

**EFFICACY OF 'SHUNTHI GHRITA SNEHAPANA' IN AMAVATA****Dr. Kamlesh Kumar Pandey\*<sup>1</sup>**

Professor, P.G. Department of Kayachikitsa, D. A. M. C. and H. Siwan, Bihar. Pin-841226.

Article Received on  
14 July 2021,Revised on 04 August 2021,  
Accepted on 24 August 2021

DOI: 10.20959/wjpr202111-21589

**\*Corresponding Author****Dr. Kamlesh Kumar  
Pandey**Professor, P.G. Department  
of Kayachikitsa, D. A. M. C.  
and H. Siwan, Bihar. Pin-  
841226.**ABSTRACT**

Amavata the term derives from the word as "Ama" and "Vata". Ama is the condition in which various ailments in system due to its toxic effect. When it combines with Vata dosha and occupies in Shleshma sthana results painful disease "Amavata". Both "Ama" and 'Vata' are contradictory in nature and thus possess difficulty in planning the line of treatment. It is the disease of Madhyam Rog Marga with Chirakari Swabhava. Sometimes it can also be manifested as the acute case. The disease is characterized by various features like Sandhishoola, Sandhishoth, Sandhigraham etc. Mandagni is the prerequisite factor for initiation of Samprapti of Amavata. In present study Shunthi ghrita has been selected due to its katu rasa, ushna veerya, Bhedan, Deepan, Pachana, Agnivardhak and Vata-Kapha Shamana properties.

**KEYWORDS:** Amavata, Samprapti of Amavata, Rheumatoid arthritis and Shunthi ghrita.**INTRODUCTION**

Living in globalized village everybody has to work hard mentally and physically to survive in this society leads to irregularities in their lifestyle change in dietetic habits and stress and strain. In this cutthroat lifestyle everybody has forgotten how to maintain their own health, hence manifesting so many lifethreatening disorders. Amavata is one of the diseases results due to irregular lifestyle and disturbance in dietetic habits. Where alongwith the articular symptoms, manifestation of gastro intestinal, cardiac and renal disturbances are quite evident. Amavata the term derives from the word as "Ama" and "Vata". Ama is the condition in which various ailments in system due to its toxic effect. When it combines with Vata dosha and occupies in Shleshma sthana results painful disease "Amavata". Both "Ama" and 'Vata' are contradictory in nature and thus possess difficulty in planning the line of treatment. It is the disease of Madhyam Rog Marga with Chirakari Swabhava. Sometimes it can also be manifested as the acute case. The disease is characterized by various features like

Sandhishoola, Sandhishoth, Sandhigraham etc. Mandagni is the prerequisite factor for initiation of Samprapti of Amavata.

The clinical presentation of Amavata closely mimics with the special variety of Rheumatological disorder called Rheumatoid arthritis and Rheumatic fever in accordance with their similarities in clinical features.

The prevalence rate of Rheumatoid arthritis is 1% with women affected 3 to 5 times as often the men and it can first develop at any age. The risk of first developing the disease appears to be greatest for women between 40 and 50 years of age and for men somewhat later.

In present study Shunthi ghrita has been selected due to its katu rasa, ushna veerya, Bhedan, Deepan, Pachana, Agnivardhak and Vata-Kapha Shamana properties. In present study Shamana therapy “Shunthi Ghrita” has been selected orally which is described in Chakradatta.

## **AIMS AND OBJECTIVES**

1. To assess the efficacy of ‘Shunthi Ghrita Snehapana’ in Amavata patients.
2. To study the aetiopathology of Amavata.

## **MATERIALS AND METHODS**

### **Inclusion Criteria**

1. The patients having signs and symptoms of Amavata were considered for present study.
2. The patients who have satisfied the criteria laid down by the American Rheumatism Association, selected and registered for detailed investigations & follow up.
3. Clinical history of the patients was taken in a specially prepared proforma.

### **Exclusion criteria**

- i. The patients who were having the deformities have been excluded from study. For ex. Ulnar deviation. Swan neck deformities, Ankylosis of wrist and elbow etc.
- ii. Patients who have given the history of below mentioned disease were omitted from the present study.
  - a. Diabetes Mellitus
  - b. Tuberculosis
  - c. Extensive blood loss
  - d. Chronic alcoholic

- e. Hypertension.
- f. Haemophilia.
- g. CRF
- h. AIDS.
- i. Hyper acidity
- j. Amoebiasis etc.

## RESEARCH METHODOLOGY

After complete examination and investigation. All patients have been kept on Pippali siddha Dugdha for one week and then divided randomly into two groups.

**Group A:** In this group 30 patients were administered Shunthi Ghrita. 10- 15 gm BD with milk along with Nadi swedana.

**Group B:** In this group 30 patients were administered Nadi Swedana and Placebo tablets. Strict diet regimen have been kept for all the patients during treatment period. Duration of treatment: 30 days.

### Criteria for Assesment

#### A) Subjective Parameters

Symptoms of Amavata.

#### B) Objective parameters

1. Joints (For swelling, pain, tenderness, morning stiffness time, temprature.)
2. Grip test.
3. Foot pressure.
4. Range of movement.
5. Walking time.

#### C) Laboratory Assessments

##### A) Subjective Parameters

The details of scoring pattern adopted for assessments of clinical signs and symptoms are as follows.

##### 1 Angamarda

No Angamarda

0

Occasional angamarda but patient is able to do usual work	1
Continuous angamarda but patient is able to do work	2
Contineous Angamarda which hampers routine work	3
Patient is unable to do any work	4

## 2. Agnimandya

No Agnimandya / Normal feeling of hunger with uncoated tounge	0
Indigestion of heavy food.	1
Indigestion of normal food and heaviness in abdomen.	2
Indigestion of light food, heaviness and flatulence constantly	3

## 3. Aruchi

Normal desire for food	0
Eating timely without much desire	1
Desire for food, little late, than normal time	2
Desire for food, only after long intervals	3

## 4. Trishna

Normal feeling of thirst	0
Frequent feeling of thirst but quench with normal amount of liquid	1
Satisfactory quench after increased intake of fluids but no awaking during nights	2
Satisfactory quench after increased intake of fluids with regular awaking during nights	3
No quench after heavy intake of fluids	4

## 5 Alasya

Fully active	0
Mild laziness, initiative in some work	1
Slow initiation in work, some times unable to work	2
Absolute lack of initiative even though capacity for work exists	3

## 6 Jwara (Fever In degree Farenheight)

No fever	0
Mild (99 <sup>0</sup> F to 101 <sup>0</sup> F)	1
Moderate (>101 <sup>0</sup> F to 103 <sup>0</sup> F)	2

Severe ( $>103^{\circ}\text{F}$ )      3

## 7      **Apaka**

Normal digestion	0
Occasional indigestion once or twice / week in one meal	1
Occasional indigestion 3-5 times/week in one meal	2
Indigestion 3 to 5 times / week in both meal	3

## **B) Objective Parameters**

### **1 Shotha (Joint swelling)**

- Assessment done by measuring the circumference of the big joint before and after treatment at the broadest over the joint in cm.
- About finger joints the change in size noted by jeweller's ring in no. from 1 to 33 before and after treatment.

### **2 Joint pain (Sandhi Shool)**

No pain	0
Mild pain of bearable nature on movement only.	1
Moderate pain at rest and mild restriction of movement.	2
Severe pain required difficulties in movement and / restriction of movements and requires medications.	3

### **3. Sparshosahatwa (Tenderness of Joint)**

No tenderness	0
Subjective experience of tenderness	1
Winching of face on pressure	2
Winching of face with withdrawal of affected parts on pressure / not allowed to be touched	3

### **4      Local Temperature (Ushnasparsha)**

Increase temperature with compare to normal body surface	2
Fall in local warm	1
Normal temp	0
Unchanged after treatment	2

### **5      Stabdhatva (Morning Stiffness)**

No stiffness or stiffness lasting for 5 minutes.	0
Stiffness lasting for > 5 minutes to 2 hours.	1
Stiffness lasting for > 2 hours to 8 hours.	2
Stiffness lasting for > 8 hours.	3

## 6 Grip strength

To find the function capacity of the affected upper limb the patients ability to compress an inflated ordinary sphygmomanometer cuff under standard conditions was carried out before and after treatment.

> 200 mm Hg	0
199 – 120 mm Hg	1
119 – 70 mm Hg	2
< 70 mm Hg	3

## 7 Foot pressure

This has been assessed by asking the patient to exert pressure over the weighing machine, initially with right leg followed by left leg. Precaution has been taken that patient should not lift the other leg while exerting pressure over the weighing machine.

25 to 21 Kg	0
20 to 16 Kg	1
15 to 10 Kg	2
Less than 10 kg	3

## 8 Walking time (for 25 feet)

15 – 20 Sec.	0
21 – 30 Sec.	1
31 – 40 Sec.	2
More than 40 sec.	3

## 9 Range of movements

For this purpose specially designed apparatus have been used. Measuring two scale at its one end is attached with degree (D) at its centre. Precaution was taken in order to keep the scale freely moving around the axis of the joint. With the help of this apparatus the angle of extension and flexion of the affected joint was noted. This apparatus is called Goniometer.

**C) Laboratory Assessment**

Investigation had been performed of all patients at 'O' week and after one month' of treatment.

**I) Hematological test**

Hb%, TLC, DLC count, ESR, R.F. titer, ASO titer

**II) Urine Examination**

Routine & Microscopic.

**Over All Effect Of Therapy**

Detailed clinical observation had been done every week for assessment of result however for IPD patients daily routine examination had been done. The patients final data had been divided in to four groups.

**Excellent:** The patients who have got complete or more than 75% relief of above sign and symptoms and laboratory investigation such as Normal E.S.R. R.F. titer, A.S.O. titer within normal range were also included in this group.

**Good:** The patients who have got 50 to 75% relief of above sign and symptoms were considered in this group.

The patients who's laboratory investigation are near to normal or (above normal range) 50% reduction in their values will be also consider in this group.

**Fair:** The patients who have got 25 to 50% relief of sign and symptoms, and less than 50% reduction in their laboratory values were considered in this group.

**Poor:** The patients who have got only less than 25% relief of sign and symptoms and laboratory tests or no change were included in this group.

**OBSERVATIONS AND RESULTS**

In present clinical study, 60 Amavata patients were selected from OPD & IPD of Ayurveda Rugnalaya and randomly divided in two groups.

**Group A:** In this group 30 patients were administered Shunthi Ghrita. 10-15 gm BD with milk along with Nadi swedana.

**Group B:** In this group 30 patients were administered Nadi Swedana and Placebo tablets.

**Duration of treatment:** - 30 days.

The collected data has been distributed in the following tables. Out of 60 patients selected for trials 5 patients have left against medical advice in each group. Hence these patients were not included in final results.

**Table 5.1: Age wise distribution of 60 patients of Amavata.**

Sr.No.	Age group	No. of patients		Total
		Group A	Group B	
1.	1 - 10	0 (0 %)	0 (0 %)	0 (0 %)
2	11 – 20	4 (13.34%)	2 (6.67 %)	6 (10.00 %)
3.	21 – 30	7 (23.34%)	11(33.33 %)	18 (30.00 %)
4.	31 – 40	5 (16.66%)	9 (30.00 %)	14 (23.33 %)
5.	41 – 50	10 (33.33%)	6 (20.00 %)	16 (26.67 %)
6	51 – 60	4 (13.33 %)	1 (3.33 %)	5 (8.33 %)
7	61 - 70	0 (0 %)	1(3.33 %)	1 (1.67 %)

Most of patients of this study were from 21-30 age group (30.00 %). Followed by 41-50 age group (26.67%), 31-40 age group (23.33%), 11-20 age group (10.00%) and 51-60 age group (8.33 %).

**Table 5.2: Distribution of Sex.**

Sr.No.	Sex	No. of patients		Total
		Group A	Group B	
1	Male	10 (33.33 %)	12 (40 %)	22 (36.67 %)
2	Female	20 (66.67 %)	18 (60%)	38 (63.33 %)

In this study maximum patients were female 63.33 %, while male patients were 36.67 %. In group A male patients were 33.33 %, female patients were 66.67 %. While in group B male patients were 40.00 %, female patients were 60.00 %.

**Table 5.3: Distribution of Religion.**

Sr.No.	Religion	No. of patients		Total
		Group A	Group B	
1.	Hindu	27(90.00 %)	24(80.00 %)	51(85.00 %)
2.	Muslim	3(10.00 %)	6(20.00%)	9 (15.00 %)
3.	Christian	0 (0 %)	0 (0 %)	0 (0 %)
4.	Other	0 (0%)	0 (0 %)	0 (0 %)

All patients were selected irrespective of religion. Maximum patients (85.00 %) were Hindu where as Muslim patients were 15.00 %.



**Table 5.4: Education standard of Amavata Cases.**

Sr.No.	Education	No. of patients		Total
		Group A	Group B	
1.	Uneducated	2 (6.67 %)	2 (6.67 %)	4 (6.67 %)
2.	Educated	28 (93.33%)	28 (93.33 %)	56 (93.33 %)
	a. Primary	17 (56.67 %)	9 (30.00 %)	26 (43.33 %)
	b.Middle	0 (0 %)	0 (0 %)	0 (0 %)
	c.Highschool	10(33.33%)	17 (56.66 %)	27 (45.00 %)
	d.Graduate	1 (3.33%)	2 (6.67%)	3 (5.00 %)

The educated patients were as high as 93.33 % only 6.67 % of patients were uneducated. Out of educated patients 45.00% were educated up to highschool, 43.33 % patients were educated up to primary and 5.00% patients were educated up to graduate.

**Table 5.5: Distribution of Marital status.**

Sr.No.	Marital status	No. of patients		Total
		Group A	Group B	
1.	Unmarried	5 (16.67 %)	7 (23.33 %)	12 (20.00 %)
2.	Married	24 (80.00 %)	22 (73.34 %)	46 (76.66 %)
3.	Widow	0 (0 %)	1 (3.33 %)	1 (1.67 %)
4.	Diworce	1 (3.33 %)	0 (0 %)	1 (1.67 %)

In this study 76.66 % of patients were married while 20.00 % of patients were unmarried.

**Table 5.6: Economical status of Amavata patients.**

Sr.No.	Economical status	No. of patients		Total
		Group A	Group B	
1.	Lower	16 (53.34 %)	16 (53.34 %)	32 (53.33 %)
2.	Middle	13 (43.33 %)	14 (46.66 %)	27 (45.00 %)
3.	Higher	1 (3.33 %)	0 (0 %)	1 (1.67 %)

In this study 53.33 % patients were from lower class and 45.00 % patients were from middle class.

**Table 5.7: Distribution of Occupation.**

Sr.No.	Occupation	No. of patients		Total
		Group A	Group B	
1.	Labour	6 (20.00 %)	3 (10.00 %)	9 (15.00 %)
2.	Farmer	4 (13.34 %)	5 (16.66 %)	9 (15.00 %)
3.	House hold worker	13 (43.34 %)	12 (40.00 %)	25 (41.66 %)
4.	Service	2 (6.66 %)	2 (6.67 %)	4 (6.67 %)
5.	Business	2 (6.66 %)	2 (6.67 %)	4 (6.67 %)
6.	Other	3 (10 %)	6 (20.00 %)	9 (15.00 %)

Out of 60 patients of Amavata, maximum patients were house hold worker (41.66 %), where as remaining 58.34 % patients were labour, farmer and from other occupation.

**Table 5.8: Incidence of Chronicity of the disease.**

Sr.No.	Chronicity	No. of patients		Total
		Group A	Group B	
1.	< 2 year	11 (36.67 %)	17 (56.67 %)	28 (46.67 %)
2.	2-4 year	14 (46.66 %)	10 (33.33%)	24 (40.00 %)
3.	4-6 year	5 (16.67%)	3 (10.00 %)	8 (13.33 %)

The patients having chronicity of disease below 2 years were 46.67%. The patients having disease from 2-4 year were 40.00%, and from 4-6 year were 13.33%.

**Table 5.9: Distribution of Onset.**

Sr.No.	Onset	No. of patients		Total
		Group A	Group B	
1.	Insidious	16 (53.34 %)	10 (33.33 %)	26 (43.33 %)
2.	Gradual	9 (30.00 %)	11 (36.67 %)	20 (33.33 %)
3	Sudden	5 (16.67 %.)	9 (30.00 %)	14 (23.34 %)

Out of 60 patients of Amavata, 43.33 % patients were given the history of insidious onset, 33.33 % patients were having gradual onset and 23.34 % of patients were having sudden onset.

**Table 5.10: Distribution of Family History.**

Sr.No.	Family History	No. of patients		Total
		Group A	Group B	
1.	Yes.	8 (26.67 %)	9 (30.00 %)	17 (28.33 %)
2.	No.	22 (73.33 %)	21 (70.00 %)	43 (71.67 %)

Most of patients in this study 71.67 % reported negative family history of joint disorder where as another 28.33 % of patients were observed with positive family history.

**Table 5.11: Diet wise distribution of 60 patients of Amavata.**

Sr.No.	Diet	No. of patients		Total
		Group A	Group B	
1.	Veg	19 (63.33 %)	14 (46.67 %)	33 (55.00 %)
2.	Mixed	11 (36.67 %)	16 (53.33%)	27 (45.00 %)

In this study 55.00 % patients were vegetarian while 45.00 % of patients consuming both veg & non veg diet.

**Table 5.12: Distribution of patients according to interest in Rasa (Taste).**

Sr.No.	Dominant Rasa	No. of patients		Total
		Group A	Group B	
1.	Madhur	14 (46.67 %)	19 (63.33 %)	33 (55.00 %)
2.	Amla	4 (13.34 %)	3 (10.00 %)	7 (11.67 %)
3.	Lavana	1 (3.33 %)	1 (3.33 %)	2 (3.33 %)
4.	Katu	11 (36.66 %)	7 (23.34 %)	18 (30.00 %)
5.	Tikta	0 (0 %)	0 (0 %)	0 (0 %)
6.	Kashaya	0 (0 %)	0 (0 %)	0 (0 %)

Out of 60 patients, 55.00 % patients were shown interest in Madhur Rasa in their diet, followed by Katu Rasa

**Table 5.13: Incidence of Amavata according to Season.**

Sr.No.	Vyadhikala	No. of patients		Total
		Group A	Group B	
1.	Shishir	9 (30.00 %)	12 (40.00 %)	21 (35.00 %)
2.	Vasant	9 (30.00 %)	5 (16.67 %)	14 (23.33 %)
3.	Grishma	1 (3.34 %)	1 (3.33 %)	2 (3.33 %)
4.	Varsha	3 (10.00 %)	4 (13.33 %)	7 (11.67 %)
5.	Sharada	4 (13.33 %)	3 (10.00 %)	7 (11.67 %)
6.	Hemant	4 (13.33 %)	5 (16.67 %)	9 (15.00 %)

Incidence of Amavata was observed in 35 % patients in Shishir Ritu (35.00 %) whereas in 23.33 % patients onset was noticed in Vasant Ritu.

**Table 5.14: Distribution of Prakriti of Amavata patients.**

Sr.No.	Deha Prakriti	No. of patients		Total
		Group A	Group B	
1.	Vata-Pitta	11 (36.67 %)	8 (26.67 %)	19 (31.67 %)
2.	Pitta-Kapha	2 (6.67 %)	6 (20.00 %)	8 (13.33 %)
3.	Kapha-Vata	4 (13.34 %)	2 (6.67 %)	6 (10.00 %)
4.	Pitta-Vata	1 (3.33 %)	1 (3.33 %)	2 (3.33 %)
5.	Kapha- Pitta	3 (10.00 %)	5 (16.67 %)	8 (13.33 %)
6.	Vata- Kapha	9 (30.00 %)	8 (26.67 %)	17 (28.34 %)
7.	Tridoshik	0 (0 %)	0 (0 %)	0 (0 %)

In this study it is found that maximum Vata-Pitta prakriti 31.67 % patients were observed and whereas 28.34 % patients were Vata- Kapha prakriti.

**Table 5.15: Distribution of patients according to Agni.**

Sr.No.	Agni	No. of patients		Total
		Group A	Group B	
1.	Manda	21 (70.00%)	26(86.67 %)	47 (78.33 %)
2.	Tikshna	0 (0 %)	0 (0 %)	0 (0 %)
3.	Vishama	9 (30.00 %)	4 (13.33 %)	13 (21.67 %)
4.	Samagni	0 (0 %)	0 (0 %)	0 (0 %)

In the present clinical study, it revealed that majority of the patients 78.33 % having Mandagni, and 21.67 % of patients having Vishamagni.

**Table 5.16: Distribution of patients according to Satva.**

Sr.No.	Satva	No. of patients		Total
		Group A	Group B	
1.	Pravara	4 (13.33 %)	3 (10.00 %)	7 (11.67 %)
2.	Awara	9 (30.00 %)	6 (20.00 %)	15 (25.00 %)
3.	Madhyama	17 (56.67 %)	21 (70.00 %)	38 (63.33 %)

Out of 60 patients of Amavata, 63.33 % patients were having Madhyama Satva and 25.00 % patients were having Awara Satva while only 11.67 % patients were having Pravara Satva.

**Table 5.17: Distribution of patients according their Habit.**

Sr.No.	Habit	No. of patients		Total
		Group A	Group B	
1.	Tea	19 (63.34 %)	19 (63.34 %)	38 (63.34 %)
2.	Tobacco	7 (23.34 %)	8 (26.67 %)	15 (25.00 %)
3.	Smoking	2 (6.66 %)	1 (3.33 %)	3 (5.00 %)
4.	Icecream	0 (0 %)	2 (6.66 %)	2 (3.33 %)
4.	No Habit	2 (6.66 %)	0 (0 %)	2 (3.33 %)

In present study, it is observed that majority of patients having habit of consuming tea regularly (63.34 %), habit of tobacco was found in 25.00 %.

**Table 5.18: Incidence of Cardinal Symptoms.**

Sr.No.	Cardinal Symptoms	No. of patients		Total
		Group A	Group B	
1.	Sandhishool	30 (100 %)	30 (100 %)	60 (100 %)
2.	Sandhishoth	30 (100 %)	30 (100 %)	60 (100 %)
3.	Sandhigraha	30 (100 %)	30 (100 %)	60 (100 %)
4.	Sparsha-asahtva	30 (100 %)	30 (100 %)	60 (100 %)

Regarding the cardinal features of Amavata all the patients i.e. 100 % patients having Sandhishool, Sandhishoth, Sandhigraha and Sparsha-asahtva.

**Table 5.19: Incidence of Associated Symptoms.**

Sr.No.	Associated Symptoms	No. of patients		Total
		Group A	Group B	
1.	Angmarda	30 (100 %)	30 (100 %)	60 (100 %)
2.	Agnimandya	27 (90 %)	29 (96.66 %)	56 (93.33 %)
3.	Aruchi	23 (76.66 %)	19 (63.33 %)	42 (70.00%)
4.	Trishna	19 (63.33 %)	16 (53.33 %)	35 (58.33%)
5.	Alasya	28 (93.33 %)	29 (96.66 %)	57 (95 %)
6.	Jwar	24 (80 %)	21 (70%)	45 (75 %)
7.	Apaka	21 (70 %)	18 (60. %)	39 (65 %)

In present study, maximum number of patients were having Angamarda (100 %), Alasya (95.00 %), Agnimandya (93.33 %), Jwar (75.00 %), Aruchi (70.00 %), Apaka (65.00 %), and Trishna (58.33 %).

**Table 5.20: Distribution of patients according to Joints Involvement.**

Sr.No.	Joints (Big)	No. of patients		Total
		Group A	Group B	
1.	Shoulder	20 (66.67 %)	18 (60.00 %)	38 (63.33 %)
2.	Elbow	24 (80.00 %)	16 (53.33 %)	40 (66.67 %)
3.	Wrist	30 (100 %)	27 (90.00 %)	57 (95.00 %)
4.	Hip	14 (46.66 %)	7 (23.33 %)	21 (35.00 %)
5.	Knee	27 (90.00 %)	25 (83.33 %)	52 (86.66 %)
6.	Ankle	29 (96.66 %)	28 (93.33 %)	57 (95.00 %)

Majority of patients presented with classical involvement of Wrist joint and Ankle joint each 95.00%, followed by Knee joint 86.66%, Elbow joint 66.67%, shoulder joint 63.33% while involvement of hip joint was seen in 35.00 % patients.

**Table 5.21: The effect of Therapy on Subjective parameter, Objective parameter and Haematological parameter of Group 'A' presented in below table.**

Sr. No.	Grade	Subjective parameter		Objective parameter		Haematological parameter	
		No. of Patient	%	No. of Patient	%	No. of Patient	%
1	Excellent	21	84	12	48	12	48
2	Good	03	12	13	52	6	24
3	Fair	00	0	0	0	6	24
4	Poor	01	04	0	0	1	04
5	Total	25	100	25	100	25	100

**Table 5.22: The effect of Therapy on Subjective parameter, Objective parameter and Haematological parameter of Group 'B' presented in below table.**

Sr. No.	Grade	Subjective parameter		Objective parameter		Haematological parameter	
		No. of Patient	%	No. of Patient	%	No. of Patient	%
1	Excellent	0	0	0	0	0	0
2	Good	2	08	01	04	0	0
3	Fair	5	20	14	56	01	04
4	Poor	18	72	10	40	24	96
5	Total	25	100	25	100	25	100

**Table 5.23: Effect of Therapy wise distribution of 50 patients of Amavata.**

Sr.No	Effect of Therapy	Group A		Group B	
		No. of Patients	Percentage	No. of Patients	Percentage
1.	Excellent	13	52	0	0
2.	Good	11	44	01	04
3.	Fair	01	04	14	56
4.	Poor	0	0	10	40

In group A, 52.00 % patients have got Excellent results, 44.00 % patients have got Good results, where as 4.00 % patients have got fair results.

In group B, Good results was observed in 4.00 % patients, where as 56.00 % patients have shown fair results, and 40.00% patients have shown poor results.

**Table 5.24: Effect of therapy on Associated Symptoms of Amavata in 50 Patients.**

Sr. No.	Associated Symptoms	Group A		Group B	
		BT	AT	BT	AT
1.	Angamarda	25 (100 %)	07 (28.00 %)	25 (100 %)	23 (92.00 %)
2.	Agnimandya	23 (92.00 %)	04 (16.00 %)	25 (100 %)	22 (88.00 %)
3.	Aruchi	20 (80.00 %)	03 (12.00 %)	18 (72.00 %)	18 (72.00 %)
4.	Trishna	16 (64.00 %)	03 (12.00 %)	14 (56.00 %)	14 (56.00 %)
5.	Alasya	24 (96.00 %)	05 (20.00 %)	24 (96.00 %)	23 (92.00 %)
6.	Jwar	20 (80.00 %)	0 (0 %)	18 (72.00 %)	18 (72.00 %)
7.	Apaka	18 (72.00 %)	03 (12.00 %)	18 (72.00 %)	18 (72.00 %)

In group A out of 25 (100 %) patients 18 (72.00 %) have got relief from Angamarda and in group B, out of 25 (100 %) patients only 02 (8.00 %) have got relief from Angamarda.

In group A, Agnimandya reported in 23 (92.00 %) patients before the treatment and after the treatment 19 (76.00 %) patients have got relief from this symptom and in group B

Agnimandya was reported in 25 (100 %) patients before the treatment and after the treatment only 03 (12.00 %) patients have got relief from this symptom.

In group A, Aruchi was reported in 20 (80.00 %) patients before the treatment and after the treatment 17 (68.00 %) patients have got relief from this symptom where as in group B, Aruchi was reported in 18 (72.00%) patients and after the treatment this symptom was not relieved in any patients.

In group A, Trushna was reported in 16 (64.00 %) patients before the treatment and after the treatment 13 (52.00 %) patients have got relief from this symptom where as in group B, Trushna was reported in 14 (56.00%) patients before the treatment and after the treatment this symptom was not relieved in any patients.

In group A, Alasya was reported in 24 (96.00 %) patients before the treatment and after the treatment 19 (76.00 %) patients have got relief from this symptom where as in group B Alasya was reported in 24 (96.00 %) patients before the treatment and after the treatment only 01 (04.00 %) patients have relieved from this symptom.

In group A, Jwar was reported in 20 (80.00 %) patients before the treatment and after the treatment it was recovered in all the patients, where as in group B, Jwar was reported in 18 (72.00%) patients before the treatment and after the treatment this symptom was not relieved in any patients.

In group A, Apaka (Indigestion) reported in 18 (72.00 %) patients before the treatment and after the treatment 15 (60.00 %) patients have got relief from this symptom, where as in group B, Apaka was reported in 18 (72.00%) patients and after the treatment this symptom was not relieved in any patients.

**Table 5.25: Effect of therapy on cardinal feature of Amavata in joints of right side in group A.**

Sr. No.	Sandhishool	Mean		S.E.(m)±	‘t’cal	P
		BT	AT			
1.	Shoulder	1.44	0.2	0.22	5.68	<0.001
2.	Elbow	1.20	0.16	0.22	4.73	<0.001
3.	Wrist	1.84	0.48	0.16	8.39	<0.001
4.	Hip	0.92	0.12	0.20	4.00	<0.001
5.	Knee	2.12	0.36	0.19	9.51	<0.001
6.	Ankle	2.00	0.20	0.178	6.65	<0.001

The effect on cardinal symptoms were shown in above table indicates that statistically highly significant relief was found in right shoulder, elbow, wrist, hip, knee, ankle joints.

**Table 5.26: Effect of therapy on cardinal feature of Amavata in joints of left side in group A.**

Sr. No.	Sandhishool	Mean		S.E.(m)±	‘t’cal.	P
		BT	AT			
1.	Shoulder	1.64	0.20	0.21	6.89	<0.001
2.	Elbow	1.44	0.16	0.18	7.19	<0.001
3.	Wrist	2.00	0.60	0.14	9.89	<0.001
4.	Hip	0.76	0.08	0.18	3.78	<0.001
5.	Knee	2.08	0.28	0.19	9.40	<0.001
6.	Ankle	1.72	0.16	0.16	9.51	<0.001

The effect on cardinal symptoms were shown in above table indicates that statistically highly significant relief was found in shoulder, elbow, wrist, hip, knee and ankle joints.

**Table 5.27: Effect of therapy on cardinal feature of Amavata in joints of right side in group A.**

Sr. No.	Sandhishoth	Mean		S.E.(m)±	‘t’cal.	P
		BT	AT			
1.	Shoulder	33.98	32.42	0.18	8.51	<0.001
2.	Elbow	23.36	22.58	0.18	4.38	<0.001
3.	Wrist	16.12	15.24	0.15	5.95	<0.001
4.	Hip	68.62	67.82	0.22	3.61	<0.01
5.	Knee	35.64	34.62	0.16	6.40	<0.001
6.	Ankle	24.00	23.00	0.14	7.78	<0.001

The effect on cardinal symptoms were shown in above table indicates that statistically highly significant relief was found in shoulder, elbow, wrist, knee, ankle joints, while it was significant in hip joint.

**Table 5.28: Effect of therapy on cardinal feature of Amavata in joints of left side in group A.**

Sr. No.	Sandhishoth	Mean		S.E.(m)±	‘t’cal.	p
		BT	AT			
1.	Shoulder	33.80	32.80	0.13	7.56	<0.001
2.	Elbow	23.46	22.54	0.18	5.19	<0.001
3.	Wrist	15.86	14.70	0.15	7.77	<0.001
4.	Hip	68.66	68.00	0.19	3.54	<0.01
5.	Knee	35.58	34.54	0.12	8.51	<0.001
6.	Ankle	24.52	23.38	0.12	9.17	<0.001



The effect on cardinal symptoms were shown in above table indicates that statistically highly significant relief was found in shoulder, elbow, wrist, knee, ankle joints, while it was significant in hip joint.

**Table 5.29: Effect of therapy on cardinal feature of Amavata in joints of right side in group A.**

Sr. No.	Sandhigraha	Mean		S.E.(m)±	‘t’cal.	p
		BT	AT			
1.	Shoulder	1.20	0.2	0.19	5.22	<0.001
2.	Elbow	1.08	0.12	0.19	5.14	<0.001
3.	Wrist	1.80	0.36	0.16	8.77	<0.001
4.	Hip	0.68	0.12	0.17	3.22	<0.01
5.	Knee	1.60	0.28	0.16	8.22	<0.001
6.	Ankle	1.84	0.28	0.18	8.51	<0.001

The effect on cardinal symptoms were shown in above table indicates that statistically highly significant relief was found in shoulder, elbow, wrist, knee, ankle joints while it was significant in hip joint.

**Table 5.30: Effect of therapy on cardinal feature of Amavata in joints of left side in group A.**

Sr. No.	Sandhigraha	Mean		S.E.(m)±	‘t’cal.	P
		BT	AT			
1.	Shoulder	1.24	0.08	0.19	6.51	<0.001
2.	Elbow	1.04	0.08	0.16	6.08	<0.001
3.	Wrist	1.64	0.32	0.15	8.82	<0.001
4.	Hip	0.72	0.04	0.18	3.78	<0.001
5.	Knee	1.68	0.28	0.19	7.31	<0.001
6.	Ankle	1.68	0.32	0.18	7.49	<0.001

The effect on cardinal symptoms were shown in above table indicates that statistically highly significant relief was found in shoulder, elbow, wrist, hip, joints.

**Table 5.31: Effect of therapy on cardinal feature of Amavata in joints of right side in group A.**

Sr. No.	Sparsha-asahtva	Mean		S.E.(m)±	‘t’cal.	P
		BT	AT			
1.	Shoulder	1.16	0.20	0.18	5.40	<0.001
2.	Elbow	0.92	0.08	0.17	4.94	<0.001
3.	Wrist	1.76	0.40	0.14	9.71	<0.001
4.	Hip	0.68	0.08	0.15	3.93	<0.001
5.	Knee	1.88	0.20	0.17	9.85	<0.001
6.	Ankle	1.80	0.32	0.17	8.49	<0.001

The effect on cardinal symptoms were shown in above table indicates that statistically highly significant relief was found in shoulder, elbow, wrist, hip, knee, ankle joints.

**Table 5.32: Effect of therapy on cardinal feature of Amavata in joints of left side in group A.**

Sr. No.	Sparsha-asahtva	Mean		S.E.(m)±	‘t’cal.	P
		BT	AT			
1.	Shoulder	1.24	0.12	0.19	6.04	<0.001
2.	Elbow	1.24	0.16	0.15	7.11	<0.001
3.	Wrist	1.80	0.36	0.18	7.86	<0.001
4.	Hip	0.60	0.04	0.15	3.65	<0.01
5.	Knee	1.76	0.20	0.20	7.77	<0.001
6.	Ankle	1.76	0.28	0.17	8.49	<0.001

The effect on cardinal symptoms were shown in above table indicates that statistically highly significant relief was found in shoulder, elbow, wrist, knee and ankle joints while it was significant in hip joint.

**Table 5.33: Effect of therapy on cardinal feature of Amavata in joints of right side in group A.**

Sr. No.	Range of movement	Mean		S.E.(m)±	‘t’cal.	P
		BT	AT			
1.	Shoulder	77.60	87.20	1.85	5.19	<0.001
2.	Elbow	134.20	143.20	2.08	4.32	<0.001
3.	Wrist	70.80	83.20	1.58	7.82	<0.001
4.	Hip	124.20	135.80	2.84	4.09	<0.001
5.	Knee	114	129.20	1.56	9.69	<0.001
6.	Ankle	36.00	46.80	1.22	8.98	<0.001

The effect on cardinal symptoms were shown in above table indicates that statistically highly significant relief was found in shoulder, elbow, wrist, hip, knee and ankle joints.

**Table 5.34: Effect of therapy on cardinal feature of Amavata in joints of left side in group A.**

Sr. No.	Range of movement	Mean		S.E.(m)±	‘t’cal.	P
		BT	AT			
1.	Shoulder	78.80	88.80	1.93	4.77	<0.001
2.	Elbow	132.00	141.40	2.41	4.07	<0.001
3.	Wrist	68.60	80.60	1.50	8.00	<0.001
4.	Hip	126.00	136.00	2.41	4.48	<0.001
5.	Knee	115.00	128.40	2.09	6.61	<0.001
6.	Ankle	35.80	47.00	1.13	9.93	<0.001

The effect on cardinal symptoms were shown in above table indicates that statistically highly significant relief was found in shoulder, elbow, wrist, hip, knee and ankle joints.

**Table -5.35: Effect of therapy on Clinical Assesment in group A Patients.**

Sr.No.	Clinical Assesment	Mean		S.E.(m)±	‘t’cal.	P
		BT	AT			
1	Grip Test (Rt)	2.16	0.56	0.19	8.36	<0.001
	Grip Test (Lt)	1.92	0.56	0.14	9.71	<0.001
2	FootPressure(Rt)	1.92	0.32	0.17	9.24	<0.001
	FootPressure(Lt)	1.92	0.40	0.15	9.87	<0.001
3	Walking Time	1.00	0.12	0.12	7.33	<0.001
4	Weight	51.20	50.40	0.155	4.878	<0.001

After completion of the course of group A its effect on Clinical Assesment were observed as presented in above table. It provides highly significant results in Grip Test, Foot Pressure, Walking Time and weight.

**Table 5.36: Effect of therapy on Hematological Parameter of group A.**

Sr. No.	Hematological Parameter	Mean		S.E.(m)±	‘t’cal.	P
		BT	AT			
1.	Hb %	9.82	10.81	0.11	9.09	<0.001
2.	TLC	9220	8320	236.80	3.80	<0.001
3.	ESR	51	36	1.45	10.31	<0.001
4.	RA Titer	38	27	1.52	6.93	<0.001
5.	ASO Titer	208	096	36.70	3.06	<0.01

Group A provided statistically highly significant results in Hematological parameters Hb %, TLC, ESR, RA titer, while it was significant in ASO Titer.

**Table 5.37: Effect of therapy on Cardinal Features of Amavata in joints of right side in group B.**

Sr. No.	Sandhishool	Mean		S.E.(m)±	‘t’cal.	P
		BT	AT			
1.	Shoulder	0.96	0.72	0.14	1.66	>0.05
2.	Elbow	0.84	0.52	0.11	2.87	<0.05
3.	Wrist	1.76	1.48	0.16	1.77	>0.05
4.	Hip	0.60	0.40	0.12	1.73	>0.05
5.	Knee	1.64	1.36	0.16	1.77	>0.05
6.	Ankle	1.80	1.40	0.18	2.19	<0.05

The effect on cardinal symptoms were shown in above table indicates that statistically significant relief was found in elbow and ankle joints while it was insignificant in shoulder, wrist, hip, and knee joints.

**Table 5.38: Effect of therapy on Cardinal Features of Amavata in joints of left side in group B.**

Sr. No.	Sandhishool	Mean		S.E.(m) $\pm$	't'cal.	P
		BT	AT			
1.	Shoulder	1.20	0.92	0.14	2.06	<0.05
2.	Elbow	1.04	0.76	0.11	2.58	<0.05
3.	Wrist	1.92	1.60	0.18	1.78	>0.05
4.	Hip	0.48	0.24	0.09	2.75	<0.05
5.	Knee	1.72	1.44	0.16	1.77	>0.05
6.	Ankle	1.56	1.24	0.16	1.99	>0.05

The effect on cardinal symptoms were shown in above table indicates that statistically significant relief was found in shoulder, elbow and hip joints while it was insignificant in wrist, knee and ankle joint.

**Table 5.39: Effect of therapy on Cardinal Features of Amavata in joints of right side in group B.**

Sr. No.	Sandhishoth	Mean		S.E.(m) $\pm$	't'cal.	P
		BT	AT			
1.	Shoulder	32.50	32.46	0.09	0.40	>0.05
2.	Elbow	22.90	22.06	0.80	1.04	>0.05
3.	Wrist	15.74	15.72	0.13	0.15	>0.05
4.	Hip	70.88	70.76	0.09	1.36	>0.05
5.	Knee	35.04	34.84	0.14	1.44	>0.05
6.	Ankle	23.40	23.30	0.153	0.781	>0.05

The effect on cardinal symptoms were shown in above table indicates that statistically insignificant relief was found in shoulder, elbow, wrist, hip, knee, and ankle joints.

**Table 5.40: Effect of therapy on Cardinal Features of Amavata in joints of left side in group B.**

Sr. No.	Sandhishoth	Mean		S.E.(m) $\pm$	't'cal.	P
		BT	AT			
1.	Shoulder	32.42	32.34	1.94	1.84	>0.05
2.	Elbow	23.52	23.30	0.11	2.03	>0.05
3.	Wrist	15.62	15.42	0.11	1.85	>0.05
4.	Hip	70.72	70.56	0.08	1.99	>0.05
5.	Knee	35.08	34.94	0.12	1.16	>0.05
6.	Ankle	23.42	23.16	0.13	2.06	<0.05

The effect on cardinal symptoms were shown in above table indicates that statistically insignificant relief was found in shoulder, elbow, wrist, hip and knee joints while it was significant in ankle joints.

**Table 5.41: Effect of therapy on Cardinal Features of Amavata in joints of right side in group B.**

Sr. No.	Sandhigraha	Mean		S.E.(m) $\pm$	't'cal.	P
		BT	AT			
1.	Shoulder	0.80	0.56	0.12	2.01	>0.05
2.	Elbow	0.80	0.64	0.09	1.69	>0.05
3.	Wrist	1.56	1.24	0.14	2.32	<0.05
4.	Hip	0.40	0.36	0.12	0.33	>0.05
5.	Knee	1.32	1.04	0.14	2.06	<0.05
6.	Ankle	1.48	1.16	0.17	1.88	>0.05

The effect on cardinal symptoms were shown in above table indicates that statistically insignificant relief was found in shoulder, elbow, hip and ankle joints while it was significant in wrist and knee joints.

**Table 5.42: Effect of therapy on Cardinal Features of Amavata in joints of left side in group B.**

Sr. No.	Sandhigraha	Mean		S.E.(m) $\pm$	't'cal.	P
		BT	AT			
1.	Shoulder	0.88	0.64	0.13	1.81	>0.05
2.	Elbow	0.72	0.64	0.08	1.00	>0.05
3.	Wrist	1.56	1.24	0.17	1.88	>0.05
4.	Hip	0.36	0.28	0.06	1.44	>0.05
5.	Knee	1.36	1.04	0.16	1.99	>0.05
6.	Ankle	1.36	1.08	0.15	1.89	>0.05

The effect on cardinal symptoms were shown in above table indicates that statistically insignificant relief was found in shoulder, elbow, wrist, hip, knee, and ankle joints.

**Table 5.43: Effect of therapy on Cardinal Features of Amavata in joints of right side in group B.**

Sr. No.	Sparsha-asahtva	Mean		S.E.(m) $\pm$	't'cal.	P
		BT	AT			
1.	Shoulder	0.92	0.68	0.13	1.81	>0.05
2.	Elbow	0.72	0.48	0.09	2.75	<0.05
3.	Wrist	1.64	1.44	0.15	1.31	>0.05
4.	Hip	0.44	0.32	0.09	1.36	>0.05
5.	Knee	1.52	1.28	0.13	1.81	>0.05
6.	Ankle	1.72	1.36	0.21	1.74	>0.05

The effect on cardinal symptoms were shown in above table indicates that statistically insignificant relief was found in shoulder, wrist, hip, knee and ankle joints while it was significant in elbow joints.

**Table 5.44: Effect of therapy on Cardinal Features of Amavata in joints of left side in group B.**

Sr. No.	Sparsha-asahtva	Mean		S.E.(m)±	't'cal.	P
		BT	AT			
1.	Shoulder	0.92	0.68	0.12	2.01	>0.05
2.	Elbow	0.88	0.64	0.13	1.81	>0.05
3.	Wrist	1.68	1.40	0.147	1.89	>0.05
4.	Hip	0.36	0.24	0.07	1.81	>0.05
5.	Knee	1.44	1.04	0.10	2.65	<0.05
6.	Ankle	1.48	1.20	0.147	1.89	>0.05

The effect on cardinal symptoms were shown in above table indicates that statistically insignificant relief was found in shoulder, elbow, wrist, hip, and ankle joints while it was significant in knee joints.

**Table 5.45: Effect of therapy on Cardinal Features of Amavata in joints of right side in group B.**

Sr. No.	Range of movement	Mean		S.E.(m)±	't'cal.	P
		BT	AT			
1.	Shoulder	81.00	84.20	1.63	1.96	>0.05
2.	Elbow	139.6	142.6	1.53	1.96	>0.05
3.	Wrist	72.20	75.60	1.79	1.89	>0.05
4.	Hip	132.8	136.8	1.35	2.95	<0.05
5.	Knee	118.8	122.4	1.81	1.98	>0.05
6.	Ankle	39.4	41.60	1.15	1.90	>0.05

The effect on cardinal symptoms were shown in above table indicates that statistically insignificant relief was found in shoulder, elbow, wrist, knee and ankle joints while it was significant in hip joints.

**Table 5.46: Effect of therapy on Cardinal Features of Amavata in joints of left side in group B.**

Sr. No.	Range of movement	Mean		S.E.(m)±	't'cal.	P
		BT	AT			
1.	Shoulder	82.80	86.20	1.57	2.16	<0.05
2.	Elbow	137.8	140.8	1.55	1.93	>0.05
3.	Wrist	71.8	74.4	1.36	1.92	>0.05
4.	Hip	136.2	138.2	1.15	1.73	>0.05
5.	Knee	120.2	123.4	1.44	2.22	<0.05
6.	Ankle	37.60	40.40	1.47	1.89	>0.05

The effect on cardinal symptoms were shown in above table indicates that statistically insignificant relief was found in elbow, wrist, hip, and ankle joints while it was significant in shoulder and knee joints.

**Table 5.47: Effect of therapy on Clinical Assesments in group B Patients.**

Sr. No.	Clinical Assesments	Mean		S.E.(m)±	't'cal.	P
		BT	AT			
1	Grip Test (Rt)	1.76	1.32	0.21	2.11	<0.05
2	Grip Test (Lt)	1.68	1.28	0.22	1.85	>0.05
3	Foot Pressure (Rt)	1.56	1.24	0.16	1.96	>0.05
4	Foot Pressure (Lt)	1.56	1.20	0.19	1.89	>0.05
5	Walking Time	0.80	0.48	0.15	2.14	<0.05
6	Weight	51.24	51.02	0.10	2.29	<0.05

After completion of the course of group B its effect on Clinical Assesments were observed as presented in above table. It provides significant results in Grip Test (Rt hand) Walking Time and weight while it was insignificant in Grip Test (Lt hand) and Foot pressure of both legs.

**Table 5.48: Effect of therapy on Haematological Parameter of group B.**

Sr. No.	Haematological Parameter	Mean		S.E.(m)±	't'cal.	P
		BT	AT			
1.	Hb %	10.13	10.14	0.46	0.25	>0.05
2.	TLC	9336	9256	181	0.44	>0.05
3.	ESR	47.92	47.52	0.78	0.51	>0.05
4.	RA Titer	35.20	35.00	0.33	0.61	>0.05
5.	ASO Titer	316	286	8.00	1.00	>0.05

Group B provided statistically insignificant results in all Haematological parameters like Hb %, TLC, ESR, RA titer and ASO Titer.

**Table 5.49: Effect of therapy on RA factor.**

Sr.No.	RA Factor	No. of patients	
		BT (+)	AT (-)
1.	Group A	15	6
2.	Group B	15	0

In group A, before the treatment RA titer was positive in 15 patients and after the treatment it was negative in 6 patients, In group B, before the treatment RA titer was positive in 15 patients and after the treatment it was unchanged in all the patients.

## COMPARATIVE STUDY OF EFFECT ON SYMPTOMS IN GROUP 'A' AND GROUP 'B'

**Table No. 5.50: Comparative effect of therapy on Cardinal Features of Amavata in both the Groups.**

Sr. no.	Sandhishool		A.M.		S.E.(m)±	'Z'cal.	P
			Group A	Group B			
1	Rt.side	Shoulder	0.20	0.72	0.139	3.75	<0.01
2		Elbow	0.16	0.52	0.100	3.70	<0.01
3		Wrist	0.48	1.48	0.101	9.80	<0.01
4		Hip	0.12	0.36	0.093	2.57	<0.05
5		Knee	0.36	1.36	0.134	7.44	<0.01
6		Ankle	0.20	1.40	0.099	12.04	<0.01
7	Lt.side	Shoulder	0.20	0.90	0.134	5.36	<0.01
8		Elbow	0.16	0.76	0.129	4.67	<0.01
9		Wrist	0.60	1.60	0.123	8.12	<0.01
10		Hip	0.10	0.24	0.085	1.64	<0.01
11		Knee	0.30	1.44	0.125	9.11	<0.01
12		Ankle	0.16	1.24	0.114	9.43	<0.01

Comparative study of effect on symptoms Sandhishool of right sided joints shows that statistically significant relief was found in all the joint while that of left sided shows that all the joints were statistically significant except hip joint which was insignificant.

**Table No. 5.51: Comparative effect of therapy on Cardinal Features of Amavata in both the Groups.**

Sr. no.	Sandhishoth		A.M.		S.E.(m)±	'Z'cal.	P
			Group A	Group B			
1	Rt.side	Shoulder	32.42	32.46	0.751	0.05	>0.05
2		Elbow	22.58	22.06	0.773	0.67	>0.05
3		Wrist	15.24	15.72	0.301	1.59	>0.05
4		Hip	67.82	70.76	1.116	2.63	<0.05
5		Knee	34.62	34.87	0.524	0.47	>0.05
6		Ankle	23.00	23.30	0.341	0.88	>0.05
7	Lt.side	Shoulder	32.80	32.34	0.727	0.63	>0.05
8		Elbow	22.54	23.30	0.546	1.39	>0.05
9		Wrist	15.00	15.42	0.281	1.49	>0.05
10		Hip	68.00	70.56	1.054	2.43	<0.05
11		Knee	34.54	33.62	1.111	0.82	>0.05
12		Ankle	23.00	23.16	0.378	0.42	>0.05



Comparative study of effect on symptoms Sandhishoth of both sided joints shows that statistically significant relief was found in all the joint except hip joint of both side where it was insignificant.

**Table No. 5.52: Comperative effect of therapy on Cardinal Features of Amavata in both the Groups.**

Sr. no.	Sandhigraha		A.M.		S.E.(m)±	‘Z’cal.	P
			Group A	Group B			
1	Rt.side	Shoulder	0.20	0.56	0.109	3.31	<0.01
2		Elbow	0.12	0.64	0.102	5.10	<0.01
3		Wrist	0.36	1.24	0.109	8.03	<0.01
4		Hip	0.12	0.36	0.117	2.05	<0.05
5		Knee	0.28	1.04	0.116	6.55	<0.01
6		Ankle	0.28	1.16	0.117	7.50	<0.01
7	Lt.side	Shoulder	0.10	0.64	0.099	5.40	<0.01
8		Elbow	0.10	0.64	0.107	5.01	<0.01
9		Wrist	0.30	1.24	0.102	9.21	<0.01
10		Hip	0.00	0.28	0.091	3.08	<0.05
11		Knee	0.30	1.04	0.119	6.20	<0.01
12		Ankle	0.30	1.08	0.107	7.27	<0.01

Comparative study of effect on symptoms Sandhigraha of both sided joints shows that statistically significant relief was found in all the joint.

**Table No. 5.53: Comperative effect of therapy on Cardinal Features of Amavata in both the Groups.**

Sr. no.	Sparsha-asahtva		A.M.		S.E.(m)±	‘Z’cal.	P
			Group A	Group B			
1	Rt.side	Shoulder	0.20	0.68	0.114	4.23	<0.01
2		Elbow	0.08	0.48	0.082	4.86	<0.01
3		Wrist	0.40	1.44	0.109	9.52	<0.01
4		Hip	0.08	0.32	0.089	2.71	<0.01
5		Knee	0.20	1.28	0.104	10.39	<0.01
6		Ankle	0.32	1.36	0.113	9.19	<0.01
7	Lt.side	Shoulder	0.10	0.68	0.114	5.08	<0.01
8		Elbow	0.20	0.64	0.098	4.47	<0.01
9		Wrist	0.36	1.40	0.107	9.68	<0.01
10		Hip	0.00	0.24	0.079	3.05	<0.01
11		Knee	1.60	1.04	0.171	3.27	<0.01
12		Ankle	0.30	1.20	0.116	7.76	<0.01

Comparative study of effect on symptoms Sparsha-asahtva of both sided joints shows that statistically significant relief was found in all the joint.

**Table No. 5.54: Comperative effect of therapy on Cardinal Features of Amavata in both the Groups.**

Sr. no.	Range of movement		A.M.		S.E.(m)±	'Z'cal.	P
			Group A	Group B			
1	Rt.side	Shoulder	87.20	84.20	1.254	2.39	<0.05
2		Elbow	142.8	142.6	2.011	0.099	>0.05
3		Wrist	83.60	75.60	2.024	3.952	<0.01
4		Hip	135.8	136.8	2.821	0.35	>0.05
5		Knee	129.2	122.0	1.891	3.80	<0.01
6		Ankle	47.00	41.60	1.204	4.486	<0.01
7	Lt.side	Shoulder	88.00	86.20	1.087	1.65	>0.05
8		Elbow	141.0	140.8	2.049	0.098	>0.05
9		Wrist	81.00	74.40	2.418	2.729	<0.01
10		Hip	136.0	138.2	2.531	0.87	>0.05
11		Knee	128.4	123.4	2.031	2.46	<0.05
12		Ankle	47.00	42.40	1.969	2.33	<0.05

Comparative study of effect on symptoms Range of movement of right sided joints shows statistically significant results except elbow and hip joint where it was insignificant while that of left sided joints shows statistically significant result in wrist, knee and ankle joint shoulder, elbow and hip joint were showing insignificant result.

## CONCLUSIONS

1. The present clinical study has been undertaken to evolve the treatment procedure for Amavata and to see the efficacy of "Shunthi Ghrita". The study has been revealed that the maximum number of patients were got significant results in their signs and symptoms.
2. "Shunthi Ghrita" has shown significant reduction in positivity of RA titer ( $t = 6.93$ , at 0.1 % level), ASO titer ( $t = 3.06$ , at 1 % level) and also weight reduction ( $t = 4.87$ , at 0.1 % level), increases the Hb % ( $t = 9.09$ , at 0.1 % level) and decrease in ESR ( $t = 10.31$ , at 0.1 % level).
4. The drug "Shunthi Ghrita" has shown highly significant results in comparision to Placebo group because values of Z test were significant.
5. Finally it can be concluded that Amavata patients have got significant results with "Shunthi Ghrita" than "Placebo group".
7. To draw final conclusions the trial requires more clinical data.

8. From this clinical study we come out with partial fulfillment of aims and objectives which were mentioned in our study by evolving simple oral management and also critical study of samprapti of Amavata.

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