



## Research Article

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### COMPARATIVE CLINICAL STUDY OF BHALLATAKADI CHURNA AND ERANDA SNEHA IN THE MANAGEMENT OF AMAVATA WITH SPECIAL REFERENCE TO RHEUMATOID ARTHRITIS

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#### ABSTRACT

Amavata is most crippling joint disease. With the passage of time most of the dietary habits, changing lifestyle and environment have been contributing number of diseases like Amavata which have become a challenge to the human race. Management of this disease is merely insufficient in other systems of medicine and patients are continuously looking for treatment from Ayurveda to overcome this challenge. The aim of this study was to evaluate the efficacy of study drugs in the management of Amavata and their effect on Rheumatoid Factor (RA) Factor. In the present clinical study, 60 patients of amavata were registered from the out patient department and indoor patient department of Yashwant Dharmarth Hospital, Kodoli, Kolhapur, Maharashtra, India. The patients in group I (20 patients) were given Bhallatakadi Churna, patients in group II (20 patients) were given Eranda tail and the patients in group III (20 patients) were given Bhallatakadi Churna along with Eranda tail. Patients treated with group III had better relief in most of lakshanas of disease and also improvement in objective criteria like RA Factor, ESR and C reactive proteins. The improvement was statistically significant in all three groups, but comparatively group III shown more significant relief.

**Keywords:** Amavata, Rheumatoid arthritis, Bhallatakadi Churna, Eranda tail, RA Factor.

#### INTRODUCTION

With the passage of time most of the dietary habits, changing lifestyle and environment have been contributing number of diseases like Amavata which have become a challenge to the human race. The chief pathogenic factors ama and vata are contradictory in nature so difficulty in planning the line of treatment. Amavata can be equated with Rheumatoid arthritis an inflammatory autoimmune joint disorder. Many previous studies were carried out in field of Ayurveda for treating amavata and got significant results also<sup>1,2</sup> but here efforts are made for assessing effect of Ayurvedic drugs in the management of amavata along with their effect on RA Factor. Rheumatoid arthritis is autoimmune joint disorder having prevalence ranged 0.12 % to 0.75 %<sup>3</sup>. It is a depilating disease and continues pose challenge to physicians due to its morbidity and crippling nature. Hence the management of this disease is merely insufficient in other systems of medicine and patients are continuously looking with a hope towards Ayurveda to overcome this challenge.

#### Aims and Objectives

- To assess the efficacy of Bhallatakadi churna and Eranda sneha in amavata.
- To assess the result of both drugs on R.A. Factor.

#### MATERIALS AND METHODS

##### Conceptual study

Detailed study of Amavata in relation to rheumatoid arthritis along with the review of drugs chosen for study from all available books and internet was carried out.

##### Clinical Study

- Subjects attending Kayachikitsa OPD and IPD of Yashwant Ayurved Hospital Kodoli, India were selected for study.
- Subjects were selected by randomized method. Ethical Clearance number granted for this study was MUHS/PG/E-3-T/3210/315

##### Inclusion Criteria

- Subjects of age between 20- 65 years.
- Either sex
- Subjects having sandhishool, sandhishoth, sandhishabdhatva, sparshaasahatva and associated lakshnas of amavata

##### Exclusion criteria

Subjects having major illness and prediagnosed of Hypertension, HIV, Diabetes mellitus, Rheumatic fever and allergic to Bhallataka were excluded from the study.

### **Withdrawal criteria**

- Subjects unwilling for treatment.
- Any adverse reaction occurs.

### **Trial Drug Schedule**

20 patients were selected randomly in each group and treated as (Bhallatakadi churna 1 g BID for group I); (Eranda tail 10 ml OD for group II) and (both drugs for group III)

Duration of treatment: 30 days.

Follow up: Day- 15<sup>th</sup>, 30<sup>th</sup>

References of trial drugs: Yogratnakar amavatachikitsa.<sup>4,5</sup>

### **Criteria for assessment**

- Relief in the cardinal and associated lakshnas of amavata was assessed by using a special scoring system.
- Improvement in laboratory parameters RA Factor, ESR, C reactive protein, DLC (differential leucocytes count).
- Functional assessment was done by measuring walking time, grip strength, general functional capacity and fatigue.
- Improvement in general health.
- The obtained data were statistically analyzed by applying test like chi square test.<sup>6</sup>

### **Total effect of therapy**

The obtained results were graded as follows.

Complete remission: 100 % relief

Marked improved: > 50 % reliefs

Improved: 25 % to 50 % relief

Unchanged: < 25 % relief or no relief

### **Observations**

Each group contains 20 patients. All patients completed the treatment. In this study 33.33 % patients were from age group 51-65 years and 30 % patients were from age group 31-40 years. 65 % patients were male whereas 35 % patients were female. Which means evidence of Amavata is prevalent in Female particularly in the area of study. In 8.3 % patients having family history of Amavata while 6.6 % patients having tobacco addiction, 6.6 % having tobacco powder (mishri) addiction, 1.6 % having Cigarette addiction. In the present study, majority of the patients i.e. 33.33 % reported chronicity ranging between > 1 to < = 3 years, 16.66 % patients were having the chronicity < = 1, chronicity of > 3 to < = 5 were 21.66 % and > 7 to < = 10 years was present in 13.33 % of patients and 8.3 % patient were having chronicity of > 5 to < = 7 and rest of 6.66 % patients having chronicity of > 10. In the present study, majority of the patients i.e. 30 % were of Vatakapha prakriti and 26.66 % and 21.66 % of patients were having Vatapitta and Kaphavata prakriti respectively.

### **RESULTS**

In present study Table 1 shows percentage of relief in sandhishool in three groups patients 50 %, 55 %, 85 % respectively. Results were significant in Group III than other groups. There was significant difference in the results of three groups on Sandhishool.

Table 2 shows percentage of relief in sandhishotha in three groups patients 60 %, 85 %, 90 % respectively. There was significant difference in the results of three groups on Sandhishoth.

Table 3 shows percentage of relief in sandhishabdghata in three groups patients 60 %, 65 %, 75 % respectively. There was no significant difference in the results of three groups on Sandhishabdghata.

Table 4 shows relief of Spashaasahatva observed in group I (75 %), in group II (75 %) and in group III (80 %) patients. There was no significant difference in the results of three groups on Sparshaasahatva.

Percentage of relief in angamarda in three groups patients were 65 %, 55 %, 90 % respectively in lakshana aruchi. Percentage of relief in three groups patients were 83 %, 61 %, 94 % respectively.

Percentage of relief in Trishna in three groups patients were 57 %, 69 %, 76 % respectively.

Percentage of relief on Aalsya in three groups patients were 70 %, 62 % and 75 % respectively.

Relief of Gourav observed in three groups patients were 46 %, 52 %, 69 % respectively.

Relief in Jwar observed in group I (70 %), in group II (18 %) and in group III (66 %) patients.

Relief of Apaka observed in group I (87 %), in group II (30 %) and in group III (70 %) patients.

Relief of shoonata anganam observed in group I (25 %), in group II and group III (80 %) patients.

Group I shows statistically significant results (P < 0.05). Groups II and III show statistically highly significant results (P < 0.01) in RA Factor. Significant reduction in the RA Factor level was obtained in group I (60 %) and group II (60 %) while in group III (75 %) patients.

Table 5 shows significant difference in the efficacy of three groups on RA Factor. Effect of therapy on E.S.R. Group I was highly significant at level of p < 0.001 and Group III was statistically significant (P < 0.01). Effect of therapy on C.R.P. Groups I and III was statistically significant (P < 0.05). Effect of therapy on Grip Power Groups I and III were statistically significant (P < 0.01). Group II was significant at the level of p < 0.05. Effect on walking time Group II was statistically significant (P < 0.05) while Group III was statistically

highly significant  $p < 0.01$ . Effect on general functional capacity Groups I was statistically significant ( $P < 0.05$ ). Group II and III were statistically highly significant at the level of  $p < 0.01$ ,  $p < 0.001$  respectively. The general functional capacity of patients in group I showed an improvement of 25 % and in group II 25 %, in group III 55 %. Improvement in fatigue shows statistically highly

significant results. In Group III and I results were ( $p < 0.001$ ) and ( $p < 0.01$ ) respectively. The data of the present series reveals that in Group I out of 20 patients, none of the patients got complete remission, 13 patients (65.00 %) markedly improved, 7 patients (35.00 %) improved and none of patients remained unchanged. (Table 6)

**Table 1: Effect of therapy on Sandhishool**

Group	Number of patients	Relief	No change	Percentage of relief	Chi-Square value	Df	“P” value	Significant/ Insignificant
I	20	10	10	50	6.17	2	< 0.05	Significant
II	20	11	9	55				
III	20	17	3	85				

**Table 2: Effect of therapy on Sandhishotha**

Group	Number of patients	Relief	No change	Percentage of relief	Chi-Square value	Df	“P” value	Significant/ Insignificant
I	20	12	8	60	6.088	2	< 0.05	Significant
II	20	17	3	85				
III	20	18	2	90				

**Table 3: Effect of therapy on Sandhistabdhahta**

Group	Number of patients	Relief	No change	Percentage of relief	Chi-Square value	Df	“P” value	Significant/ Insignificant
I	20	12	8	60	1.050	2	> 0.05	Insignificant
II	20	13	7	65				
III	20	15	5	75				

**Table 4: Effect of therapy on Sparshaasahatva**

Group	Number of patients	Relief	No change	Percentage of relief	Chi-Square value	Df	“P” value	Significant/ Insignificant
I	20	15	5	75	0.196	2	> 0.05	Insignificant
II	20	15	5	75				
III	20	16	4	80				

**Table 5: Comparison of Efficacy of Three Groups on RA Factor**

Source of variation	Df	Sum of Squares	Mean sum of squares	F-ratio
Between the groups	3-1 = 2	13.54	6.77	3.65
Error	59-2 = 57	105.51	1.85	
Total	60-1 = 59	119.05		

**Table 6: Overall Effect of the Therapy**

Results	Group I		Group II		Group III	
	Number of patients	Percentage of Relief	Number of patients	Percentage of Relief	Number of patients	Percentage of Relief
Complete remission	0	0	0	0	0	0
Markedly improved	13	65 %	16	80 %	17	85 %
Improved	7	35 %	4	20 %	3	15 %
Unchanged	0	0	0	0	0	0

## DISCUSSION

A significant reduction in the time duration of morning stiffness, shotha, sparshaasahatva, rheumatoid arthritis titer, CRP, ESR was observed; however the grip strength was significantly increased. There was no significant difference in the results of three groups on Sandhistabdhahta, Sparshaasahatva, Angamarda, Trishna, Alasya, Gourav and Shoonata Anganam; so all three groups' works almost similarly on these lakshanas. Group I was more effective in Angamarda, Aruchi, Jwar, Apaka. Group II was effective in all pratyatma lakshanas as

compare to Group I. Group III was highly effective in all lakshanas as compare to other two groups. The effect of group III i.e. Bhallatakadi churna with Eranda Tail was for better in comparison to the other two groups.

### Probable mode of action of drugs Bhallatakadi Churna

Action of drug deepana and ama pachana is by Laghu, Ruksha, Tikshna Guna, Katu, Tikta Rasa, Ushna Virya, Vatakaphashamaka, Vedanaprashamana and Shothahara action. It replenishes and rejuvenates the impaired

Dhatus by Rasayana action of Bhallataka and Haritaki and also gives nourishment to them.<sup>8</sup> Drug may acts as antioxidant, anti-inflammatory, analgesic, anti-arthritis, immunosuppressive and immunomodulatory.<sup>9</sup>

### Eranda Tail

Due to Madhura, Katu, Kashaya rasa, Ushna virya, Madhura vipak, Eranda taila is having Vata-kapha-shamaka property.<sup>10</sup> Bhavmishra praises eranda sneha by comparing it to the lion which kills the elephant of amavata causing diseased condition of body.<sup>11</sup> Content of Eranda, tricinolein is mainly responsible for purgative effect. Castor beans contains tocopherol and vitamin E having anti-inflammatory property.<sup>12</sup> Both drugs play major role as Anti inflammatory and analgesic as they having shothahara and vedanaprashamana Karma. They show significant reduction in R.A. Factor, E.S.R. and C.R.P. levels.

### CONCLUSION

Based on the present study, it can be concluded that Bhallatakadi churna and Eranda Tail has better improvement in most of the symptoms and also decreased ESR, RA Titer. Trial drugs in this study seem to be a very good combination of Amapachak, Agnivardhak, Shothaghna, Vedanashamak and Rasayana dravyas.

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