



# AN ETIOPATHOLOGICAL STUDY OF AMAVATA W.S.R TO RHEUMATOID ARTHRITIS AND ITS UPSHYATAMAKA PARIKSHAN WITH PANCHSAM CHURNA –A CASE STUDY

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## ABSTRACT

*Ayurveda* is oldest life science. Currently people are busy in getting success which has resulted in *Mithya ahara-vihara* (improper lifestyle & food habits). *Amavata* is also result of such disturbed lifestyle. *Amavata* is not mentioned in *Brihat-Trayee* (major three classical texts). *Ama* and *Vata* are the main components in the pathogenesis of *Amavata*. *Vata* gets obstructed by *Ama* and gets vitiated. It circulates *Ama* all over the body giving rise to the symptoms like *Shoola*, *Shotha*, *Gauravata* etc. The prevalence of RA is approximately 0.8% of the population (range 0.3 to 2.1%); Women are affected approximately more. Available modern drugs not cure and not directed towards improving quality of life and adverse effects is the issue again. Considering the longer duration of therapy and available costly therapies herbal drug like *Panchsam churna* which is cost effective was tested here. Study was carried out in one sample of 60 patients suffering from *Amavata*. Overall moderate relief in symptoms was observed. Wilcoxon Signed Ranks test has shown significant difference between BT and AT mean for all symptoms ( $P < 0.05$ ). No control drug was taken.

**Keywords:** *Amavata*, Rheumatoid Arthritis, *Panchsam Churna* etc.

**INTRODUCTION-** *Ayurveda* places great emphasis on prevention and encourages the maintenance of health through diet, lifestyle and the use of herb. It is a system which has been proposed with the dual objects of keeping each and every person healthy as well as to root out diseases. *Ayurveda* stands apart from the rest of medical fraternity with its holistic and all encompassing approach to the disease management on the basis of *Nidana Panchaka*. Today is the era of modernization and fast life, everyone is busy and living a stressful life. A change in lifestyle of modern human being has created several disharmonies in the biological system due to modernization and changes in dietary habits and emotional stress all these changes lead to hyosecretion of digestive juice and diminished gastrointestinal motility. Different diseases have been described in the context of "*Rasavaha Srotas*". *Rasavaha srotas* are considered as main *srotas* as they supply nutrients to all body parts, give *poshana* to all the *dhatu*s specially *Ras dhatu* which is responsible for the *poshana* of *uttrottar dhatu*. *Ama* which originates from improperly digested food is toxic particle that clogs the channels i.e. *Srotas* (mainly *Rasavaha srotas*). Different diseases have been described in the context of "*Rasavaha Srotas*" but the disease predominantly disturbing the daily life is "*Amavata*"

*Amavata* is not mentioned in *Brihat-Trayee* (major three classical texts). But further it is mentioned in the classical texts of next generation like *Madhava Nidana*, *Yogaratnakara*, *Chakradatta*, *Bhaishajya Ratnavali* etc.

#### **Need of this research work-**

Now a days due to improper ,irregular life style incidence of disease due to improper digestion is increasing.

- *Amavata* not hamper the routine work but also the psychology of patients.
- Due to wide spectrum of disease and much prevalence in society
- Lack of effective treatment in modern pathy.
- Affect mainly middle age and specially female.

#### **Aims and Objectives -**

- To study the concept of etiopathogenesis of *Amavata*.
- To study the comparative and analytical description of *Amavata* w.s.r to Rheumatoid Arthritis.
- To study the therapeutic effect of *Panchsam churna* on *Amavata* patients.

**Material & methods-**The present study aim to analyzing the therapeutic efficacy of *Panchsam Churna* in the management of *Amavata*. The methodology followed in the study includes the following aspects viz. Material required, source of data, inclusion and exclusion criteria, study design, treatment schedule, duration of treatment, parameters for assessing the response and follow up period. In this chapter the various materials required for the study along with their descriptions and method of application of the procedure is explained.

***Panchsam Churna*** –Drug reference is taken from *Sharangdhar Samhita Madhyam khanda* (6/95-96)

**INGREDIENTS**                      **QUANTITY**

<i>Shunthi</i>	1 part
<i>Haritki</i>	1 part
<i>Trivrit</i>	1 part
<i>Pippali</i>	1 part
<i>Sauvarchal</i>	1 part

**ANUPANA-** *sukhushan jala*

**DOSE -** 5 gm BD

**METHODOLOGY-**

1. **Source of Data** - Patients were taken from OPD and IPD of Govt.P.G Ayurveda college and Hospital, Varanasi

2. **Method of collection of Data-** Patients diagnosed as *Amavata* and fulfilling the inclusion criteria were selected .Patients were registered and recorded as per the specially designed clinical proforma.Review of literature was done from texts books available in library of Govt.P.G. Ayurveda college and hospital Varanasi, and from Authentic Research Journals,Websites and Digital publication.

**Inclusion Criteria –**

- 1 ) Patient having sign and symptoms of *Amavata* are considered for the present study.
- 2) Patient who had satisfied the criteria laid down by the American Rheumatism Association are selected and registered for detailed investigation and follow up. Patient has to satisfied atleast 4 of these 7 criteria.
- 3 ) Patients of 16- 60 years of age.
- 4 ) Both sex (of all the religion & caste).
- 5) Chronicity of less than 10 years.

**Exclusion Criteria –**

1. Complicated cases of R.A, associated with DM & HTN.
2. Patients suffering from Carcinoma.
3. Patients suffering from Systemic diseases like, Chronic Renal disease, Heart disease etc.
4. Patient having HIV & other immune compromised diseases.
5. Patient of RA with chronicity of more than 10 years.

**Criteria for Withdrawal-**

- Any critical emergency.
- Patients not attending regular follow ups.
- Patients having adverse effects of the drug

**STUDY DESIGN** – Present study is Randomized single Arm Trial.

**SAMPLE SIZE** -Minimum of 60 patients were selected randomly.

**Assessment criteria-**

### I.SUBJECTIVE PARAMETERS AND GRADING-

<b>Pain in joint</b>	<b>Score</b>
No pain	0
Mild pain of bearable nature, comes occasionally	1
Moderate pain, but no difficulty in joint movement, appears frequently and requires some <i>Upasaya</i> , measures for relief	2
Slight difficulty in joint movements due to pain or severe pain, requires medication and may remain throughout the day	3
More difficulty in moving the joints and pain is severe, disturbing sleep and requires strong analgesics.	4
<b>Swelling of the joint</b>	<b>Score</b>
No swelling	0
Slight swelling	1
Moderate swelling	2
Severe swelling	3
<b>Stiffness of joint</b>	<b>Score</b>
No stiffness or stiffness lasting for 5 min	0
Stiffness lasting for 5 min to 2 hrs.	1
Stiffness lasting for 2 to 8 hours	2
Stiffness lasting for more than 8 hours	3
<b>Tenderness of joints</b>	<b>Score</b>
No tenderness	0
Subjective experience of tenderness	1
Wincing of face on pressure	2
Wincing of face with withdrawal of affected parts on Pressure	3
Resist to touch	4
<b>Redness of joints</b>	<b>Score</b>
Redness observed before treatment	2
Reduction in redness after treatment	1
No redness	0

No change after treatment	2
<b>Warmth of joints</b>	Score
Raised temperature when compared to the normal body surface	2
Fall in local warmth	1
Normal temperature	0
No change after treatment	2

General symptoms of *Amavata* like *Agnimandya*, *Aruchi*, *Angamarda*, *Trishna*, *Gaurava*, *Alasya*, *Jwara*, *Bahumutrata*, *Kuksikathinya*, *Kukshishula*, *Nidraviparyaya*, *Chhardi*, *Vibandha*, *Jadya*, *Antrakujana*, *Daurbalya*, were scored as mentioned below.

General syptoms	Score
Symptoms observed before treatment	2
Some relief after treatment	1
Complete relief after treatment	0
No improvement after treatment	2

(II) Physiological normalcy which is further divided into

- Vata* i.e Relief in *Anaha*, *kukshikathinya*, *Antrakujan*
- Mutra* i.e Relief in *Bahumutrata*
- Purisha* i.e Relief in *Vibandha*

### (III) Functional Assessment

Following periodical functional tests were carried out for objective assessment of the improvement of *Amavata* patients.

[1] **Walking time:** The patients were asked to walk a distance of 50 feet and the time taken was recorded before and after the treatment by using stop watch.

[2] **Grip Strength:**

Patient able to compress sphygmomanometer cuff 200 mmhg or more	0
Patient able to compress sphygmomanometer cuff 200-120 mmhg	1
Patient able to compress sphygmomanometer cuff 120-70 mmhg	2
Patient able to compress sphygmomanometer cuff under 70 mmhg	3

**[3] Foot pressure –**

Patient able to press weighing machine upto 25-21 kg	0
Patient able to press weighing machine upto 20-16 kg	1
Patient able to press weighing machine upto 15-10 kg	2
Patient able to press weighing machine less than 10 kg	3

**[4]Functional Capacity**(IV) Assessment for *Agni Bala* :

Complete ability to carry on all routine duties without handicap	0
Adequate normal activity despite slight difficulty in joint movement	1
Few activities are persisting but patient can take care of himself	2
Few activities are persisting and patient requires an attendant to take care of himself.	3
Patients is totally bed ridden	4

A] score to *Ruchirahara kala* (Taste and appetite)

Equal willing towards all <i>Bhojya padartha</i>	0
Willing towards some specific <i>hara</i> or <i>Rasavishesha</i>	1
Willing towards only most liking food and not to other	2
Unwilling for food, but takes meal	3
Total unwilling for meal	4

B] score to *Abhyavaharanabhilasha* (Revival and improvement in hunger)

Person taking food in normal quantity twice a day	0
Person taking food in moderate quantity twice a day	1
Person taking food in less quantity twice a day	2
Person taking food in less quantity once a day	3
Person not at all taking food	4

C] Score to *Ahara Kala Samyagajaranam* (Digestion of ingested food within time) If proper at the end of digestion will give *Jirna Ahara Lakshana* –they are

*Utsaha, Laghuta, Udgar Shuddhi, Shutta Trishna Pravriti, Yathochhita Malotsarga*

Presence of all (five) symptoms after 6 hrs	0
Presence of four symptoms after 6 hrs	1
Presence of three symptoms after 6 hrs	2
Presence of two symptoms after 6 hrs	3
Presence of one symptom after 6 hours	4

#### OTHER CRITERIA AND GRADATION-

<i>Daurbalya</i>	<i>Bahumutrata</i>	<i>Kandu</i>
<i>Angamarda</i>	<i>Hridgraha</i>	<i>Vibandha</i>
<i>Agnimandhya</i>	<i>Nidralpata</i>	<i>Bhrama</i>
<i>Aruchi</i>	<i>Gaurav</i>	
<i>Hrillasa</i>	<i>Anaha</i>	
<i>Praseka</i>	<i>Daha</i>	
<i>Chhardi</i>	<i>Jwara</i>	
<i>Trishna</i>	<i>Kukshishula</i>	
<i>Shrama</i>	<i>Antrakujana</i>	

#### Gradation -

0-Absent

1-Mild

2-Moderate

3-Severe



**OBJECTIVE CRITERIA-** RA factor**INVESTIGATION-** ASO, ESR, CRP,CBC, X-RAY

**OBSERVATION** - Total 60 patients have been registered for the present study. Out of 60 patient only 53 patient completed the treatment.

Completed	Lama	Total
53	07	60

**Demographic data-**

- Distribution of patients based on Age –

Majority of the patients i.e 49.1% were reported in the age group of 31-40 yrs, followed by 39.6 % of 41-50 yrs of age group, while 11.3 % in the age group of 51-60 yrs.

- Sex wise distribution-

Among 53 patients of the study, majority of the patients were female 60.4% and remaining were male.

- Religion wise distribution –

Majority of the patients i.e 84.9 % were Hindu whereas remaining 15.1 % of the patients were Muslim.

- Marital status wise distribution of 53 patients of *Amavata*

In the present study, majority of the patients i.e 90.6% were married and 3.8% were widow and divorce, 1.9% were unmarried.

- *Ahara kala* wise distribution of 53 patients of *Amavata*-

Out of 53 patients, maximum i.e. 71.6% were doing *Akala bhojana* followed by *Kala bhojan* 15.09% and *Kalatita bhojana* 13.20%.

- Time duration for food intake wise distribution of 53 patients of *Amavata*.

In the present study maximum i.e. 67.9 % patients were taking *Naatidruta –Ativilambita Bhojana* followed by *Ativilambita bhojana* 18.86% and *Atidruta Bhojana* 13.2%.

- Addiction wise distribution of 53 patients *Amavata*-

Incidence of tea and Coffee was 47.1 %, tobacco chewing was 33.9% and smoking and Alcohol was 33.9 %, 16.9% respectively.

- Sleep quality wise distribution of 53 patients of *Amavata* - Out of 53 patients maximum i.e 49.05% of patients had *Adhika nidra*, followed by *Khandita nidra* 32.07%, *Samyaka nidra* 13.2%, *Alpanidra* 11.3%.

- Jihwa Samata wise distribution of 53 patients of *Amavata*-

In this study,100% patients found with Sama Jihwa.



- *Koshtha* wise distribution of 53 patients of *Amavata* - Out of 53 patients, maximum i.e. 64.1% of patients had *Krura Koshtha*, 20.7% of patients had *Madhyam koshtha* and 15.09% had *Mridu koshtha*.

- *Agni* wise distribution -

81.1% of patients had *Mandagni*, 11.3 % of patients had *Vishmagni*, 5.6% had *tikshanagni*, 1.8% had *Samagni*.

- Exercise wise distribution of 53 Patients of *Amavata*

Out of 53 patients, maximum i.e. 54.7% patients were not doing exercise followed by 30.18% were doing irregularly exercise, 15.09% doing regular exercise.

- *Abhyavarna shakti* wise distribution of 53 patients of *Amavata*.

62.2 % of patients having *Madhyam Abhyavarna Shakti*, 26.4 % of patient having *Pravara Abhyavarna Shakti* rest 11.32 % of patients having *Avara Abhyavarna Shakti*.

- *Jarana Shakti* wise distribution of 53 patients of *Amavata*.

Maximum i.e 71.6 % patients having *Avara Jarana Shakti*, followed by *Madhyama Jarana Shakti* 28.6%.

- *Mutra matra* wise distribution of 53 patients of *Amavata*

54.7 % patients were found with *Bahu Mutra* ,35.8% patients were having *samyaka* quantity of *Mutra* while 9.4% were found with *Alpa Mutra*.

- *Deha prakriti* wise distribution of 53 patients of *Amavata*

In the present study, majority of the patients i.e. 56.6 % were of *Kapha-vata prakriti* and 45.2% and 11.3 % were having *Kapha-Pitta* and *vata-pitta prakriti*.

- *Manas Prakriti* wise distribution of 53 patients of *Amavata*

In the present study, majority of the patients i.e. 54.7% were *Rajas* predominant *Prakriti*, followed by *Tamasika* predominant 45.2%.

- Chronicity wise distribution of 53 patients of *Amavata*

In the present study, majority of the patients i.e. 50.9% reported chronicity ranging between >2 to <4 years, 30.1% of patients were having the chronicity <= 2 years, chronicity of each >5 to <6 years and >6to <10 years was present in 9.4% of patients

- *Aaharaj nidana*

In the *Aharaja Nidana*, history of consumption of *madhura rasa is* (67.9%) ,*Ati guru* (71. 6%), *Snigdha* and *Sheeta is* (62.2%), *Ruksha* ( 33.9% ), (50.9%), (28.3%) of patients practicing *Vishamasan* and *Viruddahar* respectively.

- *Viharaj Nidana*

Among the *Viharatmaka nidana*, maximum number of patients i.e 52.8 % gave the history of *Diwaswapan* followed by *Visamashayya* and *Ativyayam* were 13.2 % and 1.88 % . respectively.

- *Manasika Nidana* -

Among *Manasika Nidana Chinta* was found in maximum no. of patients i.e 28.3% followed by *Shoka* in 24.5%, *Krodha* found in 15.09% and *Bhaya* in 3.7%.

R.A. factor wise distribution of 53 patients of *Amavata* -

In 3.7 % of patient R.A. factor is weekly positive and in 96.2 % patient R.A.factor is negative.

- Cardinal symptoms wise distribution-

*Sandhi shoola*, *Sandhigraha* was presented in all the patients followed by *Sandhishootha* in 90.5% and *Sparshasahyata* in 22.6% of patient.

- General symptoms wise distribution of 53 patients of *Amavata*

Majority of patients i.e 41.5 % had *Gauravta*, followed by *Aruchi* in 35.8% and *Jwara* in 33.9% of patients *Angamarda* and *Trishna* was found in 24.5% and 7.5% respectively.

- Associated symptoms wise distribution of 53 patients of *Amavata* -

Among Associated symptoms all 53 patients had *Daurbalya* followed by 96.2% of patient had *vibandha* and 81.1 % had *Agnimandhya* , *Bahumutrata* was found in 54.7% and *nidralpta* in 11.3

- Distribution of 53 patients of *Amavata* based on involvement of Joints-

All 53 patients were reported with involvement of PIP (hand) and 96.2% with wrist joint, while 52.8% of patient with DIPJ (hand), Shoulder and elbow joint were involved in 50.09% and 41.5 % respectively. Other joints involved were hip joint and ankle joint having 15.09% and 11.3 % of patients respectively. MTPJ) in 16.09% of patients and PIP (feet), DIP (feet) each were in 7.5% of patients.

## Results

Showing effect of therapy on subjective and objective criteria

## Effect of therapy on Cardinal Features :

Complain	n	Mean score		Relief %	Z	P	Significance
		BT	AT				
<i>Sansdhishoola</i>	53	1.84	0.84	54.34	-7.147	<0.05	S
<i>Sandhishootha</i>	48	1.83	0.83	54.64	-7.280	<0.05	S
<i>Sparshasahyat</i>	12	1.84	1.11	39.67	-6.245	<0.05	S
<i>Sandhigraha</i>	53	1.4	0.50	65.98	-7.141	<0.05	S

*Sandhishoola* : The mean score for *Sandhi shoola* before treatment was 1.84 which reduced to 0.84 after the treatment. 54.34% relief was observed in *Sandhishoola* .

*Sandhishootha* : The mean score for *Sandhishootha* before treatment was 1.83 which reduced to 0.83 after the treatment . 54.64 % relief was observed in *Sandhishootha*.

*Sparshasahyata* : The mean score before treatment was 1.84 which reduced to 1.11 after treatment .39.67 % relief was observed in *Sparshasahyata*.

*Sandhigraha* : The mean score before treatment was 1.4 which reduced to 0.05 after treatment. 65.98 % relief was observed in patients.

The statistical analysis showed that improvement was statistically significant in all four cardinal features( p value < 0.05)

## Effect of therapy on Associated Symptoms :

Symptoms	N	Mean difference		Relief %	Z	P	Significance
		BT	AT				
<i>Daurbalya</i>	53	1.09	0.35	67.8	-6.245	<0.05	S
<i>Alasya</i>	53	1.18	0.41	65.25	-6.403	<0.05	S
<i>Gaurava</i>	22	2.11	1.20	43.12	-6.788	<0.05	S
<i>Trishna</i>	04	1.75	0.92	58.68	-6.633	<0.05	S

<i>Jwara</i>	18	0.5 4	0.2 2	43.12	-4.123	<0.05	S
<i>Angamarda</i>	13	1.7 1	0.7 3	57.3	-7.076	<0.05	S
<i>Aruchi</i>	19	2.2 8	1.2 6	44.73	-7.086	<0.05	S
<i>Agnimandhya</i>	43	2.37	1.3 7	42.19	-7.147	<0.05	S

*Daurbalya* : The mean score before treatment was 1.09 which reduced to 0.35 after treatment.67.8% relief was observed and was statistically significant.(P value <0.05)

*Alasya* : The mean score before treatment was 1.18 which reduced to 0.41 after treatment.65.25 % relief was observed and was statistically significant.(P value <0.05)

*Gaurava* . : The mean score before treatment was 2.11 which reduced to 1.20 after treatment.43.12 % relief was observed and was statistically significant.(P value <0.05)

*Trishna* : The mean score before treatment was 1.75 which reduced to 0.92 after treatment.58.68 % relief was observed and was statistically significant. (P value <0.05)

*Jwara* : The mean score before treatment was 0.54 which reduced to 0.22 after treatment.43.12 % relief was observed and was statistically significant. .(P value <0.05)

*Angamarda* : The mean score before treatment was 1.71 which reduced to 0.73 after treatment.57.3 % relief was observed and was statistically significant. .(P value <0.05)

*Aruchi* : The mean score before treatment was 2.28 which reduced to 1.26 after treatment. 44.73m% relief was observed and was statistically significant.(P value <0.05)

*Agnimandhya* : The mean score before treatment was 2.37 which reduced to 1.37 after treatment. 42.19% relief was observed and was statistically significant. .(P value <0.05)

Effect of therapy on Physiological Normalcy of *Vata*, *Mutra* and *Purisha* :

Physiological normalcy of	N	Mean score		% of relief	Z	P	Significance
		BT	AT				
<i>Vata</i>	05	0.43	0.16	62.79	-3.500	<0.05	S
<i>Mutra</i>	29	1.75	0.92	47.42	-2.646	<0.05	S
<i>Purisha</i>	53	0.434 0	0.169 8	62.79	-3.500	<0.05	S

Effect on Physiological Normalcy of *Vata, Mutra and Purisha* : 62.79 % relief was found in *Apana vatadushti (Anaha, Antrakujana, Kukshishoola, Kukshikathinya)* and 47.42 % relief in *Mutra (Bahumutrata)* and 62.79 % relief in *Purisha (Vibandha)* symptoms.

The Statistical analysis showed that improvement was significant. (P value <0.05)

#### Effect of therapy on Degree of Disease Activity :

Degree of disease activity	N	Mean score		Relief %	Z	P	Significance
		BT	AT				
Grip strength	53	1.40	0.77	17.54	-6.245	<0.05	S
Foot pressure	53	2.00	1.50	27.7	-6.784	<0.05	S
Walking time in sec(for 25 feet)	53	2.00	1.44	28	-7.147	<0.05	S

Grip Strength : The mean score was 1.40 before treatment which reduced to 0.77 after treatment This 17.54 % relief was observed, which is significant relief. (P value <0.05)

Foot pressure : The mean score was 2.00 before treatment which reduced to 1.50 after treatment .27.7% relief was observed ,which is significant relief. (P value <0.05)

Walking Time : The mean score was 2.00 before treatment which reduced to 1.44 after treatment 28 % relief was observed, which is significant relief. (P value <0.05)

#### Effect of therapy on Agni Bala :

	N	Mean score		Relief %	Z	P	Significance
		BT	AT				
<i>Ruchirahara kaal</i>	53	2.28	1.26	44.73	-7.076	<0.05	S
<i>Abhyavaharana Shakti</i>	53	2.37	1.37	42.19	-7.147	<0.05	S
<i>Aharakaal samyakajaranam</i>	53	1.54	0.62	59.61	-7.000	<0.05	S

There was 44.73 % improvement observed in Ruchirahara, 42.19% in Abhyavaharana Shakti, and 52.61 % improvement was observed in Jaranashakti which is significant .(P value <0.05)

Effect of therapy on Lab parameters :

Investigation	Mean score		% change	t	P	Significance
	BT	AT				
Hb %	12.81	12.83	-0.0192	-0.156	0.878	NS
RBC	4.68	4.71	-0.029	-0.444	0.661	NS
TLC	7457	7430	26.9	0.127	0.900	NS
Neutrophils	58.84	58.30	0.43	0.442	0.663	NS
Lymphocytes	35.15	33.61	26	1.68	0.105	NS
Eosinophils	4.80	04.34	0.46	1.237	0.228	NS
Monocytes	2.73	2.53	0.192	0.926	0.363	NS
PCV	38.000	38.015	-0.015	-0.039	0.969	NS
ESR	41.38	33.15	8.23	1.021	0.317	NS

Above table shows that in patients treated with *Panchsam Churna*.

- There was -0.0192 % change found in Haemoglobin, which was statically insignificant. (P value 0.878)
- There was an decrease by 26.9% found in total WBC, which was statically insignificant. (P value 0.900)
- There was an decrease by 0.43 % found in Neutrophils, which was statically insignificant. (P value 0.663)
- There was an decrease by 26 % found in Lymphocyte, which was statically insignificant. (P value 0.105 )
- There was an decrease by 0.46 % found in Eosinophils, which was statically insignificant .(P value 0.228 )
- There was an decrease by 0.192% found in Monocytes, which was statically insignificant. (P value 0.363)
- There was an decrease by 0.015 % found in PCV, which was statically insignificant. (P> value 0.969)
- There was an decrease by 8.23 % found in ESR, which was statically insignificant. (P value 0.317)
- There was -0.029 % change found in RBC count, which was statically insignificant. (P value 0.661)



▪ **.- 5.7 Overall effect of therapy :**

No.	Criteria	No. of patients	%
1	Cured (75-100 %)	0	0
2	Moderate improvement (51-75%)	35	66.0
3	Mild improvement (25-51 %)	18	33.9
4	No improvement (< 25% )	0	0

▪ In the present study, no one patient got complete cured.66.03 % of the patients showed moderate improvement.Mild improvement was found in 33.9% of the patients.None of the patient remain unchanged.

**DISCUSSION-**

▪ **Discussion on Samprapti-**

*Samprapti* of *Amavata* is really a topic of discussion because in *Amavata* the main causative factor, *Ama* is the result of malfunctioning of digestive and metabolic mechanisms. The disease is initiated by the consumption of *Viruddha Ahara* and simultaneous indulgence in *Viruddha Ahara* in the preexistence of *Mandagni*. Though, *Ama* and *Vata* are chiefly pathogenic factors *Kapha* and *Pitta* are also invariably involved in its *samprapti*. Primarily the *Samprapti* originates in the *Annavaha srotasa* then branches out through the *Madhyama roga Marga*, with special inclination for *Sleshma sthana* especially *Sandhi*. *Rasa*, *Asthi* and *Majja dhatus* are primarily involved *Dushyas* though the *Mamsa Dhatu*, *Snayu* and *Kandara* are also affected. *Sandhishoola*, *Sandhishotha*, *Stabdhatu* and *Sparshasahyata* are salient feature of the disease. The disease *Amavata* run a chronic course and *Jadya*, *Sankocha*, *Anga vaikalya* etc. are responsible for crippling of the patients in the long run.

From the modern point of view, the disease Rheumatoid Arthritis stands parallel to *Amavata* in its clinical features. RA is a chronic inflammatory arthropathy, which most commonly affects middle aged women. Despite intensive research, the etiology of Rheumatoid Arthritis remains unknown. There is no clear evidence of an infective cause although this is a possibility. Immunological tests may demonstrate an imbalance between Thelper and Tsuppressor cells. It is known that some 60% of rheumatoid patients will be DR4 positive. It has been suggested that diet or stress could play a significant role, in the majority of RA patients. As noted earlier the uncertainty in the aetiopathogenesis of this disease is the main hindrance in the exploration of an effective treatment for its prevention. In spite of available treatment, it cripples the patient for the rest of his life. Moreover, it affects the younger and middle aged people, substantially hampering the economy of the Nation. Thus, the disease has posed great challenge to the Clinicians and Researchers. In context of present study, *Panchsam Churna* has been chosen as a shaman drug in *Amavata*, which is mentioned by *Sharangdhar (Madhyam Khanda.)*



The total effect of therapy is assessed in terms of complete relief, marked improvement, moderate improvement, cured and unchanged.

### Discussion on observation:

General Description of The Patients: General description of the patients studied in the present series was as follows :

- Majority of the patients (49.1%) were reported in the age group of 31 to 40 years group, followed by 39.6 % patients in the age group of 41- 50 years, while 11.3 % in the age group of 51-60 years. Textual references also reflect the predominance of Rheumatoid Arthritis in middle age. People of this establish their social, economic and professional lives at this age, they cannot focus on their health due to family responsibilities and carrier awareness, cannot follow the correct diet and behavior plan, which ultimately leads to Indigestion. May be due to this largest number of patients in this age group was found in this particular study.
- In this study majority of the patients were female (60.4%) as compared to male patients (39.6 %). Textual references also reflects the predominance of Rheumatoid Arthritis in females.
- Majority of the patients in this series were Hindus (84.9%), which may be due to predominance of Hindu community in this particular region whereas remaining (15.1%) of the patients were Muslim.
- In the present study majority of the patients (90.6%) were married as they were from the middle age group, 3.8% were widow and divorce, 1.9% were unmarried. This may be due to predominance of *Amavata* in middle age.
- Most of the women registered were housewives i.e. (50.9%) which reflects the general occupation of majority of the females in this area also due to family responsibilities home work, emotional factor, housewives were afflicted by Indigestion and formation of *Ama*. 39.6% and 1.9% patient were found office worker and labor respectively. This shows their stressful lifestyle & irregularity in all aspects i.e. eating, drinking, sleeping .
- In the present study maximum no. of patients (43.4%) were Graduated and followed by ( 34.0% ) of the post-graduate while remaining were high secondary passed and 5.2 % of the primary. However educational level is not directly related to pathogenesis of *Amavata* but we can say that educated people have sitting job also It may be due to urban habitat of the patients .
- Majority of the patients i.e. 39.6% were of upper-middle class followed by 35.8% of the patients of middle class, and Rich and Poor were 22.6% , 1.9% respectively It may be due to the fact that, this study was conducted in a general hospital, where free treatment facilities are available. Another possibility was that middle people are more prone to stress and strain, which may precipitate the disease *Amavata* .
- Majority of the patients i.e. (77.3%) in the present study were from urban area. This may be due to geographical location of the hospital in the urban area and (22.6%) were from rural area.
- Majority of patients i.e. (90.5% ) patients in the present study were Vegetarian. This data is only reflection of predominant diet in this region and rest were taking both vegetarian and non-vegetarian food.

- Maximum i.e. 71.6% were doing *Akala bhojana* followed by *Kala bhojan* (15.09%) and *Kalatita bhojana* (13.20%) *Akala bhojan* causes *Agnimandhya* .
- Maximum number of patients i.e. 67.9 % patients were taking *Naatidruta –Ativilambita Bhojana* followed by *Ativilambita bhojana* (18.86%) and *Atidruta Bhojana* (13.2%), According to *Acharya Charaka* those who eat too slow are not get satisfaction (*Atrpti*), they eat too much, their food becomes cold and digested irregularly.
- Maximum patients were i.e. habituated to sleep immediate after lunch 52.8%, 43.39 % of patients sitting / back to their work /job/duty, and *Pada shatagamana* (3.7 %). Reason behind this was lack of Knowledge, work load and sedentary life style. Due to work, job many of come back to their work just after meal afflicted by indigestion, because it leads to vitiation of *Dosha* and *Mandagni*. As it is a period of *Madhura Avasthapaka* in which there is already secretion of *Kapha* in more quantity for *Kledana* of food. Due to this *Ahara* gets *Vidahi* in spite of proper digestion.
- Maximum i.e. 54.7% patients were not doing exercise followed by 30.18% were doing irregularly exercise, 15.09% doing regular exercise. Now a days, due to growing use of technologies and sitting type of work culture, lack of time physical activities are decreasing, It is the cause for vitiation of *Kapha Vridhhi* and *Agni Mandhya*.
- Majority of patients i.e.62.2% have sedentary life style, 32.07 % of patients used to do moderate type of work followed by 5.6% have heavy work. These are the *Hetu* of *Kapha Vriddhi*, *Agnimandhaya*, *Ama* formation.
- Incidence of tea and Coffee was 47.1 %, tobacco chewing was 33.9% and smoking was 20.7%. Chewing Tobacco and Smoking is common in Varanasi. Due to Tannin content of Tea, it hampers digestion if taken frequently, by inhibition of digestive enzymes. All these addictions come under *Ahitashana* and *Vishamashana*, which lead to *Mandagni* and formation of *Ama* so, addiction may also play role in the aggravation of the disease *Amavata*
- Maximum i.e. 64.1% of patients had *Krura Kostha*, 20.7% of patients had *Madhyam kostha* and 15.09% had *Mridu kostha*. Disturbance of *Apanavayu*, *Samana vayu* and *Purishavaha Srotas* are evident for the alterations of *Koshtha* from normalcy.
- In this study maximum i.e. 81.1% of patients had *Mandagni*, 11.3 % of patients had *Vishamagni*. *Mandagni* is the root cause of the production of *Ama* as told by *Acharya Vagbhatta*, the data also prove the same.
- Maximum i.e 62.2 % of patients having *Madhyam Abhyavarna Shakti*, 26.4 % of patient having *Pravara Abhyavarna Shakti* rest 11.32 % of patients having *Avara Abhyavarna Shakti*. Due to faulty dietary habits sedentary life style and stressful life.
- Maximum i.e 71.6 % patients having *Avara Jarana Shakti*, followed by *Madhyama Jarana Shakti* 28.6% .This is due to the *Mandagni* which is one of the cause of *Amavata*.
- In the study it is noted that 39.6% patients had *Pichchhila Mala Pravritti*,79.2% of patients had *Durgandha* in *Malapravritti* 56.6% of patients need more time,more efforts during *Malapravritti*, 33.9% of patients need more time, few efforts during *Malapravritti*,96.2% patients reported unsatisfactory *Mala*

*Pravritti. Purisha* is *Anna mala* and due to undigested food and *Ama* production, *Sama Malapravritti* was observed with *Guru, Pichhila* and *Snigdha* with *Daurgandhatva* and due to indigestion the time required for its digestion prolongs and it results in irregular *Malapravritti*.

- In the study, 54.7 % patients were found with *Bahu Mutra*, 35.8% patients were having *samyaka* quantity of *Mutra* while 9.4% were found with *Alpa Mutra*. This may be due to formation of *Ama* and *Kapha Vridhi* and also *Acharya Madhav* has told *Bahumutrata* as a symptom of *Pravradh Amavata*.
- In this study, it was found that maximum number of patients i.e. 56.6% were possessing *Kapha Vata Prakriti*. In general *Kapha Prakriti* will have *Mandagni* leading to *Ama* formation, which when provoked by *Vata* and gets settled in respective *Sleshma sthana*. So, it is justifiable that *Kapha vata prakriti* persons are easily prone to *Amavata*.
- In the present study, majority of the patients i.e. 54.7% were *Rajas* predominant *Prakriti*, the people having *Raja* dominant *Prakriti* are *Chanchal* and *Jihvalolupa*, which leads to *Vishamshana* and thus responsible for causing *Mandagni*.
- 92.4% of the patients of this study reported negative family history of joint disorders whereas 7.5% patients reported positive family history. But to give any conclusion regarding the relation of family history with the incidence of disease *Amavata*, a large scale survey of the patients is required.
- In the present study, majority of the patients i.e. 50.9% reported chronicity ranging between >2 to <4 years, 30.1% of patients were having the chronicity <= 2 years, chronicity of each >5 to <6 and >6 to <10 years was present in 9.4% of patients. According to the study most of the patient had *Amavata* related from more than 2 year to less than 4 year the reason behind the chronicity of the disease are lack of knowledge, negligence, continuous consumption of etiological factors, and choice of *Ayurveda* treatment after failure of other pathies treatment.
- Rheumatoid Factor : In 3.7 % of patient R.A. factor is weekly positive and in 96.2 % patient R.A. factor is sero-negative. This observation collaborates very well with textual reference (Davidson – 1994).

### Discussion on *Nidana* :

- *Aharaja Nidana* and *Viharaj Nidana* : In the *Aharaja Nidana*, history of consumption of *Ati guru Ahara* is 71.6% *Madhura rasa pradhan ahara* is 67.9% , *Snigdha* and *Sheeta Ahara* is 62.2%, and 33.9% patients consume *Ruksha Ahara*. 50.9%, 28.3% of patients practicing *Vishamasan* and *Viruddahar* respectively. Majority of the patients in the present study gave the history of 52.63% of each *Guru* and *Snigdha* and *Sheeta* (50%) *Ahara Sevana*,
- Among the *Viharatmaka nidana*, maximum number of patients i.e 52.8 % gave the history of *Diwaswapna*. In this study 60.4% were females among which 50.9 % were housewives and it is noted that housewives after doing their household work and taking Lunch they sleep in day time *Diwaswapna* leads to vitiation of *Kapha* and hampers digestive fire. It disrupts the digestive enzymes and delays gastric emptying by disrupting gastric myoelectric function.

- All these factors leads to *Mandagni* and consequently to the formation of *Ama* so it can be concluded that all the above mentioned factors play an important role in precipitation and aggravation of the disease.
- *Mansika Nidana* : *Chinta* was found in maximum no. of patients i.e 28.3% followed by *Shoka* in 24.5%, *Krodha* found in 15.09% and *Bhaya* in 3.7%. *Acharya Charaka* quoted *Rasavaha Srotas* gets vitiated due to over worry. *Rasavaha Srotodushti* along with continuous indulgence of causative factors vitiates further *Srotas*, which leads to multisystem manifestation of the disease. Moreover, *Chintana* or excessive stress leads to stimulation of sympathetic nervous system and inhibits the gastric secretion ultimately leads to *Agnimandhya*. If a person is under psychological stress like fear, anxiety, depression etc, digestion will not be proper even if it takes the *Pathya Ahara*. *Pratikula Manasa bhava* having the effect on *Jathargni*.(Table no. 4.42 )

### Discussion on Symptoms :

- Cardinal Features: *Sandhi shoola*, *Sandhigraha* was presented in all the patients followed by *Sandhishootha* in 90.5% and *Sparshasahyata* in 22.6% of patient because these are the main symptoms, such finding are expected. These finding are due to the predominant *Madhura*, *Snigdha*, *Sheeta Ahara* and *Bhojnothara Vyayam*, *Adhyashana*, *Diwaswapan*.
- General Features: Majority of patients i.e 41.5 % had *Gauravta*, followed by *Aruchi* in 35.8% and *Jwara* in 33.9% of patients. *Angamarda* and *Trishna* was found in 24.5% and 7.5% respectively. Among Associated symptoms all 53 patients had *Daurbalya* followed by 96.2% of patient had *Vibandha* and 81.1 % had *Agnimandhya*, *Bahumutrata* was found in 54.7% and *Nidralpta* in 11.3%. Due to predominant diet of *Kapha dosha* (*Ati Guru*, *Snigdha*, *Madhura*, *Amla rasa*, wrong habits such as daytime *sleep*, *Adhyashana*, *Vishmashana*, *Alasya*, sedentary life style) *Agni* becomes poor and symptoms related to *Amavata* has been appeared.
- Maximum number of patients had involvement of *Kapha vriddhi* and *prakopa* followed by *Vata vriddhi* and *prakopa* in *Amavata*.
- Maximum number of patients had the *dushti* of *Asthivaha*, *Rasavaha*, *Majjavaha*, *Purishavaha*, *Raktavaha* and *Annavaha srotasa*, which is in accordance with the main *srotasa* involved in the disease process.
- Involvement of Joints: All 53 patients were reported with involvement of PIP (hand) and 96.2% with wrist joint, while 52.8% of patient with DIPJ (hand), Shoulder and elbow joint were involved in 50.09% and 41.5 % respectively. Other joints involved were hip joint and ankle joint having 15.09% and 11.3 % of patients respectively. MTPJ in 16.09% of patients and PIP (feet), DIP (feet) each were in 7.5% of patients.

### Discussion on Effect of Treatment:

In this study effect of treatment was assessed on the basis of changes observed after the treatment in *Rogabala*, *Agnibala*, Physiological normalcy of *Vata*, *Mutra*, *Purisha* symptoms, Degree of disease activity.



On the analysis of Effect of therapy on Cardinal features.

- *Sandhishoola*: The mean score for Sandhi shoola before treatment was 1.84 which reduced to 0.05 after the treatment. Z value is -7.147. This 54.34 % relief was statistically significant ( $p < 0.05$ )
- *Sandhishootha*: The mean score for *Sandhi shootha* before treatment was 1.83 which reduced to 0.83 after the treatment. Z value is -7.280. This 54.64% relief was statistically significant ( $P < 0.05$ )
- *Sparshasahyata* : The mean score before treatment was 1.84 which reduced to 1.11 after treatment . Z value is -6.245. This 39.67 % relief was statistically significant ( $P < 0.05$ )
- *Sandhigraha* : The mean score before treatment was 1.4 which reduced to 0.05 after treatment Z value is -7.141. This 65.98 % relief was statistically significant ( $P < 0.05$ ).
- *Daurbalya*: The mean score before treatment was 1.09 which reduced to 0.35 after treatment. Z value is -6.245 this 67.8% relief was statistically significant. (P value  $< 0.05$ ).
- *Alasya*: The mean score before treatment was 1.18 which reduced to 0.41 after treatment. Z value is -6.403 this 65.25 % relief was statistically significant. (P value  $< 0.05$ )
- *Gauravata*: The mean score before treatment was 2.11 which reduced to 1.20 after treatment. Z value is -6.788 This 43.12 % relief was statistically significant. (P value  $< 0.05$ ).
- *Trishna*: The mean score before treatment was 1.75 which reduced to 0.92 after treatment. Z value is -6.663 This 58.68 % relief was statistically significant. (P value  $< 0.05$ )
- *Jwara* : The mean score before treatment was 0.54 which reduced to 0.22 after treatment. Z value is -4.123 . This 43.12 % relief was statistically significant.(P value  $< 0.05$ ).
- *Angamarda* : The mean score before treatment was 1.71 which reduced to 0.73 after treatment. Z value is -7.076 .This 57.3 % relief was statistically significant (P value  $< 0.05$ ).
- *Aruchi*: The mean score before treatment was 2.28 which reduced to 1.26 after treatment. Z value is -7.076 This 44.73% relief was statistically significant.(P value  $< 0.05$ ).
- *Agnimandhya*: The mean score before treatment was 2.37 which reduced to 1.37 after treatment. Z value is -7.147 This 42.19% relief was statistically significant.(P value  $< 0.05$ )

Drugs of *Panchsam churna* i.e *Pippali*, *Haritki*, *Shunthi*, *Trivrit*, *Sauvarchal lavan* are *Katu-Tikta rasatmaka*, *Katu vipaki*, *Laghu*, *Ruksha gunatmaka* and possessing *Shoothara*, *Vatanulomana*, *Vibandha-hara*, *Shoola hara*, and *Kapha- vatahara karmas*. Hence *Panchsam churna* destroys *Ama* and brings *Vata* in normal state helping relief in symptoms.

Effect on Physiological Normalcy of *Vata*, *Mutra* and *Purisha* : the mean score in *Apana vatadushti* before treatment was 0.43 which reduced to 0.16 . Z value is -3.500. This 62.79 % relief was found in *Apana vatadushti* which is statistically significant. (P value  $< 0.05$ ). This is due to *Vatanulomana* property of *Panchsam churna*.

- The mean score in *Bahumutrata* before treatment was 1.75 which reduced to 0.92, Z value is -2.646. This 47.42 % relief in *Mutra (Bahumutrata)* was found which is statistically significant (P value  $< 0.05$ ). This is because of *shoshana* property of *Pippali* that absorbs excess *Kleda* and *Ama pachaka* properties of all drugs of *Panchsam churna*.

➤ The mean score in *Vibandha* before treatment was 0.43 which reduced to 0.16 .Z value is -3.500 This 62.79 % relief in *Purisha (Vibandha)* symptoms was found which is statistically significant. (P value <0.05). This is due to *Vatanulomana, Vibandha-hara, Virechaka* property.

#### **Effect on Agni Bala :**

➤ *Abhyavaharana Shakti* - The mean score before treatment was 2.37 which reduced to 1.37 after treatment. Z value is -7.147 .This 42.19% relief was observed, which is significant relief (P value<0.05)

➤ *Ruchirahara* -The mean score before treatment was 2.28 which reduced to 1.26 after treatment. Z value is -7.076 .This 44.73 % relief was observed, which is significant relief (P value<0.05)

➤ *Samyakjaranam Shakti* - The mean score before treatment was 1.54 which reduced to 0.62 after treatment. Z value is -7.000.This 59.6 % relief was observed, which is significant relief.(P value<0.05)

*Amavata* is caused by digestive insufficiency *Panchsam Churna* has *Agni Deepana, Pachana, Vatanuloman properties*. All the content of *Panchsam churna* has *Agni Deepan, Rochaka, Kaphashamaka properties*. *Ushnodaka anupana* also act as *Ama pachaka, deepana*, so overall it has significant effect on *Agni bala* .

#### **Effect of therapy on degree of disease activity:**

➤ Grip Strength -The mean score was 1.40 before treatment which reduced to 0.77 after treatment. This 17.54 % relief was observed, which is significant relief (P value <0.05)

➤ Foot pressure - The mean score was 2.00 before treatment which reduced to 1.50 after treatment 27.7% relief was observed, which is significant relief (P value <0.05)

➤ Walking Time - The mean score was 2.00 before treatment which reduced to 1.44 after treatment 28 % relief was observed, which is significant relief (P value <0.05)

Effect of therapy on Lab value: All the patients taken for the study were examined for Haemoglobin value before and after the treatment. There was -0.0192 % change found in Haemoglobin, which was statically insignificant (P value 0.878). There was an decrease by 26.9% found in total WBC, which was statically insignificant (P value 0.900).There was an decrease by 0.43 % found in Neutrophils, which was statically insignificant (P value 0.663). There was an decrease by 26 % found in Lymphocyte, which was statically insignificant.(P value 0.105 ).There was an decrease by 0.46 % found in Eosinophils, which was statically insignificant (P value 0.228 ) There was an decrease by 0.192% found in Monocytes, which was statically insignificant (P value 0.363).There was an decrease by 0.015 % found in PCV, which was statically insignificant (P> value 0.969) There was an decrease by 8.23 % found in ESR, which was statically insignificant.(P value 0.317) There was -0.029 % change found in RBC count, which was statically insignificant.(P value 0.661)

In the present study, no one patient got complete cured.66.03 % of the patients showed moderate improvement. Mild improvement was found in 33.9% of the patients. None of the patient remains unchanged.

## Summary-

The entire work is summarized in the section. The present clinical study entitled “An Etiopathological study of *Amavata* w.s.r to Rheumatoid Arthritis and its *upshayatamaka Parikshana* with *Panchsam churna* ” was completed with a clinical trial. This dissertation has mainly 3 parts.

Part 1 includes Introduction, Reviews of *Ayurvedic* and Modern Literatures. During the study, the available literatures in the ancient and modern medical books with regard to *Amavata* along with Rheumatoid Arthritis were compiled and critically analyzed. This has enabled to understand the physiopathology of the *Amavata* and mode of action of the therapeutics in a better way. The essential drug required for the study along with their properties has been described under the section of drug review.

Part 2 deals with Material and Methods and Observation and results. Method of preparation of the medicines along with study design has been mentioned under this heading. The patients suffering from *Amavata* and fulfilling the criteria of selection for the present study were randomly selected. The patients were subjected for detail clinical examination as per the specially designed proforma. Investigation which include CBC, R.A factor, ESR, ASO, CRP were done before and after the treatment to analyze the effectiveness of clinical trial drug *Panchsam churna*. The present clinical study comprised of 60 patients.

Part 3 deals with, Discussion, Summary and Conclusion. Among the selected 60 patients, observation of present study reveals that the incidence of *Amavata* is more common among the middle age group, in females, married people having *Mandagni*, vegetarian diet, addiction like coffee/tea, alcohol, having mental stress, having maximum indulgence in mentioned *Aharaja*, *Viharaja* and *Mansika Nidanas*.

Response of treatment was assessed in terms of clinical and investigational improvement. Both, improvement was calculated statistically and by reduction of mean difference of symptoms score.

Significant improvement ( $p < 0.05$ ) was found in symptoms like *Sandhishoola*, *Sandhishotha*, *Sandhigraha*, *Sparshasahyata*, *Angamarada*, *Aruchi*, *Trishna*, *Gauravata*, *Jwara*, *Daurbalya*, *Agnimandya*, *Praseka*, *Chhardi*, *Kandu*, *Vibandha*, *Bhrama*, *Kukshishula*, *Antrakujana*, *Anaha*, *Daha*, *Bahumutrata*, *Hridgraha*, *Nidralpata*.

After the observations when results were statistically analyzed, the overall effect of therapy reveals that in this clinical study 63 % i.e moderate improvement was found.

In this way the statistical analysis of this clinical study reveals that “The Clinical Trial Drug *Panchsam Churna* Is Moderately Effective In The *Amavata*”.

## Conclusion –

*Amavata* as a separate disease is not described in *Brihatrayi*, first time its detailed description is available in medial period text *Madhava Nidana*. It can be concluded that hypo-functioning of *Agni* otherwise termed as *Mandagni* is largely responsible for the formation of *Ama* which chief pathogenic factor of the disease. It is



observed that symptomatology of *Amavata* very closely resembles with the disease Rheumatoid arthritis. From this study, it is concluded that non-compliance of code of healthy diet, selection and eating plays a major role in causation of disease. Hence, we can say that code and conduct of healthy eating must be followed to achieve early and better results of the disease. Sedentary life style and lack of physical activity is all one of the major *nidana* in present era for *Amavata*. *Amavata* is the disease having *Vata* and *Kapha* predominance. But, in fact it is *Tridoshika* with origin from both *Pakvashaya* and *Amashaya*. *Panchsam churna* appears to be a good *Agni deepana*, *Pachana* and *Ruchya*, since statistically significant result ( $p < 0.05$ ) observed in appetite and bowel movements etc. are improved after taking *Panchsam churna*. *Pachsam churna* shows a significant ( $p$  value  $< 0.05$ ) result on cardinal features and associated symptoms of *Amavata*. Shamana chikitsa with *Panchsam Churna* provided moderate improvement. Use of single medicine gave limited results in *Amavata* patients. Without *Shodhana (Basti or Virechana)* it may take longer duration to get relief in symptoms of *Amavata*. No side effects were observed by *Panchsam Churna*. Null hypothesis is rejected and alternative hypothesis is accepted.

**Conflict of Interest – Nil**

**Source of Support - Nil**

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