

CLINICAL EVALUATION OF THE EFFECT OF SIDDHAVASTI AND SIMHANAD GUGGULU IN THE MANAGEMENT OF AMAVATA (RHEUMATOID ARTHRITIS)

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ABSTRACT

Amavata is one of the chronic diseases on which the mankind focuses today. Even though, it is not proved to be fatal, it cripples the affected patients. It is a challenge to the physician owing to its chronicity, incurability, complications and morbidity. *Amavata* can be correlated with Rheumatoid arthritis mentioned in the contemporary medical science, in view of its clinical features. Many research studies have been done to solve this clinical problem, but an effective, safe, less complicated and cost effective treatment is still required for the management of this disease. In the present study 60 patients of *Amavata* were registered from OPD & IPD Dept. of Kayachikitsa, Govt. Ayurvedic Hospital, Jalukbari, Guwahati and were randomly allocated into two groups. In group-A, *Simhanad guggulu* 1gm/day in two divided doses was given for 2 months and in group-B, *Siddhavasti* for 14 days along with *Simhanad guggulu* 1gm/day in two divided doses was given to the patient for 2 months. On statistical analysis of the results, it was found that both *Simhanad guggulu* and *Simhanad guggulu* with *Siddha vasti* were effective, but *Simhanad guggulu* along with *Siddha vasti* shows better results in pain, swelling, stiffness, tenderness, ESR and on Health Assessment Questionnaire (HAQ) for RA as compared to *Simhanad guggulu* alone in the management of *Amavata*.

Keywords: *Amavata*, Rheumatoid arthritis, *Siddha vasti*, *Simhanad guggulu*

INTRODUCTION

Ayurveda, the science of holistic health care aims to maintain the health i.e. to maintain the homeostasis of the body and mind in healthy person and to cure the disease i.e. to convert the pathological entities to physiological entities ^[1]. Ayurveda may be the first medical science which efforts to protect the life from disease by different healthy procedure like- *Dinacharya* (daily healthy regiment), *Ratricharya* (healthy night regiment), *Ritucharya* (healthy seasonal regiment), *Shatvritta* (code of conduct),

Swasthavritta (act for healthy life) etc. It is mentioned in Ayurveda that changes in lifestyle, Food habits, behavioral pattern etc. are the contributing factors for a number of diseases, *Amavata* (Rheumatoid Arthritis) is one among them.

The word *Amavata* is made up of two words i.e. '*Ama*' and '*Vata*' ^[2]. This disease mainly occurs due to derangement of *Agni* (metabolic activity), resulting in the production of *Ama* (endotoxins). When this *Ama* combines with vitiated *Vata* and occupies

the *Sleshma sthana*, it results in painful disease *Amavata*. *Amavata* is characterized by *sandhiruja* (joint pain), *sandhisotha* (swelling of the joints), *vrishikdamstavat vedana* (nature of pain is like that of scorpion bite) of affected joints, *gourava* (heaviness), *angamarda* (bodyache), *agnimandya* (decrease metabolic activity), *jadya* (stiffness), *jwar* (increase temperature) etc [3]. The features of *Amavata* described in the Ayurvedic classics are almost similar to that of Rheumatoid Arthritis mentioned in the contemporary medical science, in view of its clinical features. Rheumatoid arthritis is a chronic inflammatory systemic disease which is variable in its effects but can progress swiftly to become severe and disabling in a short period of time [4]. This disease primarily affects the synovial joints resulting in pain, deformity and eventual functional limitation causing substantial morbidity and accelerated mortality [5]. The drugs commonly used for the management of RA by conventional medicine are Nonsteroidal Anti-inflammatory Drugs (NSAIDs), Corticosteroids and Disease Modifying Anti-Rheumatic Drugs (DMARDs) [6]. These medicines show notorious side effects if used for a long time. NSAIDs, which are used as a first line of treatment give only symptomatic relief but do not arrest the progression of the disease. Though DMARDs and Corticosteroids helps in controlling the disease process but once the medication is stopped, the disease flares up. So, it is high time to resort the management principle of *Amavata* (Rheumatoid Arthritis) in order to find out an effective, safe, less complicated and affordable treatment.

In the present study *Simhanad Guggulu* [7] was used as *Shaman* yoga while *Siddhavasti* [8] was selected as *Sodhana* process to evaluate the effectiveness of these two drugs in the management of *Amavata* (Rheumatoid Arthritis).

AIM AND OBJECTIVE:

1. To evaluate the clinical efficacy of *Simhanad guggulu* in the management of *Amavata*.

2. To evaluate the combined clinical efficacy of *Simhanad guggulu* along with *Siddhavasti* in the management of *Amavata*.
3. To compare the clinical efficacy of *Simhanad guggulu* alone and the combined therapy of *Simhanad guggulu* and *Siddhavasti* in the management of *Amavata*.

MATERIALS AND METHODS:

SOURCE OF DATA:

Total 60 patients attending the OPD/IPD of Kayachikitsa department, Government Ayurvedic Hospital, Guwahati suffering from RA were randomly distributed into Group-A and Group-B.

METHOD OF COLLECTION DATA:

INCLUSION CRITERIA:

Patients with age group of 18-60 years, fulfilling the diagnostic criteria of *Amavata* (Rheumatoid arthritis) have been selected.

Diagnostic Criteria-

Patients have been diagnosed on the basis of-

- Clinical features of *Amavata* like- *Sandhishhula*, *sandhisotha angamarda*, *aruchi*, *trishna*, *alasya*, *gaurava*, *jwara*, etc.
- The base of criteria for the diagnosis of Rheumatoid arthritis laid down by American Rheumatism Association (1988 revision) [9] also taken into consideration
- Laboratory investigation-
 - 1) Blood for routine examination
 - 2) Fasting and postprandial blood sugar
 - 3) SGOT, SGPT
 - 4) Serum creatinine
 - 5) Serum uric acid
 - 6) RA factor/anti-CCP
 - 7) C-Reactive protein
 - 8) ASO titre
 - 9) Stool and Urine for routine examination

EXCLUSION CRITERIA:

1. Complicated Diabetes mellitus
2. Hypertension

3. Psychiatric disorders
4. Severe metabolic disorders
5. Epilepsy
6. Malignancy
7. Rheumatoid arthritis with chronicity more than 10 years
8. having severe deformities
9. All other conditions which need regular medication have been excluded.

INTERVENTION:

- ❖ Group-A: *Simhanad guggulu* has been given orally to the patients at a dose of 1gm/day after meal into two divided doses for 2 months
- ❖ Group-B: *Simhanad guggulu* has been given to the patients at a dose of 1gm/day after meal into two divided doses for 2 months along with *Siddhavasti* for 14 days from the beginning of the therapy uninterruptedly.
- ❖ The patients were strictly advice to follow *pathya-apathya*.

Total duration of treatment: 60 days

ASSESSMENT CRITERIA WITH SCORING:

A. SUBJECTIVE PARAMETERS :

❖ **JOINT PAIN-**

- 0 - No pain
- 1 - Pain occasional, and bearable
- 2 - Pain frequent, can be managed with analgesics
- 3 - Pain persistent, unmanageable even with analgesic

❖ **MORNING STIFFNESS:**

- 0 - No stiffness
- 1 - Early morning stiffness up to 30 minute
- 2 - Early morning stiffness more than 30 min, <45 minute
- 3 - Morning stiffness > 45 minute

❖ **SWELLING:**

- 0- No swelling
- 1 - Just covering bony prominences
- 2 - Severe swelling

HEALTH ASSESSMENT QUESTIONNAIRE (HAQ) FOR RHEUMATOID ARTHRITIS

❖ **GENERAL FUNCTIONAL CAPACITY:**

- 0 - Complete ability to carry on all routine works without help
- 1 - Frequent normal activity despite slight difficulty in joint movements
- 2 - Few activities persisting, but can take care of himself/herself
- 3 - Few activities persisting but needs attendant to take care of himself/herself
- 4 - Patient is totally bedridden

OBJECTIVE PARAMETERS:

❖ **TENDERNESS**

- 0 - No tenderness
- 1- Tender but bearable
- 3- Tender and winced
- 4- Tender, winced and withdraw

❖ **ESR**

OBSERVATION AND RESULTS OF THE THERAPEUTIC TRIAL:

Among the 60 patients, maximum number of patients i.e. 30 patients (50%) were between the age group of 31-40 years, 55 patients (91.67%) were female followed by 5 patients (8.33%) male, 38 patients (63.33%) belonged to Hinduism followed by 21 patients (35%) Muslim and 1 patient (1.67%) Christian. Maximum number of patients i.e. 29 patients (48.33%) were housewives followed by 18 patients (30%) desk worker and 13 patients (21.67%) field worker. 37 patients (61.67%) belonged to urban area and 23 patients (38.33%) belonged to rural area. Maximum number of patients belonged to middle class i.e. 38 patients (63.33%) followed by 19 patients (31.67%) lower class and 3 patients (5%) higher class. 56 patients (93.33%) were married and 4 patients (6.67%) were unmarried. 57 patients (97%) belonged to non-vegetarian group followed by 3 patients (5%) vegetarian. 27 patients (45%) had irregular bowel habit followed by 18 patient (30%) had constipated bowel and a minimum of 15 patients (25%) had normal bowel habit. 2 patients (3.33%) were shown to have family history of RA in their family and the rest 58 patients (96.67%) did not have any short of family history. 20

patients (33.33%) felt more pain in the morning, 19 patients (31.67%) felt more pain at night, 11 patients (18.33%) felt more pain at evening and 10 patients (16.67%) felt continuous pain. Maximum number of patients i.e. 43 patients (71.67%) have taken NSAIDs and DMARDs and a minimum of 17 patients (28.33%) were coming for treatment without having NSAIDs and DMARDs.

RESULTS:

Out of 30 patients included in each group in Group-A, 3 patients were dropped out and in Group-B, 2 patients were dropped out during the study period and thus kept exempted.

SUBJECTIVE PARAMETERS:

Table 1: Effect of the Drug on Group-A and Group-B for Pain Criteria after 60 Days (I.E. After Completion of Trial)

Group	Mean BT	Mean AT	Mean BT-AT	SD _{BT}	SD _{AT}	SE	t value	p
A	1.89	1.22	0.67	0.64	0.89	0.2	3.35	<0.01
B	1.96	1	0.96	0.64	0.77	0.2	4.8	<0.001

INTERPRETATION: In Group-A, $t_{26} = 3.35$, $P < 0.01$, hence it shows significant result and in Group-B $t_{27} = 4.8$, $P < 0.001$, hence it shows highly significant. It implies *Simhanad guggulu* alone and *Simhanad guggulu* along with *siddha vasti* both are effective in pain.

Table 2: Comparative Effect Of The Drugs On Group-A And Group-B For Pain Criteria

Mean A	Mean B	Mean B-A	Comb. SD	Comb. SE	T ₅₃	p
0.67	0.96	0.29	0.14	0.04	7.25	<0.001

INTERPRETATION: $t_{53} = 7.25$, $P < 0.001$, hence the difference is highly significant. It implies that the effect of combined therapy i.e. *Simhanad guggulu* along with *Siddha vasti* is more effective than *Simhanad guggulu* alone in pain.

Table 3: Effect of the Drugs on Group-A and Group-B for Stiffness Criteria after 60 Days (I.E. After Completion of Trial)

Group	Mean BT	Mean AT	Mean BT-AT	SD _{BT}	SD _{AT}	SE	t value	p
A	1.81	1.18	0.63	0.68	0.87	0.22	2.86	<0.01
B	1.96	0.92	1.04	0.69	0.85	0.2	5.2	<0.001

INTERPRETATION: In Group-A, $t_{26} = 2.86$, $P < 0.01$, hence it shows significant result and in Group-B $t_{27} = 5.2$, $P < 0.001$, hence it shows highly significant. It implies *Simhanad guggulu* alone and *Simhanad guggulu* along with *siddha vasti* both are effective in Stiffness.

Table 4: Comparative Effect of the Drugs on Group-A and Group-B for Stiffness Criteria

Mean A	Mean B	Mean B-A	Comb. SD	Comb. SE	T ₅₃	P
0.67	1.04	0.37	0.14	0.04	9.25	<0.001

INTERPRETATION: $T_{53} = 9.25$, $P < 0.001$, hence the difference is highly significant. It implies that the effect of combined therapy i.e. *Simhanad guggulu* along with *Siddha vasti* is more effective than *Simhanad guggulu* alone in stiffness.

Table 5 - Effect of the Drugs on Group-A and Group-B for Swelling Criteria after 60 Days (I.E. After Completion of Trial)

Group	Mean BT	Mean AT	Mean BT-AT	SD _{BT}	SD _{AT}	SE	t value	p
A	0.89	0.37	0.52	0.56	0.63	0.17	3.06	<0.01
B	1.03	0.36	0.67	0.57	0.55	0.14	4.78	<0.001

INTERPRETATION: In Group-A, $t_{26} = 3.06$, $P < 0.01$, hence it shows significant result and in Group-B $t_{27} = 4.78$, $P < 0.001$, hence it shows highly significant. It implies *Simhanad guggulu* alone and *Simhanad guggulu* along with *siddhavasti* both are effective in Swelling.

Table 6: Comparative Effect of The Drugs on Group-A and Group-B for Swelling Criteria

Mean A	Mean B	Mean B-A	Comb. SD	Comb. SE	T ₅₃	P
0.52	0.68	0.16	0.14	0.04	4	<0.001

INTERPRETATION: $T_{53} = 4$, $P < 0.001$, hence the difference is highly significant. It implies that the effect of combined therapy i.e. *Simhanad guggulu* along with *Siddha vasti* is more effective than *Simhanad guggulu* alone in swelling.

Table 7: Effect of the Drugs on Group-A and Group-B for HAQ after 60 Days (I.E. After Completion Of Trial)

Group	Mean BT	Mean AT	Mean BT-AT	SD _{BT}	SD _{AT}	SE	t value	P
A	37.93	23.96	13.97	10.27	11.51	2.97	4.7	<0.001
B	39	15.57	23.43	10.06	11.22	2.85	8.22	<0.001

INTERPRETATION: In Group-A, $t_{26} = 4.7$, $P < 0.001$, hence it shows highly significant result and in Group-B $t_{27} = 8.22$, $P < 0.001$, hence it shows highly significant. It implies *Simhanad guggulu* alone and *Simhanad guggulu* along with *siddha vasti* both are effective in HAQ.

Table 8: COMPARATIVE EFFECT OF THE DRUGS ON GROUP-A AND GROUP-B FOR HAQ

Mean A	Mean B	Mean B-A	Comb. SD	Comb. SE	t ₅₃	p
13.96	23.07	9.11	0.46	0.12	75.92	<0.001

INTERPRETATION: $T_{53} = 75.92$, $P < 0.001$, hence the difference is highly significant. It implies that the combined therapy i.e. *Simhanad guggulu* along with *Siddha vasti* is more effective than *Simhanad guggulu* alone in HAQ i.e. to increase the quality of health.

Table 9: Effect of the Drugs on Group-A and Group-B for General Functional Capacity after 60 Days (I.E. After Completion of Trial)

Group	Mean BT	Mean AT	Mean BT-AT	SD _{BT}	SD _{AT}	SE	t value	P
A	1.56	0.89	0.67	0.8	0.78	0.22	3.04	<0.01
B	1.68	0.67	1.01	0.94	0.82	0.24	4.2	<0.001

INTERPRETATION: In Group-A, $t_{26} = 3.04$, $P < 0.01$, hence it shows significant result and in Group-B $t_{27} = 4.2$, $P < 0.001$, hence it shows highly significant. It implies *Simhanad guggulu* alone and *Simhanad guggulu* along with *siddhavasti* both are effective in general functional capacity.

Table 10: Comparative Effect of the Drugs on Group-A and Group-B General Functional Capacity

Mean A	Mean B	Mean B-A	Comb. SD	Comb. SE	t ₅₃	p
0.81	1	0.19	0.14	0.04	4.75	<0.001

INTERPRETATION: $T_{53} = 4.75$, $P < 0.001$, hence the difference is highly significant. It implies that the combined therapy i.e. *Simhanad guggulu* along with *Siddha vasti* is more effective than *Simhanad guggulu* alone in general functional capacity i.e. to increase the quality of health.

OBJECTIVE PARAMETERS:

Table 11: Effect of the Drugs on Group-A and Group-B for Tenderness Criteria After 60 Days (I.E. After Completion of Trial)

Group	Mean BT	Mean AT	Mean BT-AT	SD _{BT}	SD _{AT}	SE	t value	p
A	1.37	0.74	0.63	0.84	0.81	0.22	2.86	<0.01
B	1.42	0.53	0.89	0.87	0.63	0.2	4.45	<0.001

INTERPRETATION: In Group-A, $t_{26} = 2.86$, $P < 0.01$, hence it shows significant result and in Group-B $t_{27} = 4.45$, $P < 0.001$, hence it shows highly significant. It implies *Simhanad guggulu* alone and *Simhanad guggulu* along with *siddha vasti* both are effective in Tenderness.

Table 12: Comparative Effect of the Drugs on Group-A and Group-B for Tenderness Criteria

Mean A	Mean B	Mean B-A	Comb. SD	Comb. SE	T ₅₃	P
0.63	0.89	0.26	0.14	0.04	6.5	<0.001

INTERPRETATION: $T_{53} = 6.5$, $P < 0.001$, hence the difference is highly significant. It implies that the effect of combined therapy i.e. *Simhanad guggulu* along with *Siddha vasti* is more effective than *Simhanad guggulu* alone in tenderness.

Table 13: Effect of the Drugs on Group-A and Group-B for ESR After 60 Days (I.E. After Completion of Trial)

Group	Mean BT	Mean AT	Mean BT-AT	SD _{BT}	SD _{AT}	SE	t value	p
A	65.37	49.44	15.93	21.14	19.87	5.58	2.85	<0.01
B	71.18	42.92	28.26	29.85	21.51	6.95	4.07	<0.001

INTERPRETATION: In Group-A, $t_{26} = 2.85$, $P < 0.01$, hence it shows significant result and in Group-B $t_{27} = 4.07$, $P < 0.001$, hence it shows highly significant. It implies *Simhanad guggulu* alone and *Simhanad guggulu* along with *siddha vasti* both are effective in ESR.

Table 14: Comparative Effect of the Drugs on Group-A and Group-B for ESR

Mean A	Mean B	Mean B-A	Comb. SD	Comb. SE	T ₅₃	P
15.93	28.25	12.32	0.66	0.17	72.47	<0.001

INTERPRETATION: $T_{53} = 72.47$, $P < 0.001$, hence the difference is highly significant. It implies that the effect of combined therapy i.e. *Simhanad guggulu* along with *Siddha vasti* is more effective than *Simhanad guggulu* alone on ESR i.e. to decrease the inflammation.

DISCUSSION

Maximum number of patients belonged to the age group 31-40 years (50%) and 41-50 years (31.67%), which shows the predominance of this disease is more in middle age group. In this study, majority of patient's i.e. 73.33% were female as compared to male (26.67%). Thus the data shows prevalence of *Amavata* (Rheumatoid arthritis) is more common among female gender. Highest number of cases were found addition positive, so there may be some role of this addiction factor for the formation of this disease. Maximum number of patients (36.67%) were having history of gradual onset and chronicity of 1-3 years. The study reveals that maximum number of

patients (45%) had irregular bowel habit, it may due to the *Mandagni*. In this present study, data shows that maximum patients, 65% were RA negative followed by 35% were RA positive. It means RA factor is not confirmatory test for the diagnosis of *Amavata* (Rheumatoid arthritis) but it can be of prognostic significance because patients with high titers tend to have more severe and progressive disease with extra-articular manifestation. The effect of therapies in both the groups i.e. Group-A and Group-B were assessed statistically with paired t test and into Group-A & Group-B by unpaired t test. Both the groups i.e. *Simhanad guggulu* alone and *Simhanad guggulu* along with *Siddha Vasti* have shown significant result in terms of different degrees but the effect of

combined therapy of *Simhanad guggulu* along with *Siddha vasti* shows better result than *Simhanad guggulu* alone in pain, stiffness, swelling, tenderness, ESR and in HAQ.

CONCLUSION

The results were analyzed statistically which shows both *Simhanad Guggulu* and *Simhanad Guggulu* with *Siddh Vasti* are effective for the management of *Amavata*. But the combined therapy of *Simhanad Guggulu* and *Siddha Vasti* showed highly significant effect than *Simhanad Guggulu* alone in the management of *Amavata*.

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Source of Support: Nil

Conflict Of Interest: None Declared

How to cite this URL: Bapi Chakraborty & Bishnu Prasad Sarma: Clinical Evaluation Of The Effect Of Siddhavasti And Simhanad Guggulu In The Management Of Amavata (Rheumatoid Arthritis). International Ayurvedic Medical Journal {online} 2018 {cited June, 2018} Available from: http://www.iamj.in/posts/images/upload/1239_1245.pdf