



## Research Article

## A CLINICAL STUDY ON THE EFFECT OF *VAITARAN BASTI* IN THE MANAGEMENT OF *AMAVATA* VIS-A-VIS RHEUMATOID ARTHRITIS

Gulhane Harshad<sup>1\*</sup>, Bhople Sunanda<sup>2</sup>, Sangita Vidhale<sup>3</sup>, Anjali Deshmukh<sup>4</sup>, Anup Pande<sup>5</sup>

<sup>1</sup>Assistant Professor, <sup>2</sup>MD Scholar, Dept of Kayachikitsa, <sup>3</sup>Associate Professor, Dept. of Kaumarbhritya, <sup>4</sup>Professor, Dept. of Rachana Sharir, <sup>5</sup>Associate Professor, Dept. of Rasashastra, MUPS Ayurved College, Hospital & Research Centre, Risod, India.

**KEYWORDS:** *Amavata*, Rheumatoid arthritis, *Vaitaran Basti*.

### ABSTRACT

The disease *Amavata* described in classical Ayurvedic literature is closely mimic with Rheumatoid Arthritis (RA) in modern medical science. *Amavata* is the challenging problem for medical science with different treatment protocol. In this clinical study 15 patients were included having typical symptoms. All the included patients treated with *Vaitaran Basti* (medicated enema) to evaluate its efficacy in said disease. The patients were diagnosed on the basis of American criteria of Rheumatoid Arthritis as well as signs and symptoms mentioned in the classics.

**Aim:** To assess the efficacy of *Vaitaran Basti* in the patients of *Amavata*, reveal the probable action of *Vaitarana Basti* in the management of *Amavata*. **Materials and Methods:** In the present study 15 patients of *Amavata* were studied. These patients were selected irrespective of sex, religion and economical status. The patients were diagnosed on the basis of American criteria of Rheumatoid Arthritis as well as signs and symptoms mentioned in the classics. American is mentioned criteria of Rheumatoid. **Result:** Paired t test was applied to this BT and AT scores as these grades are accepted as per international norms. It showed that administered therapy reduced degree of disease activity significantly as  $P < 0.001$ . **Conclusion:** It showed that administered therapy reduced degree of disease activity significantly as  $P < 0.001$ .

### \*Address for correspondence

**Dr. Harshad D. Gulhane**

Associate Professor,  
Dept of Kayachikitsa,  
Mups Ayurved College,  
Hospital & Research Centre,  
Risod.

Email: [harryayu007@gmail.com](mailto:harryayu007@gmail.com)

Mob. No. - 09623371671

### INTRODUCTION

In this modern era the changing lifestyle of human being by means of diet and behavioural pattern leads to several disorders.<sup>[1]</sup> Said causes are responsible for production of *Ama* (improperly digested food) and imbalance in *Tridosha* (*Vata-Pitta-Kapha*) in body lead to development of *Amavata* (Rheumatoid Arthritis).<sup>[2]</sup> Rheumatoid arthritis is a chronic inflammatory disease whose major manifestation is synovitis of multiple joints. It has a prevalence of 1% and is more common in women than men (F:M ratio of 3:1).<sup>[3]</sup> Due to similar mode of presentation the disease, rheumatoid arthritis is closely resemble with *Amavata*. Most of the patients of RA have systemic features like fatigue, low grade fever (upto 38°C), anaemia, elevations of acute phase reactants (ESR and CRP levels).<sup>[4]</sup>

### Clinical Manifestations<sup>[5]</sup>

**Gender:** Female (3:1)

**Age:** Late childbearing years in women (sixth to eighth decade in men)

**Distribution:** Symmetric small joint- MCP (Metacarpophalangeal), PIP (Proximal Interphalangeal), MTP (Metatarsophalangeal) joints.

**Systemic:** Fatigue, possible weight loss, occasional low grade fever.

**Symptoms:** Joint stiffness (worse in morning), pain, swelling.

Untreated, Rheumatoid arthritis causes joint destruction with consequent disability and shortens life expectancy.<sup>[6]</sup> RA is systemic disease with extra articular manifestation like, rheumatoid nodule, cardiac involvement, pulmonary involvement, diffuse interstitial fibrosis, kerato conjunctivitis sicca, scleritis,

neurological manifestation, Felty syndrome.<sup>[7]</sup> The reduction of inflammation and pain, preservation of function, and prevention of deformity are primary objective in treating RA.<sup>[8]</sup> Management of *Amavata* focuses on improving digestion of food, '*Pachana*' and also the '*Pachana*' of *Sama Rasa Dhatu* developed in etiopathogenesis.<sup>[8]</sup>

According to Acharya Yogaratnakara, the concept of *Chikitsa sutra* (treatment) of *Amavata* consists of *Langhana* (fasting), *Svedana* (fomentation), *Deepana* (increased digestive power), intake of *Katu, Tikta Rasas, Virechana* (purgation), *Basti* (medicated enema), *Ruksha Sveda* (dry fomentation), as per *Avastha* (disease progression) of *Vyadhi* (disease)<sup>[9]</sup>.

*Chakradatta* while describing the *Chikitsa Sutra* (treatment protocol) for *Amavata* has indicated the use of *Kshara Basti* (medicated enema) as a treatment modality for the disease *Amavata*. In this series he has described the '*Vaitarana Basti*'.<sup>[10]</sup>

The term *Vaitarana* has been made from the word '*Vaitaranam*', which literary means to donate, go across, to leave which help to expel out the *Dosha*. Thus, we can say that *Vaitarana Basti* helps to expel out the morbid *Dosha* from the body and thereby giving relief in the disease. Due to wide spectrum of disease, much prevalence in society and lack of effective medication this research is being chosen for study.

## AIMS AND OBJECTIVES

1. To review all Ayurvedic as well as modern literature regarding *Amavata*.
2. To study the *Samprapti* (pathogenesis) of *Amavata* and its management.
3. To evaluate the efficacy of *Vaitarana Basti* in *Amavata*.
4. To reveal the probable action of *Vaitarana Basti* in the management of *Amavata*.

## MATERIALS AND METHODS

### Selection of Patients

A total of 15 subjects with *Amavata* (RA) were recruited for the study all the patients of *Amavata* (RA) were selected irrespective of sex, religion and economical status. Among which 15 subjects (11 female and 04 male) completed the whole course signed informed consent was obtained from all the participants.

### Criteria of Diagnosis

The patients were diagnosed on the basis of American criteria of Rheumatoid Arthritis as well as signs and symptoms mentioned in the classics. American is mentioned criteria of Rheumatoid Arthritis as follows:

1. Morning stiffness lasting for at least 1hour and for more than 6 weeks
2. Arthritis of 3 or more of 14 possible joints area
3. Arthritis of hand joints, wrist, metcarpo-phalangeal, interphalangeal, metatarso-phalangeal joints for more than 6 weeks
4. Symmetrical arthritis- Simultaneous involvement of the same joint areas
5. Rheumatoid nodules- Subcutaneous nodules over bony prominences
6. Serum Rheumatoid factor
7. Radiological changes

### Criteria of Inclusion

1. All patients of any age group, sex fulfilling the American criteria for rheumatoid arthritis.
2. All patients presenting with signs and symptoms resembling *Amavata*.

### Criteria of Exclusion

1. Patients not willing for trial.
2. Patients who left the treatment in between.
3. Patients who were steroid dependent for relief of symptoms.
4. Patients presenting with complications like SLE, endocarditis etc.
5. Patients with contractures of joints will not be included.

### Drugs

#### Contents of *Vitarana Basti*

*Amalika* (*Emlī*) (*Tamarindus indica* Linn.): 20gm

*Guda* (Jaggery): 10gm

*Saindhava* (Rock Salt): 5gm

*Til Taila* (*Sesamum indicum* Linn): 40ml

*Gomutra* (Cow urine): 160ml

*Madanphala Churna* (*Randia dumetorum* Linn.): 5-7gm

#### Preparation of *Basti Dravya*

20gm of *Amalika* and 10gm of *Guda* (Jaggery) were mixed in 100ml water on previous night. Mixture was smashed thoroughly. The mixture was heated up to boiling point on next morning. After that 40ml of (*Nirama*) *Til Taila*, 5gm of *Saindhava* was taken in a container and mixed thoroughly. Then above mixture was filtered and added to it. At last, 160ml of *Gomutra* and 5-7gm of *Madanphala Churna* as *Prakshepa* was added. The mixture was mixed thoroughly to prepare homogeneous liquid. That whole mixture was used as *Basti Dravya*.

#### Duration of *Basti*

As per references specific duration has not been mentioned. It was fixed as 11 (eleven) days.

#### Time of Administration

After breakfast around 10 am in left lateral position by *Basti Yantra*.

**Criteria of Assessment**

The signs and symptoms were assessed by adopting suitable scoring method and objective signs by using appropriate clinical tools.

*Angamarda* (bodyache), *Alasya* (laziness), *Gauravata* (heaviness), *Agnimandya* (low appetite), *Shotha* (swelling), morning stiffness, tenderness and pain were graded as follows:

- Completely absent: 0
- Mild presence: 1
- Moderate presence: 2
- Severe: 3

For the purpose of assessing the disease Erythrocyte Sedimentation Rate was also evaluated before and after treatment.

**Degree of Disease Activity**

For diagnostic and therapeutic purpose, the degree of disease activity was estimated on the basis of criteria laid down by American Rheumatism Association (1967). Details are given in table. In these criteria the maximum score is 27, which represents an average grade of 3 (severely active). By dividing the total score by 9, the grade of the disease was obtained and denoted by grades zero (0) to three (3). The table is described here:

**Table 1: Table Showing Semi Quantitative Criteria of Estimating of Degree of Disease Activity**

Grade	0	1	2	3
Morning stiffness	No morning stiffness	Morning stiffness >1/2 hr but <1 hr	>1hr but <6 hr	All the day through
Fatigue	none	Work fulltime despite some fatigue	Patient must interrupt work to take rest	Fatigue at rest
Pain	none	Mild pain of low intensity not disturbing routine work	Moderate pain hampers daily routine work	Severe pain causing definite interruption in routine work
General function	All activities without difficulty	Most activities but with difficulty	Few activities Care for self	Little self care mainly chair and bed ridden
Spread in joints	none	0 to 5	5 to 10	More than 10
ESR	0 - 20	20 - 40	40 - 60	>60
Hb gm%	>12	12-10	10-9	<9
Physicians estimate	Inactive	Minimum	Moderately Active	Severely active
Patients estimate	Fine	Almost well	Pretty good	Pretty bad

**Table 2: Table Showing Age-Wise Distribution of 15 Patients of Amavata**

S. No.	Age Group	No. of Patients	Percentage
1	15-20	1	6.66
2	20-25	0	0
3	25-30	3	20
4	30-35	2	13.33
5	35-40	3	20
6	40-45	1	6.66
7	45-50	2	13.33
8	50-55	0	0
9	55-60	2	13.33
10	60-65	1	6.66

**Table 3: Table Showing Sex-Wise Distribution of 15 Patients of Amavata**

S. No.	Sex	No. of Patients	Percentage
1	Male	4	26.67
2	Female	11	73.33

**Table 4: Table Showing Sex-Wise Distribution of 15 Patients of Amavata**

S. No.	Religion	No. of patients	Percentage
1	Hindu	11	73.33
2	Muslim	1	6.66
3	Buddha	3	10

**Table 5: Table Showing Socio Economic Status of 15 Patients of Amavata**

S. No.	Economical Status	No. of Patients	Percentage
1	Poor	6	40
2	Middle	7	46.66
3	Rich	2	13.33

**Table 6: Table Showing Physical Built-wise Distribution of 15 Patients of Amavata**

S.No.	Physical Built	No. of Patients	Percentage
1	<i>Krishha</i>	8	53.33
2	<i>Madhyama</i>	4	26.66
3	<i>Sthula</i>	3	20

**Table 7: Table Showing Effect of Treatment on Signs and Symptoms of 15 Patients of Amavata**

S. No.	Sign/Symptom	Symptom score			% of relief
		BT	AT	Difference	
1	<i>Angamarda</i>	40	18	22	55
2	<i>Alasya</i>	42	22	20	47.62
3	<i>Gauravata</i>	38	17	21	55.26
4	<i>Agnimandya</i>	45	24	21	46.66
5	Swelling	48	39	9	18.75
6	Morning stiffness	50	37	13	26
7	Tenderness	54	36	18	33.33
8	Pain	46	27	19	41.3
	Total	363	220	143	39.39

**Table 8: Table Showing Effect of Therapy on Haematological Parameters of 15 Patients of Amavata by Paired t Test**

S. No.	Haematological parameters	Mean $\pm$ SD		Mean of Diff. $\pm$ SD	SEd	T	P
		BT	AT				
1	Haemoglobin	11.3 $\pm$ 1.0925	12.34 $\pm$ 0.786	1.04 $\pm$ 0.8567	0.1916	5.425	<0.001
2	ESR	54.6 $\pm$ 5.566	45.15 $\pm$ 7.035	9.45 $\pm$ 5.394	1.206	7.830	<0.001

**Table 9: Table Showing Effect of Therapy on Degree of disease activity of 15 Patients of Amavata by Paired t Test**

S. No.	Parameters	Mean $\pm$ SD		Mean of Diff. $\pm$ SD	SEd	T	P
		BT	AT				
1	Morning stiffness	2.05 $\pm$ 0.223	0.8 $\pm$ 0.523	1.25 $\pm$ 0.444	0.099	12.57	<0.001
2	Fatigue	1.8 $\pm$ 0.523	0.7 $\pm$ 0.571	1.1 $\pm$ 0.307	0.0688	15.97	<0.001
3	Pain	1.9 $\pm$ 0.447	0.95 $\pm$ 0.394	0.95 $\pm$ 0.2236	0.050	18.99	<0.001
4	General function	1.85 $\pm$ 0.366	0.9 $\pm$ 0.447	0.95 $\pm$ 2236	0.050	18.99	<0.001
5	Spread in joints	1.1 $\pm$ 0.3077	0.95 $\pm$ 0.2236	0.15 $\pm$ 0.366	0.0819	1.830	>0.05
6	Hb gm %	0.95 $\pm$ 0.510	0.45 $\pm$ 0.510	0.5 $\pm$ 0.512	0.1147	4.356	<0.02
7	ESR	2.1 $\pm$ 0.0377	1.74 $\pm$ 0.444	0.35 $\pm$ 0.489	0.1094	3.197	<0.02
8	Physicians estimate	2.0 $\pm$ 0.3244	0.95 $\pm$ 0.223	1.05 $\pm$ 0.2236	0.050	20.98	<0.001
9	Patients estimate	2.05 $\pm$ 0.2336	0.95 $\pm$ 0.2336	1.1 $\pm$ 0.3077	0.0688	15.975	<0.001
Total disease activity		1.78 $\pm$ 0.2142	0.945 $\pm$ 0.2416	0.835 $\pm$ 0.0812	0.0181	45.92	<0.001

## OBSERVATIONS AND RESULTS

All the patients of *Amavata* of this series were examined in detail with respect to the special proforma.

Most of the patients (60%) of this series were male (Table-3). 20% were of age group 25 to 30 years (Table-2). 73.33% of the patients from were Hindu religion (Table-4). Most of the patients (46.66%) were from middle economic status (Table-5). Table-6 highlighted that 53.33% patients were *Krishna* (thin) in physical built.

Before starting the treatment, symptoms present in all patients were graded and their values were noted as before treatment (BT). After completion of treatment, they were noted as after treatment (AT). The data was assessed as percent of relief as shown in Table-7. 55.26% relief was observed in *Gauravata* (heaviness) while 47.62% relief was seen in *Alasya* (lethargic). Swelling was relieved by 18.75% only while 41.3% relief was observed in pain. Average percentage relief was 39.39%. It was observed that Hb gm% Mean  $\pm$  SD was 11.3  $\pm$  1.0925 before treatment which was increased to 12.34  $\pm$  0.786 which is highly significant as P<0.001. Paired t test was also applied to ESR, which was 54.6 $\pm$ 5.566 before treatment, was reduced to 45.15  $\pm$  7.035, this is highly significant as P< 0.001. It was observed that morning stiffness, fatigue, pain, general functions, Hb gm%, ESR, physician estimate and patient's estimate showed significant progress. Average of all criteria of degree of disease activity before treatment was 1.78 $\pm$ 0.2142 which was reduced to 0.945 $\pm$ 0.2416. Paired t test was applied to this BT and AT scores as these grades are accepted as per international norms. It showed that administered therapy reduced degree of disease activity significantly as P < 0.001.

## Probable Mode of Action of Basti

In the present study *Vaitarana Basti* has provided significant relief in cardinal symptom, associated symptoms and general symptoms of the disease. *Vaitarana Basti* is the type of *Kshara Basti* described in *Chakradatta Niruhadhikara*. The *Guna*(qualities) of *Vaitarana Basti* can be considered as *Laghu, Ruksha, Ushna, Tikshna*. Majority of the drugs are having *Vata-kapha shamaka* action. Owing to this property, antagonism to *Kapha* and *Ama* the *Basti* help in significant improvement in sign and symptom of disease. The *Tikshna Guna* of *Basti* help in overcoming the *Srotodushti* (manifestation of disease) resulting due to '*Sanga*' (obstruction).

*Basti Dravya* after reaching to large and small intestine get absorbed from intestine, now due to *Laghu, Ushna, Tikshna* and *Ruksha Guna* of *Vaitarana Basti Dravya*, it help to relived the obstructions and expels out the morbid material from all over the body, thus help in breaking down the pathogenesis of disease. *Niruha Basti* helps in elevating the *Avarana* of *Vata* by *Kapha*. Reduction in this *Avarana* was seen as there was improvement of *Kaphavrita Vyana* symptoms. *Basti* help in *Vatanulomana* thus helping correcting the *Apana*. *Basti* therapy may be stimulator for many intra-luminal, luminal and whole body functions. Regulatory peptides like serotonin, enteroglucagon, Vasoactive Intestinal Polypeptide (VIP) are produced in the colon. Many of the peptides are related to the functioning of the basal ganglia and some of the substances among them like CCK, VIP are stimulator of dopamenergic neuronal system. It is possible that *Basti* by stimulating many factors in GIT physiology affects on regulatory functions of these peptides either by moderation of by stimulation.<sup>[14]</sup> Thus *Basti Karma* exerts a more systemic action

besides exerting local action of operating through large intestine involving enteric nervous system. Enteric nervous system is a collection of neurons in the gastro-intestinal tract constituting the brain of gut. Thus, we can say that *Basti* plays a pivot role in the management of *Amavata*.

### CONCLUSION

*Amavata* is a commonest inflammatory joint disease, because of which patient's life becomes miserable, patients are crippled. No effective remedies available so far in modern science or other stream of medical science. In patients suffering from *Amavata*, Ayurveda has a definite role to manage the disease by *Vaitarana Basti* along with *Deepana*, *Pachana* and *Ruksha Sweda*. In this study patient suffering from *Amavata* had average of 39.39% of relief. While maximum percentage of relief 55.26% was noted in *Gauravata* while *Shotha* (swelling) was relieved by 18.75%. It was observed that Hb gm% Mean  $\pm$  SD was  $11.3 \pm 1.0925$  before treatment which was increased to  $12.34 \pm 0.786$  which is highly significant as  $P < 0.001$ . Paired t test was also applied to ESR, which was  $54.6 \pm 5.566$  before treatment, was reduced to  $45.15 \pm 7.035$ , this is highly significant as  $P < 0.001$ . It was observed that morning stiffness, fatigue, pain, general functions, Hb gm%, ESR, physician estimate and patient's estimate showed significant progress. Average of all criteria of degree of disease activity before treatment was  $1.78 \pm 0.2142$  which was reduced to  $0.945 \pm 0.2416$ . Paired t test was applied to this BT and AT scores as these grades are accepted as per international norms. It showed that administered therapy reduced degree of disease activity significantly as  $P < 0.001$ .

It is very obvious from the foresaid observation and results that *Vaitarana Basti* along with *Deepana*, *Pachana* and *Ruksha Sweda* had beneficial effect in only 11 days. Patients were relieved upto certain extent from their sufferings. This study did not show any side effect and also it is affordable to patients. It is very obvious from this study that Ayurvedic concept of management of *Amavata* plays major role in present era to serve mankind.

### REFERENCES

1. Agnivesha. Charaka Samhita, Commentary, Charaka Samhita, Sutrasthana Tistreshaniya Adhyaya (11/37). In: Lakshmidhar Dwivedi, editor. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p.263.
2. Acharya Sharangadhara, Sharangadhara Samhita, with Dipika hindi commentary by bramhananda tripathi, reprint ed. Purva khanda 5/43; Varanasi Chaukhambha surbharti, 2008, p-60.
3. Maxine A. Papadakis, Stephen J.McPhee, Micheal W. Rabow, Current Medical Diagnosis & Treatment 2020 edited by McGraw-Hill Publications, chapter -20 Vol-1, p-852
4. John B. Imboden, David B. Hellmann, John H. Stone, Current Medical Diagnosis & Treatment Rheumatology, 2007 edited by McGraw-Hill Publications, chapter -15
5. John B. Imboden, David B. Hellmann, John H. Stone, Current Medical Diagnosis & Treatment Rheumatology, 2007 edited by McGraw-Hill Publications, chapter -15
6. Maxine A. Papadakis, Stephen J.McPhee, Micheal W. Rabow, Current Medical Diagnosis & Treatment 2020 edited by McGraw-Hill Publications, chapter -20 Vol-1, p-852
7. John B. Imboden, David B. Hellmann, John H. Stone, Current Medical Diagnosis & Treatment Rheumatology, 2007 edited by McGraw-Hill Publications, chapter -15
8. Maxine A. Papadakis, Stephen J.Mc Phee, Micheal W. Rabow, Current Medical Diagnosis & Treatment 2020 edited by McGraw-Hill Publications, chapter -20 Vol-1, p-852
9. Lakshmiapati Shastri, Yogaratnakar with Vidyotini Hindi commentary Edited by Bramhashankar Shatri, published by Chaukhambha Prakashan, Amavata Chikitsa, p-566
10. Tripathi Indradev, editor. Chakradutta of Chakrapani, 1<sup>st</sup> ed. Ch. 25, ver. 1. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p. 166.
11. Radha Agrawall, Vasti- Concept & Current Procedural Modalities by Arya Vaidya Sala-Kottakal 2012, chapter 4, Mode of Action of Basti, p-63.

#### Cite this article as:

Gulhane Harshad, Bhole Sunanda, Sangita Vidhale, Anjali Deshmukh, Anup Pande. A Clinical Study on The Effect of Vaitaran Basti In The Management of Amavata Vis-À-Vis Rheumatoid Arthritis. AYUSHDHARA, 2021;8(3):3270-3275.

**Source of support: Nil, Conflict of interest: None Declared**