



Research Article

**A CLINICAL STUDY ON THE EFFECT OF PUNARNAVADI CHURNA, SINGHANADA GUGGULU IN THE MANAGEMENT OF AMAVATA (RHEUMATOID ARTHRITIS)**

**Ranjan Rohit\*<sup>1</sup>, Singh Mahendra<sup>2</sup>, Singh Richa<sup>3</sup>, M. Kavitha<sup>4</sup>, Singh Shardul Vikram<sup>5</sup>**

\*<sup>1</sup>Lecturer, Dept of Basic Principles, S.A.M.C., Aligarh, U.P., India.

<sup>2</sup>Lecturer, Dept. of Rasashastra and Bhaishajya kalpana, S.A.M.C., Aligarh, U.P., India.

<sup>3</sup>M.D. Scholar, Dept. of Swasthavritta, R.D.M. Ayurveda P.G. College, Bhopal, M.P. India.

<sup>4</sup>Lecturer, Dept of Basic Principles, A.U. and A.M.C., Aligarh, U.P., India.

<sup>5</sup>Lecturer, Dept. of Kaumarbhritya, S.A.M.C., Aligarh, U.P., India.

Received on: 02/02/2014

Revised on: 15/02/2014

Accepted on: 26/02/2014

**ABSTRACT**

*Amavata*, is firstly introduced as an independent disease in *Madhav Nidana*. It is a disease of *Madhyam roga marga* as it affects *Sandhi* and *Hridya marma*. Though *Ama* and *Vata* are the two main predominant pathogenic factors but the disease also represents *Tridoshic* vitiation. The affliction of joints by *Vata dosha* in association with *Ama* shows that both play equal role of *Dosha* and *Dushya* in the causation of this disease. This study includes evaluate the effect of Trial drugs *Punarnavadi churna* with *Anupana* of *Rasna Saptak Qwatha* and *Eranda taila* on the signs and symptoms of *Amavata* and also to evaluate the effect of trial drug with a standard drug *Singhanada Guggulu* on the signs and symptoms of *Amavata*. In short we can say that, *Amavata* is the resultant of improper digestion or partially digestion of the food particles due to hypofunction of *Gatharagni* and also due to accumulation of mala in the body and it is also considered as *Pratham doshadusti*. It may be considered as partially or incomplete metabolized *Dathu* in case of *Dhatvagni mandata*. This study might be helpful in breakdown *Samprapti* of *Amavata roga* and give right way to patient of *Amavata*.

**KEYWORDS:** *Punarnavadi churna, Singhanada guggulu, Amavata, Rasna saptak qwatha.*

**INTRODUCTION**

The substance, which is not properly digested, disintegrated, foul smelling, excessive in quantity, slimy in nature and produces stiffness of the whole body is known as *Ama*<sup>[1-2]</sup>. Not only the food taken in huge quantity but the qualities like *Viruddha ahara, Guru, Ruksha, Vistambhi, Snigdha ahar* and *Agnimandata* also cause <sup>[3]</sup> in the production of *Ama*. Consumption of food when individual is afflicted with mental upset due to *Kama, Krodha, Lobha, Moha, Irshaya, Shoka, Bhaya, Lajja, Chinta, Mano Udvega, Manoglani* <sup>[4]</sup> etc. are important factors responsible for cause of *Agnimandyajanya ama*. According to this etymology the word *Ama* along with *Vata dosha* is termed as *Amavata*<sup>[5]</sup>. This also indicates that the *Ama* and *vata* are the two main predominant factors in causing *Amavata*. When *Prakupit vata* and *Ama* simultaneously enters in the *Kostha, Trika* and *Sandhi* leading to stiffness of the body and *Trika sandhi vedna*. The

symptom<sup>[6]</sup> like *Trisna, Gaurava, Gatrastabdhatta, Agnimandya, Apaka, Angamarda, Aruchi* and *Jwara* are found in this disease. In modern era it is correlated with Rheumatoid Arthritis (RA)<sup>[7]</sup>, inflammatory auto-immune disorders. It is the commonest among chronic inflammatory joint disease in which joints becomes swollen, painful and stiffness. The Trail drug *Punarnavadi churna*<sup>[8]</sup> with *Anupana* of *Rasna saptak qwatha* <sup>[9]</sup>, *Eranda taila*<sup>[10]</sup> and Standard drug *Singhanada guggulu*<sup>[11]</sup> along with trail drug work on disease *Amavata* and breakdown the *Samprapti* of *Amavata*.

**MATERIAL AND METHODS**

Step 1: preparation of *Punarnavadi churna, Rasna saptak qwatha* and *Singhanada guggulu*

Procedure 1: preparation of *Punarnavadi churna*

## Materials

- Punarnava (*Boerhavia diffusa* L), Guduchi (*Tinospora cordifolia* (Willd.) Hook.F. & Thoms.), Shunthi (*Zingiber officinale* Rosc.), Shatahva (*Anethum sowa* Kurz.), Vriddhadaruka (*Argenia nervosa* Burm.f.), Shati (*Curcuma zedoaria* (Christ.) Roscoe), Munditika (*Sphaeranthus indicus* L.) each drug taken in equal amount.

## METHOD

For the preparation of *Punarnavadi Churna* - Punarnava, Guduchi, Shunthi, Satahava, Vriddhadaruka, Sati and Munditika were taken in equal quantity and made into fine powder and kept in a neat and clean pot.

### Procedure 2: preparation of *Rasna saptak qwatha*

#### Materials

- Rasna (*Pluchea lanceolata* Oliver & Hiern.), Guduchi (*Tinospora cordifolia* (Willd.) Hook.F. & Thoms.), Erandmool (*Ricinus communis* L.), Devadaru (*Cedrus deodara* (roxb.) Loud.), Punarnava (*Boerhavia diffusa* L.), Gokharu (*Tribulus terrestris* L.), Aragvadha (*Cassia fistula* L.) each drug taken in equal amount.

## METHOD

For the preparation of the drug *Rasnasaptak qwatha* - Rasna, Guduchi, Erandmool, Dewadaru, Punarnava, Gokharu and Aragvadha were taken in equal quantity and made it into coarse power (*yawakut*) and made the *qwatha* with four times water. When the water is reduced by one fourth then *Qwatha* will be filtered.

### Procedure 3: preparation of *Singhanada guggulu*

#### Materials

- Erand Taila (*Ricinus communis* L.) - 600 gm, Suddha Gandhaka (Sulphur) - 150 gm, Suddha Gugglu (*Commiphora mukul* (Hook. Ex. Stocks) Engl.) - 150 gm, Amalaki (*Phyllanthus emblica* L.) -150 gm, Haritaki (*Terminalia chebula* Retz. & Willd.) - 150 gm, Vibhitaki (*Terminalia bellerica* Roxb.) - 150 gm and Water - 3 liters.

## METHOD

For the preparation of *Singhanada guggulu* each Haritaki, Vibhitaki and Amlaki were to be boiled in an iron vessel with water and when decoction reduced to one fourth and

filtered through cloth. Then *Suddha gandhaka*, *Guggulu* and *Eranda taila* were added to the decoction and stirring all with iron saddle. When the mass begins to solidify, then it was called *Siddha* (cooked). When the mass is slightly cooled made in to pills of four *Rati* (1gm approx.) each and kept in a neat and clean pot.

### Step 2: Clinical study

In the present study, the patients had been selected from OPD, IPD of the Govt. *Ayurved* Hospital Rewa and referred from other health institutes or by any physician of Rewa or from other places. Total 60 *Amavata* patients were registered for study and these patients are divided into two groups (30 patients each group). But out of them four patients from Trial group and three patients from standard group were LAMA during the treatment. Lastly Trial completed on 26 patients in Trial group and 27 patients in standard group. The treatment given to the patients was of two months and after that follows up the patients as possible.

**Trial group:** Contains 26 patients; Treated with *Punarnavadi churna* with *Anupana* of *Rasna saptak qwatha* and *Eranda taila* (trial drugs). The patients of the Trial group had been given *Punarnavadi churna* in the dose of 3 to 6 grams with *anupana* of 30 to 50 ml. of *Rasna saptaka qwatha* and 10 to 20ml of *Eranda tail* in the morning and evening with empty stomach.

**Standard group:** contains 27 patients; treated with one standard drug *Singhanada guggul* and with trial drugs. *Singhanada guggulu* had been given 1 tab. B.D. to the patient of *Amavata* after meal in the morning and in evening with the Trial drugs.

## CRITERIA FOR ASSESSMENT OF PATIENTS

### Diagnosis

Pathological investigations regarding disease had also been done to support the diagnosis as well as to exclude the other pathology, such as Hb%, TLC, DLC, ESR, RA Factor, X-ray of the affected joints. The investigations had been done before and after the treatment as well as during the treatment to rule out other pathology were developing.

### Parameter with gradation Score of *Amavata*

The score system adopted for the evaluation of signs and symptoms before and after the treatment of *Amavata*. The score for all the previously mentioned signs and symptoms of

*Amavata* were as follows, Absent-0, Mild-1, Moderate-2 and Severe-3.

### Criteria of Assessing Total Effect

After the completion of treatment of both groups, the Trial group and standard group of *Amavata* under study, were finally assessed and evaluated in terms of highly effective, moderate effective, mild effective and negligible. The procedure of assessment of total effect of therapy on both groups of patients was described as **Highly Effective**: In this category when the signs, symptoms and pathological abnormalities of *Amavata* reduced by 76 to 100% were noted ++++ improvement and considered as highly effective. **Moderate Effective**: When signs, symptoms and pathological abnormalities were reduced by 51 to 75% and noted +++ improvement thus considered to be moderate effective. **Mild Effective**: A relief of signs, symptoms and pathological abnormalities reduced by 26 to 50% and noted ++ improvement thus considered to be mild effective. **Negligible**: If the signs, symptoms and pathological abnormalities were reduced by 25% or below and considered + improvement thus accepted as negligible.

### OBSERVATION

#### Signs and Symptoms of *Amavata* of Trial Group

1. **Sandhi Shotha (Swelling over joints)**: In the study twenty six patients of Trial group before treatment the mean score of *Sandhi Shotha* was 1.538 with minimum 0 and maximum 3 score. While after treatment the mean score of *Sandhi Shotha* was 0.423 with minimum 0 and maximum 1 score. The mean score of total relief was 1.115 (72.50%). In the comparative statistical study the **SD, SE, "t" and "p" values were 0.6661, 0.1306, 8.499 and p <0.001** respectively.
2. **Sandhi Shoola (Pain in joints)**: In the study twenty six patients of Trial group before treatment the mean score of *Sandhi Shoola* was 1.961 with minimum 1 and maximum 3 score. While after treatment the mean score of *Sandhi Shoola* was 0.538 with minimum 0 and maximum 1 score. The mean score of total relief was 1.423 (72.54%). In the comparative statistical study the **SD, SE, "t" and "p" values were 0.5038, 0.0988, 14.372 and p <0.001** respectively.
3. **Agni Daurbalya (Poor digestive faculty of body)**: In the study twenty six patients of Trial group before treatment the mean score of *Agni*

*Daurbalya* was 1.653 with minimum 0 and maximum 3 score. While after treatment the mean score of *Agni Daurbalya* was 0.076 with minimum 0 and maximum 1 score. The mean score of total relief was 1.577 (95.34%). In the comparative statistical study the **SD, SE, "t" and "p" values were 0.8086, 0.1585, 9.905 and p <0.001** respectively.

4. **Praseka (Salivation)**: In the Trial group before treatment the mean score of *Praseka* was 0.461 with minimum 0 and maximum 2 score. While after treatment the total means score of *Praseka* was 0.076 with minimum 0 and maximum 1 score. The mean score of total relief was 0.385 (83.33%). In the comparative statistical study the **SD, SE, "t" and "p" values were 0.4961, 0.0972, 3.909 and p <0.001** respectively.
5. **Utsaha hani (Loss of enthusiasm)**: In the Trial group before treatment the mean score of *Utsaha hani* was 2.230 with minimum 1 and maximum 3 score. While after treatment the total mean score of *Utsaha hani* was 0.923 with minimum 0 and maximum 2 score. The mean score of total relief was 1.307 (58.62%). In the comparative statistical study the **SD, SE, "t" and "p" values were 0.7359, 0.1443, 9.009 and p <0.001** respectively.
6. **Kukshi shoola (Abdominal colic)**: In the Trial group before treatment the mean score of *Kukshi shoola* was 0.538 with minimum 0 and maximum 1 score. While after treatment the mean score of *Kukshi shoola* was 0 with minimum 0 and maximum 0 score. The mean score of total relief was 0.538 (100%). In the comparative statistical study the **SD, SE, "t" and "p" values were 0.5084, 0.0997, 5.315 and p <0.001** respectively.
7. **Malabaddhata (Constipation)**: In the Trial group before treatment the mean score of *Malabaddhata* was 2.384 with minimum 1 and maximum 3 score. While after treatment the mean score of *Malabaddhata* was 0 with minimum 0 and maximum 0 score. The mean score of total relief was 2.384 (100%). In the comparative statistical study the **SD, SE, "t" and "p" values were 0.6288, 0.1233, 18.798 and p <0.001** respectively.

#### Signs and Symptoms of *Amavata* of Standard Group

1. **Sandhi Shotha (Swelling over joints)**: In the study twenty seven patients of Standard group before treatment the mean score of *Sandhi Shotha* was 1.592 with minimum 0 and maximum 3 score. While after treatment the

mean score of *Sandhi Shotha* was 0.296 with minimum 0 and maximum 1 score. The mean score of total relief was 1.296 (81.39%). In the comparative statistical study the **SD, SE, "t" and "p" values were 0.7240, 0.1393, 9.260 and p <0.001** respectively.

2. **Sandhi Shoola (Pain in joints):** In the study twenty seven patients of Standard group before treatment the mean score of *Sandhi Shoola* was 2.074 with minimum 1 and maximum 3 score. While after treatment the mean score of *Sandhi Shoola* was 0.370 with minimum 0 and maximum 1 score. The mean score of total relief was 1.704 (82.14%). In the comparative statistical study the **SD, SE, "t" and "p" values were 0.6085, 0.1171, 14.517 and p <0.001** respectively.
3. **Agni Daurbalya (Poor digestive faculty of body):** In the studied twenty seven patients of Standard group before treatment the mean score of *Agni Daurbalya* was 1.925 with minimum 1 and maximum 3 score. While after treatment the mean score of *Agni Daurbalya* was 0.148 with minimum 0 and maximum 1 score. The mean score of total relief was 1.777 (92.30%). In the comparative statistical study the **SD, SE, "t" and "p" values were 0.5774, 0.1111, 15.931 and p <0.001** respectively.
4. **Praseka (Salivation):** In the Standard group before treatment the mean score of *Praseka* was 0.629 with minimum 0 and maximum 2 score. While after treatment the mean score of *Praseka* was 0.037 with minimum 0 and maximum 1 score. The mean score of total relief was 0.592 (94.11%). In the comparative statistical study the **SD, SE, "t" and "p" values**

were **0.5007, 0.0963, 6.126 and p <0.001** respectively.

5. **Utsaha hani (Loss of enthusiasm):** In the Standard group before treatment the mean score of *Utsaha hani* was 2.259 with minimum 1 and maximum 3 score. While after treatment the total mean score of *Utsaha hani* was 0.592 with minimum 0 and maximum 1 score. The mean score of total relief was 1.667 (73.77%). In the comparative statistical study the **SD, SE, "t" and "p" values were 0.4804, 0.0924, 17.965 and p <0.001** respectively.
6. **Kukshi shoola (Abdominal colic):** In the Standard group before treatment the mean score of *Kukshi shoola* was 0.703 with minimum 0 and maximum 2 score. While after treatment the mean score of *Kukshi shoola* was 00 with minimum 0 and maximum 0 score. The mean score of total relief was 0.703 (100%). In the comparative statistical study the **SD, SE, "t" and "p" values were 0.5417, 0.1042, 6.717 and p <0.001** respectively.
7. **Malabaddhata (Constipation):** In the Standard group the mean score of *Malabaddhata* before treatment was 2.518 with minimum 2 and maximum 3 score. While after treatment the total means score of *Malabaddhata* was 0.148 with minimum 0 and maximum 1 score. The total mean score of relief was 2.370 (94.11%). In the comparative statistical study the **SD, SE, "t" and "p" values were 0.5092, 0.0980, 25.612 and p <0.001** respectively.

**Table 1: Statistical Values of TLC, DLC, Hb%, ESR, S. Uric Acid and Rh-Factor of Trial Group**

S. No.	Investigation	Mean Score		Differ-ence of Mean	SD	SE	't' value	'p' value	Remarks
		BT	AT						
1	Total Leucocyte count/cu.mm	10309.23	9569.23	740	388.64	76.21	9.710	p<0.001	H.S.
2.	Differential Leucocyte count/cu.mm								
	Polymorphs	67.38	65.11	5.27	2.4903	0.4883	8.109	p<0.001	H.S.
	Lymphocytes	28.53	31.19	2.66	2.9165	0.5719	7.186	p<0.001	H.S.
	Monocytes	1.75	1.10	0.65	0.4408	0.0864	9.143	p<0.001	H.S.
	Basophils	0.31	0.20	0.11	0.3459	0.0678	4.867	p<0.001	H.S.
	Eosinophils	2.23	2.15	0.08	0.9766	0.1915	5.587	p<0.001	H.S.
3.	Haemoglobin %	11.12	12.72	1.60	0.2900	0.0568	28.697	p<0.001	H.S.
4.	ESR mm 1 <sup>st</sup> hr Wintrobe Method	32.65	15.96	16.69	4.6196	0.9059	18.423	p<0.001	H.S.
5.	S.Uric Acid mg/dl	4.80	4.58	0.22	0.2044	0.04008	9.498	p<0.001	H.S.
6.	Rh-factor 1U/ml	22.69	21.07	1.62	1.3789	0.2704	8.505	p<0.001	H.S.

**Table 2: Statistical Values of TLC, DLC, Hb%, ESR, S.Uric Acid and Rh-Factor of Standard Group**

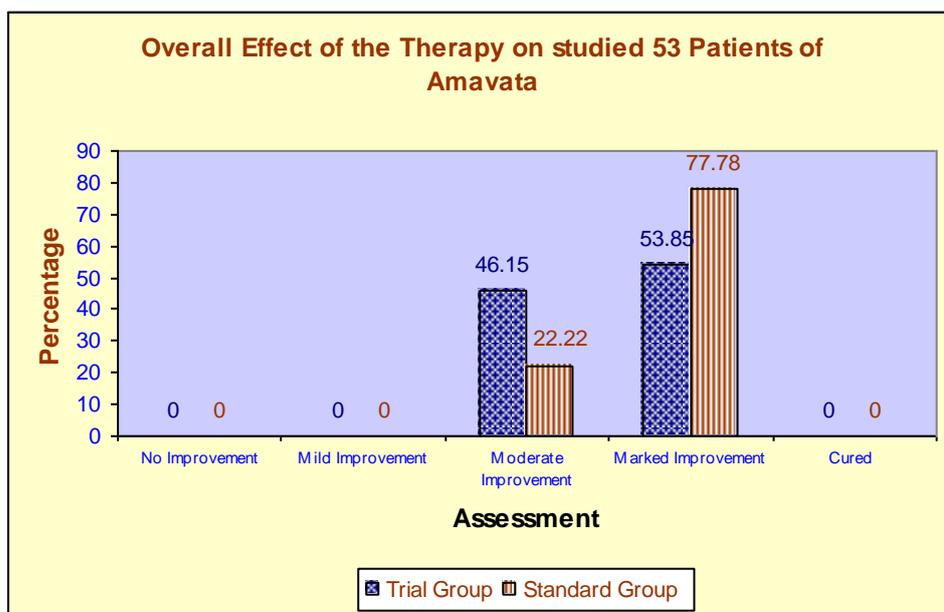
S. No.	Investigation	Mean Score		Differ- ence of Mean	SD	SE	't' value	'p' value	Remarks
		BT	AT						
1	Total Leucocyte count/cu.mm	10596.29	9777.77	818.52	570.80	109.71	7.595	p<0.001	H.S.
2.	Differential Leucocyte count/cu.mm								
	Polymorphs	68.14	66.55	1.59	2.7210	0.5236	6.856	p<0.001	H.S.
	Lymphocytes	28	29.66	1.66	1.8544	0.3568	8.8	p<0.001	H.S.
	Monocytes	1.43	1.11	0.32	0.6107	0.1175	5.957	p<0.001	H.S.
	Basophils	0.33	0.15	0.18	0.3633	0.0699	4.649	p<0.001	H.S.
	Eosinophils	2.33	2.07	0.26	0.6751	0.1299	7.12	p<0.001	H.S.
3.	Haemoglobin %	11.09	11.91	0.82	0.2571	0.4974	15.969	p<0.001	H.S.
4.	ESR mm 1 <sup>st</sup> hr Wintrobe Method	34.62	19.92	14.70	5.475	1.0536	13.952	p<0.001	H.S.
5.	Serum Uric Acid mg/dl	4.70	4.31	0.39	0.2159	0.0414	11.980	p<0.001	H.S.
6.	Rh-factor IU/ml	25.14	23.37	1.77	1.926	0.3706	6.988	p<0.001	H.S.

**Table 3: Total Score of an Individual Patient of Studied 53 Patients of Amavata**

No. of Patients	Trial Group				Standard Group			
	Total Score of an Individual Patient				Total Score of an Individual Patient			
	BT	AT	Relief	Relief %	BT	AT	Relief	Relief %
01	29	7	22	75.86%	28	9	19	67.85%
02	27	5	22	81.48%	33	6	27	81.81%
03	36	9	27	75%	38	6	32	84.21%
04	34	7	27	79.41%	42	8	34	80.95%
05	27	5	22	81.48%	29	5	24	82.75%
06	26	6	20	76.92%	35	4	31	88.57%
07	43	9	34	79.06%	36	6	30	83.33%
08	30	7	23	76.66%	28	3	25	89.28%
09	34	8	26	76.47%	29	4	25	86.20%
10	32	10	22	68.75%	36	11	25	69.44%
11	27	10	17	62.96%	35	9	26	74.28%
12	23	7	16	69.56%	45	12	33	73.33%
13	20	6	14	70%	36	6	30	83.33%
14	27	5	22	81.48%	28	4	24	85.71%
15	31	11	20	64.51%	37	8	29	78.37%
16	21	8	13	61.90%	30	3	27	90%
17	34	8	26	76.47%	49	13	36	73.46%
18	38	7	31	81.57%	36	6	30	83.33%
19	22	5	17	77.27%	41	3	38	92.68%
20	49	17	32	65.30%	35	3	32	91.42%
21	40	11	29	72.50%	34	7	27	79.41%
22	22	5	17	77.27%	41	10	31	75.60%
23	25	5	20	80%	35	6	29	82.85%
24	35	10	25	71.42%	31	3	28	90.32%
25	36	9	27	75%	38	7	31	81.57%
26	25	6	19	76%	38	8	30	78.94%
27					25	3	22	88%

**Table 4: Overall Effect of the Therapy on Studied 53 Patients of Amavata**

S. No.	Assessment	Trial Group		Standard Group	
		No. of Patient	Percentage	No. of Patient	Percentage
1.	No Improvement	0	0	0	0
2.	Mild Improvement	0	0	0	0
3.	Moderate Improvement	12	46.15%	06	22.22%
4.	Marked Improvement	14	53.85%	21	77.78%
5.	Cured	0	0	0	0



## DISCUSSION

In the present study it is found that the trial drug *Punarnavadi Churna* with *Anupana* of *Rasna saptak qwatha* and *Eranda taila* and the Standard group drug *Singhanada Guggulu* with *Punarnavadi Churna*, *Rasna saptak qwatha* and *Eranda taila* were statistically highly significant ( $p < 0.001$ ) on the general symptoms *Angamarda*, *Aruchi*, *Trishna*, *Alasya*, *Gaurava*, *Jvara*, *Apaka*, *Sunata anganama* of *Amavata*. It is also observed that the Trial and Standard group drug both were statistically highly significant on *Sandhi shotha* (inflammation over joints) and *Sandhi Shoola* (pain in joints). It is found that the Trial and Standard group drug both were statistically highly significant ( $p < 0.001$ ) on the severe symptoms of *Amavata* except *Murchha* (fainting) i.e. *Agni dourbalya*, *Praseka*, *Utsaha hani*, *Mukha vairasya*, *Daha*, *Bahumutrata*, *Kukshi Kathinyata*, *Kukshi shoola*, *Nidra-viparyaya*, *Chhardi*, *Bhrama*, *Murchha*, *Hridagraha*, *Malabaddhata*, *Sharira Jadata*, *Antrakujana* and *Anaha*. As in regard to *Mruchha* the both group drugs were significant ( $p < 0.01$ ). In the present study it is found that the TLC and DLC of the maximum patients of both groups were within normal range. But in few

patients the total leucocyte count and differential leucocytes count were increased, which after treatment by trial and standard group drug become normal and statistically found highly significant. It is also found that the trial and standard group drugs both were statistically highly significant ( $p < 0.001$ ) on the hemoglobin, ESR, Serum Uric acid and on RA factor.

## CONCLUSION

Effect of Trial drug (*Punarnavadi Churna* with *Anupana* of *Rasna saptak qwatha* and *Eranda taila*). After consideration of overall effect of therapy showed moderate improvement 46.15% and marked improvement 53.85% but no patient was totally cured. Effect of Standard group drug, (Trial drug along with *Singhanada Guggulu*) consideration of overall effect of therapy showed moderate improvement 22.22% and marked improvement 73.33% but no patients could be totally cured. On the basis of above observation, it can be said that the Standard group drug is more effective in comparison to Trial drug. We would like to say

that if a patient follow to avoid the above mentioned etiological factors and *Apathya* of *Amavata*, the formulation of *Amavata* will be broken easily with the help of treatment given by the Trial drug *Punarnavadi churna* with *anupana* of *Rasna saptak qwatha* and *Eranda taila* and with Standard group drug (*Singhanada Guggulu* along with Trial drug). The present research work regarding *Amavata* is having limitation of time, equipments, arrangement and other circumstances of this work has been performed only on the basis of Signs and Symptoms but not based on satisfactory biochemical and radiological level.

#### REFERENCES

1. Acharya Vagbhata, Editor Atrideva Gupta, Astangahridaya sutrasthan, Re edition, Chap 8/13-14, Varanasi; Chaukhambha Sanskrit Sansthan; 2005, p. 75.
2. Shri Madhavakara, Editor Yadunandana Upadhyaya, Madhava Nidan, Reprint, Vol. I, Chap. 25/4, Varanasi; Chaukhambha Sanskrit Sansthan; 2006, p. 509.
3. Shri Madhavakara, Editor Yadunandana Upadhyaya, Madhava Nidan, Reprint, Vol. I, Chp. 25/1-2, Varanasi; Chaukhambha Sanskrit Sansthan; 2006, p. 508-509.
4. Vrida Vagabhatta, Editor Shailja Srivastava, Astangasangrah sutrasthan, 1<sup>st</sup> edition, Chap. 11/21, Varanasi; Chaukhambha Orientalia; 2006, p. 508-509.
5. Shri Madhavakara, Editor Yadunandana Upadhyaya, Madhava Nidan, Reprint, Vol. I, Chap. 25/5, Varanasi; Chaukhambha Sanskrit Sansthan; 2006, p. 509.
6. Shri Madhavakara, Editor Yadunandana Upadhyaya, Madhava Nidan, Reprint, Vol. I, Chap. 25/6, Varanasi; Chaukhambha Sanskrit Sansthan; 2006, p. 511.
7. Nicholas A. Boon, Nicki R. Colledge, Brian R. Walker, John A.A. Hunter, editor, Davidson's Principals and Practice of Medicine. 20th ed., New York; Churchill Livingstone Elsevier: 2006, pp. 1101-1104.
8. Bhavamishr, Editor Brahma Sankar Mishra, Bhavaprakash, 12<sup>th</sup> edition, Vol. II, Chap. 26/46-47, Varanasi; Chaukhambha Sanskrit Sansthan; 2012, p. 285.
9. Bhavamishr, Editor Brahma Sankar Mishra, Bhavaprakash, 12<sup>th</sup> edition, Vol. II, Chap. 26/43, Varanasi; Chaukhambha Sanskrit Sansthan; 2012, p. 285.
10. Bhavamishr, Editor Brahma Sankar Mishra, Bhavaprakash, 12<sup>th</sup> edition, Vol. II, Chap. 26/50, Varanasi; Chaukhambha Sanskrit Sansthan; 2012, p. 286.
11. Chakrpanidatta, Indradev Tripathi, Chakradutta, Re ed. Chap. 25/31-32, Varanasi; Chaukhambha Sanskrit Bhawan; 2011. p. 168

#### Cite this article as:

Ranjan Rohit, Singh Mahendra, Singh Richa, M. Kavitha, Singh Shardul Vikram. A Clinical Study on the Effect of Punarnavadi Churna, Singhanada Guggulu in the Management of Amavata (Rheumatoid Arthritis). Int. J. Ayur. Pharma Research 2014; 2 (1): 46-54.

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

#### \*Address for correspondence

**Dr. Ranjan Rohit**

Lecturer

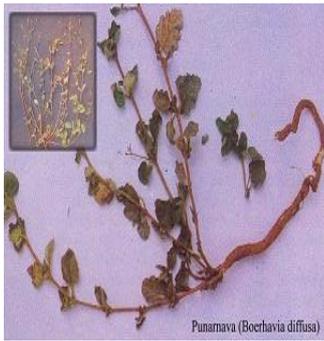
Dept. of Basic Principles

S.A.M.C., Aligarh, U.P., India.

E-mail: [dr.rohitranjan1981@gmail.com](mailto:dr.rohitranjan1981@gmail.com)

Phone: +919456973861

**CONTENT OF PUNARNAVADI CHURNA**



**Punarnava**



**Guduchi**



**Shunthi**



**Shatahva**



**Vridhdharuka**



**Sati**



**Munditika**

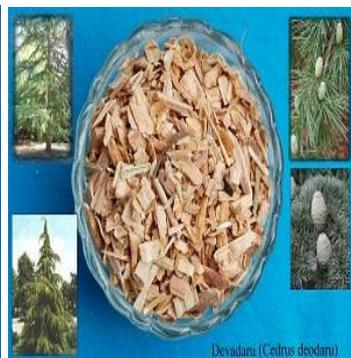
**CONTENT OF ANUPANA (RASNA SAPTAK QWATHA AND ERANDA TAIL)**



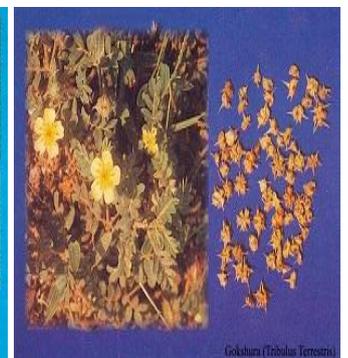
**Rasna**



**Erandmool**



**Dewadaru**



**Gokharu**



**Aragvadha**



**Punarnava**



**Guduchi**



**Erand Taila**

**CONTENT OF SINGHANADA GUGGULU**



**Erand Taila**



**Vibhitaki**



**Haritaki**



**Amalaki**



**Guggulu**



**Gandhaka**