observed in symptoms *Aruchi* and *Trushna* in both the groups. 84.61% and 81.81% relief was observed in the symptom *Vitvibandha* in Group A and Group B respectively. 85.71% and 66.66% relief was observed in the symptom *Gaurava* in Group A and Group B. 75% and 66.66% relief was observed in the symptom *Alasya* in Group A and Group B. 60% and 53.33% relief was observed in the symptom *Angamarda* in Group A and Group B, while least relief i.e., upto 50% was observed in the symptoms like *Shoola*.

### Comparative Efficacy of the Therapies in Group A and Group B

#### Subjective Parameters

**Table 35: Comparative efficacy of Vasti between Group A and Group B**

Parameters of assessment	No. of pts	SD	SE	't'	P	Remarks
<i>Sandhi Shoola</i>	30	0.22	0.08	3.37	<0.01	Significant
<i>Sandhi Shotha</i>	30	0.18	0.06	2.33	<0.05	Not significant
<i>Stabdata</i>	30	0.18	0.06	4.5	<0.001	Highly significant

**Table 36: Comparative efficacy of Total Therapy between Group A and Group B**

Parameters of assessment	No. of pts	SD	SE	't'	P	Remarks
<i>Sandhi Shoola</i>	30	0.24	0.08	3.37	<0.01	Significant
<i>Sandhi Shotha</i>	30	0.22	0.08	1.62	>0.10	Not significant
<i>Stabdata</i>	30	0.18	0.06	3.33	<0.01	Significant

#### Objective Parameters

**Table 37: Comparative efficacy of Vasti on Sparshaasahitwa between Group A and Group B**

Parameters of assessment	No. of pts	SD	SE	't'	P	Remarks
<i>Sparshaasahitwa</i>	30	0.20	0.07	4.71	<0.001	Highly significant

**Table 38: Comparative efficacy of Total Therapy on Sparshaasahitwa between Group A and Group B**

Parameters of assessment	No. of pts	SD	SE	't'	P	Remarks
<i>Sparshaasahitwa</i>	30	0.25	0.09	5.11	<0.001	Highly significant

**Table 39: Comparative efficacy of Vasti on Grip strength between Group A and Group B**

Parameters of assessment	No. of pts	SD	SE	't'	P	Remarks
Grip strength	30	0.18	0.06	2.16	<0.05	Not significant

**Table 40: Comparative efficacy of Total Therapy on Grip strength between Group A and Group B**

Parameters of assessment	No. of Pts	SD	SE	't'	P	Remarks
Grip strength	30	0.22	0.08	5.00	<0.001	Highly significant

**Table 41: Comparative efficacy of Total Therapy on E.S.R between Group A and Group B**

Parameters of assessment	No. of Pts	SD	SE	't'	P	Remarks
E.S.R	30	0.63	0.23	8.69	<0.001	Highly significant

**Table 42: Total Effect of the Therapy on 30 cases of *Amavata* under Group A and Group B on Subjective Parameters**

Group A (n=15)	Group B (n=15)	Total	In %	Relief Category
0	0	0	-	No Relief
1	1	2	6.66%	Mild Relief
3	6	9	30.00%	Moderate Relief
11	8	19	63.33%	Marked Relief

**Table 43: Total Effect of the Therapy on 15 cases of *Amavata* under Group A on Objective Parameters**

Grip strength	In %	Tenderness	In %	E.S.R	In %	Relief Category
0	-	0	-	1	6.66%	No Relief
3	20%	2	13.33%	14	93.33%	Mild Relief
3	20%	2	13.33%	0	-	Moderate Relief
9	60%	11	73.33%	0	-	Marked Relief

**Table 44: Total Effect of the Therapy on 15 cases of *Amavata* under Group B on Objective Parameters**

Grip strength	In %	Tenderness	In %	E.S.R	In %	Relief Category
0	-	1	6.66%	3	20%	No Relief
6	40%	2	13.33%	12	80%	Mild Relief
1	6.66%	3	20%	0	-	Moderate Relief
8	53.33%	9	60%	0	-	Marked Relief

## DISCUSSION

### Effect of *Vasti* in *Sandhishoola*

Both *Kshara Vasti* and *Vaitarana Vasti* are effective in reducing the severity of *Shoola* in patients of *Amavata*. When the effects of two *Vasti* are compared, the *Kshara Vasti* Group showed statistically significant improvement in *Sandhi shoola* when compared with *Vaitarana Vasti* Group, with p value ( $p < 0.01$ ).

The severity of pain was markedly decreased after *Shamanoushadhi* in both groups and result was statistically highly significant in *Kshara Vasti* Group ( $p < 0.001$ ) and *Vaitarana Vasti* Group ( $p < 0.001$ ).

Both the *Vasti* are very effective, in reducing the severity of pain in patients of *Amavata*. But *Kshara Vasti* showed a better result than *Vaitarana Vasti*.

### Effect of *Vasti* in *Sandhi Shotha*

The severity of *Sandhishotha* was markedly decreased after *Vasti* administration in both groups and result was statistically highly significant in *Kshara Vasti* Group ( $p < 0.001$ ) and statistically significant in *Vaitarana Vasti* Group ( $p < 0.01$ ) and hence *Kshara Vasti* and *Vaitarana Vasti* are effective in reducing the *Sandhishotha* in patients of *Amavata*. In the comparison, *Kshara Vasti* Group did not show any statistically significant improvement in *Sandhishotha*.

The severity of *Sandhishotha* was markedly decreased after *Shamanoushadhi* in both groups and result was statistically highly significant in *Kshara Vasti* Group ( $p < 0.001$ ) and in *Vaitarana Vasti* Group ( $p < 0.001$ ) and when the results are compared, *Kshara Vasti* Group did not show any statistically insignificant improvement. It can be concluded that both the groups are very effective in reducing the *Shotha*.

### Effect of *Vasti* in *Stabdata*

The severity of *Stabdata* was markedly decreased after *Vasti* administration in both groups and result was statistically highly significant in *Kshara Vasti* Group ( $p < 0.001$ ) and statistically significant in *Vaitarana Vasti* Group ( $p < 0.01$ ). When the two *Vasti* are compared, the *Kshara Vasti* Group showed statistically highly significant improvement in *Stabdata* when compared with *Vaitarana Vasti* Group.

### Effect of *Vasti* in *Sparsha Asahitwa*

The severity of *Sparsha Asahitwa* was markedly decreased after *Vasti* administration in both groups and result was statistically highly significant in *Kshara Vasti* Group ( $p < 0.001$ ) and in *Vaitarana Vasti* Group ( $p < 0.01$ ). In the comparison the *Kshara Vasti* Group showed statistically highly significant improvement in *Sparsha Asahitwa*.

The severity of *Sparsha Asahitwa* was markedly decreased just after *Shamanoushadhi* in both groups and result was statistically highly significant in *Kshara Vasti* Group ( $p<0.001$ ) and in *Vaitarana Vasti* Group ( $p<0.001$ ) and the *Kshara Vasti* Group showed statistically highly significant improvement in *Sparsha Asahitwa*, Hence *Kshara Vasti* showed a better improvement than *Vaitarana Vasti*.

#### Effect of Vasti in Grip strength

The Grip strength result was statistically significant in *Kshara Vasti* Group ( $p<0.01$ ) and in *Vaitarana Vasti* Group ( $p<0.02$ ).

This means both *Kshara Vasti* and *Vaitarana Vasti* are effective in increasing the Grip strength in patients of *Amavata*, but when compared, the *Kshara Vasti* Group did not show any statistically significant improvement in Grip strength when compared with *Vaitarana Vasti* Group.

The Grip strength was also analyzed after administration of *Simhanada Guggulu* with *Rasna Saptak Kwatha* as *Anupana* for 30 days following *Vasti* in both the groups.

The Grip strength was markedly increased just after *Shamanoushadhi* in both groups and result was statistically highly significant in *Kshara Vasti* Group ( $p<0.001$ ) and in *Vaitarana Vasti* Group ( $p<0.001$ ). The *Kshara Vasti* Group showed statistically highly significant improvement in Grip strength when compared.

#### Effect on Erythrocyte Sedimentation Rate after completion of total therapy

40.52% improvement was observed in Group A while in Group B improvement observed was 33.97%.

While comparing the two groups by unpaired 't' test, the *Kshara Vasti* Group showed statistically highly significant improvement in the reduction of E.S.R values when compared with *Vaitarana Vasti* Group, with p value ( $p<0.001$ ).

#### CONCLUSION

All the patients of both the groups responded well after *Kshara Vasti* and *Vaitarana Vasti* and the result were highly significant. The sustained affect of *Vasti* was very clearly evident after administration of *Vasti* along with *Shamanoushadhi*. Hence it can be concluded that the efficacy of *Vasti* in both groups was found to be satisfactory in spite of reducing dosage of *Gomootra*. Out of 30 Patients, 19 (63.33%) were markedly improved, 09 (30.00%) Moderately improved and lastly 02 (6%) were mildly improved

after the completion of therapy in subjective parameters.

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