



# CLINICAL EVALUATION OF EFFICACY OF 'AJAMODADI VATAKA' AND 'ERANDADI KWATHA' IN THE MANAGEMENT OF AMAVATA WITH SPECIAL REFERENCE TO RHEUMATOID ARTHRITIS

Dr. Kanti Lal Mali, Dr. Udai Raj Saroj, \*Prof. Ram Kishor Joshi

Dept. of Kayachikitsa, NIA, Jaipur

## Article history:

Received: 28<sup>th</sup> March 2018

Received in revised form:

20<sup>th</sup> April 2018

Accepted: 27<sup>th</sup> April 2018

Available online:

30<sup>th</sup> June 2018

## \*Corresponding author:

Prof. Ram Kishor Joshi

Email Id

[ioshirk1964@gmail.com](mailto:ioshirk1964@gmail.com)

## Present address:

Dept. of Kayachikitsa, NIA,  
Jaipur

These authors have no conflict  
of interest to declare.

Copyright © 2011,

All rights reserved

## Abstract

**Context:** *Ayurveda* has taken the foremost place in the management of crippling disease. *Amavata*, which can be compared with Rheumatoid arthritis due to its clinical appearance. Due to wide spectrum of disease, much prevalence and lack of effective medicine, so disease being chosen for the study. Prevalence of approx. 0.8% of the population.

**Aims:** To study the efficacy of *Ajamodadi Vataka* and *Erandadi Kwatha* in the management of *Amavata*.

**Methods and Material:** 45 clinically diagnosed patients of *Amavata* treated by *Ajamodadi Vataka*, 2 *Vataka* (each 3gm) three times in a day with lukewarm water, after meal for 30 days and *Erandadi Kwatha* 40ml (20gm), two times in a day, before meal for 30 days.

**Study Design-** Single centre and Open Clinical study.

**Results:** Statistically highly significant result was found in ESR and symptoms of *Amavata*.

**Conclusions:** Therapy in the form of administration of *Ajamodadi Vataka* and *Erandadi Kwatha* is effective in the management of *Amavata*.

**Key words:** *Amavata*, Rheumatoid arthritis, *Ajamodadi Vataka*, *Erandadi Kwatha*

## INTRODUCTION

In the present time, due to modern life style, hectic schedule, stress and many such reasons, incidence of disease are increasing, one of them is *Amavata*, which can be compared with Rheumatoid Arthritis due to its clinical appearance. Due to wide spectrum of disease, much prevalence in the society and lack of effective medicine, the disease is being chosen for the study. Prevalence of approx. 0.8% of the population, About 80% of people developed between age 35–50 yrs<sup>i</sup>.

According to the nature of disease, it is essential to work on such therapy which has *Ama* and *Vatahara* properties. Here has tried to study the various aspects of the disease in the perspective of *Shamana* drug. The line of treatment described for the disease as “*Langhanam Swedanam Tiktham.....*” mentioned in *Chakradatta Amavatachikisa Prakarana* 25/1<sup>ii</sup>. So, ‘*Ajamodadi Vataka & Erandadi Kwatha*’ had been selected as *Shamana* therapy.

### Aims and Objectives –

- Conceptual and clinical studies on *Amavata* w.s.r. to Rheumatoid Arthritis and its management with time examined methods and *Ayurvedic* principle.
- Clinical evaluation of the efficacy of ‘*Ajamodadi Vataka*’ in the management of *Amavata*.
- Clinical evaluation of the efficacy of ‘*Erandadi Kwatha*’ in the management of *Amavata*.
- Comparison of efficacy of ‘*Ajamodadi Vataka*’ and ‘*Erandadi Kwatha*’ in the management of *Amavata*.

### Materials and methods-

#### ➤ Selection of patient

45 patients of *Amavata* were selected from OPD and IPD of *Kayachikitsa*, National Institute of Ayurveda, Jaipur. Both acute and chronic phase of *Amavata* patients were taken for the study, following the criteria of the diagnosis of Rheumatoid arthritis in Modern Medicine and the clinical features of *Amavata* described in *Madhava Nidana Amavatanidana* 25/6.<sup>iii</sup>

#### ➤ Study Design- Single centre and Open Clinical study.

➤ **Inclusion criteria**

1. Patients between the age group of 16 to 60 years in either sex presenting with clinical features of *Amavata*.
2. Pre-diagnosed patient of *Amavata*. (chronicity < 6 years )
3. Patient willing to sign the consent forms.

➤ **Exclusion criteria**

1. Patients of age below 16 years and above 60 years of either sex.
2. Chronicity of *Amavata* more than 6 years.
3. Patients having severe crippling deformities.
4. Patients suffering from paralysis.
5. Patients having neoplasm of spine, Gout, Ankylosing spondylitis, traumatic arthritis, pyogenic Osteomyelitis etc.
6. Patients having associated Cardiac disease, Pulmonary Tuberculosis, Diabetes Mellitus, Malignant Hypertension, Renal Function Impairment, etc
7. Pregnant women and lactating mother.

**Grouping-**

45 Patients of *Amavata* were divided randomly into three groups. Each group had 15 patients.

**Group A** – 15 clinically diagnosed and registered patients of *Amavata* were treated with *Ajamodadi Vataka*, 2 *Vataka*. (each *Vataka* 3gm.) three times in a day with lukewarm water, after meal for 30 days.

**Group B** – 15 clinically diagnosed and registered patients of *Amavata* were treated with '*Erandadi Kwatha*' 40ml (20grams), two times in a day, before meal for 30 days.

**Group C** – 15 clinically diagnosed and registered patients of *Amavata* were treated with *Ajamodadi Vataka*, 2 *Vataka* (each *Vataka* 3gm.) three times in a day with lukewarm water, after meal for 30 days and '*Erandadi Kwatha*' 40ml (20grams), two times in a day, before meal for 30 days.

➤ **Trial Drugs-**

**Ajamodadi Vataka**-The proposed formulation selected in this trial was chosen from *Chakradutta Amavatachikitsa prakarana* 25/49-55<sup>iv</sup> & contents of **Ajamodadi Vataka** are *Ajamoda, Marich, Pippali, Vidang, Devadaru, Chitraka, Shatahva, Saindhava, Pippalimula, Shunthi, Vidhara, Haritaki & Guda* former 9 contents were taken in equal amount (1 part each), while later four were taken in the ratio of 10:10:5:34 respectively.

**Erandadi Kwatha**-The proposed formulation selected in this trial was chosen from *Bhaishjyaratnavali Amavatarogadhikara* 29/19<sup>v</sup> & contents of **Erandadi Kwatha** are *Eranda, Gokshura, Rasna, Shatapushpa & Punarnava* in equal proportion.

All the contents of *Erandadi Kwatha* were taken equal in quantity and *Yavakuta Churna* (coarse powder) was prepared and stored. *Kwatha* (decoction) was prepared by taking 20 grams of powder and adding 16 times of water (320 ml) and it was boiled and reduced upto *Ashtamansa* (40 ml). Fresh decoction was prepared for every time of its use.

Both drugs prepared in pharmacy of the institute. (Drug Batch no.A0056).

➤ **Duration of clinical trial and follow up study.**

1. 30 days for oral drug.
2. All patients followed up fortnightly for 1 month.

➤ **Criteria for assessment****1. Subjective parameters-****1. Pain in joint :**

**Table No. 3: Assessment of pain were done by Visual Analogue Scale-**

Sr. No.	Symptoms	Grading
1	No pain	00
2	Distress	01
3	Annoying	02 - 03
4	Uncomfortable	04
5	Dreadful	05 - 06
6	Horrible	08
7	Unbearable distress	09
8	Agonizing	10

**2. Stiffness in joint:**

Sr. No.	Symptoms	Grading
1	No stiffness	00
2	< 15 min.	01
3	< 30 min.	02
4	< 1 hrs.	03
5	> 1 hrs	04

**3.Swelling of joint:**

Sr.No.	Symptoms	Grading
1	No swelling	00
2	Felling of swelling	01
3	Felling of swelling + Heaviness	02
4	Apparent swelling	03
5	Huge (Synovial effusion) swelling.	04

**4.Tenderness at joint:**

Sr.No.	Symptoms	Grading
1	No tenderness	00
2	Says tender	01
3	Patient winces	02
4	Winces and withdraws	03
5	Not allowed to be touched	04

**5.Angmarda ( Bodyache) :**

Sr.No.	Symptoms	Grading
1	Nobodyache	00
2	Generalizedbodyacheofand onduringtheday	01
3	Generalized bodyacheduringmostpartofthedaynotaffectinganywork	02
4	Generalized bodyachethroughoutthedaybutpersonis abletodo normalroutine	03
5	Generalized(sarvanga)bodyache/painenoughto affectroutineworkforall theday	04

**6.Aruchi (Anorexia):**

Sr.No.	Symptoms	Grading
1	Willing toward all <i>Bhojya Padarth</i>	00
2	Unwilling toward some specific <i>Ahara</i> but less than normal	01
3	Unwilling toward some specific rasa i.e <i>Katu/Amala/Madhura</i> food	02
4	Unwilling for food but could take the meal	03
5	Totally unwilling for meal	04

**7.Trishna (Excessive thirst ):**

Sr.No	Symptoms	Grading
1	Feelingofthirst(7–9times/24hours)&relievedbydrinkingwater	00
2	Feelingofmoderatethirst(>9–11times/24hours)&relievedbydrinking water.	01
3	Feelingof excessstirst(>11–13times/24hours)notrelievedbydrinking water.	02
4	Feelingofseverthirst(>13times)notrelievedbydrinkingwater	03

**8. Alasya (Lazyness/ Absence of enthusiasm):**

Sr.No.	Symptoms	Grading
1	No Alasya (does satisfactory work with proper vigor & in time)	00
2	Does satisfactory work/late initiation, like to stand in comparison to walk.	01
3	Does unsatisfactory work/late initiation, like to sit in comparison to stand	02
4	Does little work very slow, like to lie down in comparison to sit.	03
5	Don't want to do work/no initiation, like to sleep in comparison to lie down	04

**9. Gaurava (Heaviness):**

Sr.No.	Symptoms	Grading
1	No feeling of heaviness	00
2	Occasional feeling of heaviness	01
3	Continuous feeling of heaviness, but patient does usual work	02
4	Continuous feeling of heaviness which hampers usual work	03
5	Unable to do any work due to heaviness	04

**10. Jwara (Fever) :**

Sr.No.	Symptoms	Grading
1	No fever	00
2	Occasional fever subsides by itself	01
3	Daily once subsides by itself	02
4	Daily once subsides by drug	03
5	Continuous fever	04

**11. Apaka (Indigestion of food)-**

Sr. No.	Symptoms	Grading
1	No Apaka /Indigestion	00
2	Indigestion / prolongation of food digestion period occasionally related to heavy meal	01
3	Avipaka occurs daily after each meal takes four to six hour for Udagara shuddhi etc Lakshana	02
4	Eat only once in a day and does not have hungry by evening	03
5	Never gets hungry always feeling heaviness in abdomen	04

**12. Bahumootrata (frequency of micturition per 24 hours):**

Sr. No.	Symptoms	Grading
1	Less than 4 times/24 hrs	00
2	4 - 6 times/24 hrs.	01
3	6-10times/24hrs	02
4	> 10 times/24 hrs	03

**For assessment of overall improvement, following grading used-**

Sr. No.	Observation	Grading	Percentage
1.	No relief	0	0-25%
2.	Mild relief	1	26-50%
3.	Moderate relief	2	51-75%
4.	Excellent relief	3	76-100%



## 2. Objective parameters -

Hb gm%, TLC, DLC, ESR, Sr.Uric acid, BSL (F), RA Factor, CRP test, ASLO titre, Urine R/M, Radiological-X-ray of appropriate joints.

In this study, Sr.Uric Acid, was used to exclude the Gouty Arthritis, BSL for screening the DM & ASL-O for screening the rheumatic arthritis.

### OBSERVATION-

18 patients in age group 31-40 yrs & 10 patients in age group 41-50 yrs were found; it shows overall 50% patients belong to 3<sup>rd</sup> to 5<sup>th</sup> decade of life. Incidence of disease is found notably higher in females (88.88%) than in males (11.11%). This suggests that the incidence of *Amavata* is more common in females than males.

Majority of the patients (80%), belonged Hindu religion; 91.11% patients were married. Out of which, maximum 66.66% patients were housewives followed by 13.33% labors, about 55.55% patients belong to poor class. Max. 51.11% Patients of *Vata-Kaphaja Prakriti* which is highly associated with the development of *Amavata*, 51.11% patients were of *Madhyama Sara*, 60% were having *Madhyama Samhanan*, 64.44% patients with *Madhyama Satmya*, 48.89% patients with *Madhyama Satva*, 48.89% patients showed *Madhyama Ahara Shakti*, 60% patients showed *Madhyama Vyayama shakti*, 55.56% patients showed *Madhyama* nature of *Koshtha*, maximum 64.44% patients were of *Mangagni*. In this type of *Agni* there is predominance *Kapha Dosha*, which may play important role in developing the pathogenesis of *Amavata*. Maximum patients 97.78% were addicted to Tea, maximum 53.33% patients were found with duration of illness of 2-4 years, 73.33% patients had positive drug history of Allopathic & *Ayurvedic* medicines. Maximum patients had *Atiguru Ahara* 82.22% forward by *Singdha Ahara* & *Vishamashana* 68.89% each, *Adhyashana* in 58.78%, *Ati Madhura* & *Atidrava Ahara* in 51.11% each, 46.67% had the habit of *Viruddha* and 15.55% had the habit of *Ruksha Ahara*, *Divasvapna* in 84.44%, *Nishchalata* in 75.55%, *Bhojanottara Vyayama* in 68.89%, *Ratri Jagarana* in 60%, *Vishama Shayya* in 35.55%, *Chinta* in 37.78%, *Bhaya* in 15.55%, *Shoka* in 8.89% as *Nidana* of *Amavata*.

8.89% patients had positive family history of the disease, maximum 46.67% patients had CRP positive test & 22.22% patients had RA factor positive test before the

treatment. 100% patients had pain in joint, stiffness of joint, swelling of joint and *Angamarda* each, 93.33% patients had Tenderness at joint & *Apaka*, 91.11% patients had *Jwara*; 88.89% patients had *Aruchi*, 77.78% patients had *Bahumutrata* & *Gaurava* each, 73.33% patients had complaint of *Alasya*, 53.33% patients had complaint of *Trishna* before the treatment. Maximum 93.33% patients had Metacarpophalangeal (hand) joint involvement, 88.88% had Proximal interphalangeal (hand), 86.66% had distal interphalangeal (hand) joint, 80% had wrist joint, 75.55% had elbow joint, 51.11% had shoulder joint, 64.44% had ankle joint, 51.11% had knee joint involvement, 77.77% had Metatarsophalangeal and 17.77 % had patients had the temporomandibular joint involvement.

## RESULTS:

### Intra group comparison in Subjective Parameters

(Wilcoxon matched-pairs signed ranks test)

Variable	Gr.	Mean		Mean Diff.	% Relief	SD±	SE±	P	S
		BT	AT						
Pain in joint	Gr. A	6.67	2.67	4.00	59.97	1.069	0.2760	<0.0001	HS
	Gr. B	6.93	3.13	3.80	54.83	1.265	0.3266	<0.0001	HS
	Gr. C	7.93	2.00	5.93	74.77	0.8837	0.2282	<0.0001	HS
Stiffness of joint	Gr. A	3.67	1.46	2.20	59.94	1.265	0.3266	<0.001	HS
	Gr. B	3.20	1.53	1.67	52.18	0.7237	0.1869	<0.001	HS
	Gr. C	3.86	0.60	3.26	84.45	0.7037	0.1817	<0.0001	HS
Swelling of joint	Gr. A	2.46	1.20	1.26	51.21	0.8837	0.2282	<0.01	HS
	Gr. B	2.60	1.06	1.53	58.84	0.6399	0.1652	<0.001	HS
	Gr. C	3.26	1.13	2.13	65.33	0.5164	0.1333	<0.0001	HS
Tenderness at joint	Gr. A	1.86	0.73	1.13	60.75	0.9155	0.2364	<0.001	HS
	Gr. B	2.06	1.20	0.86	41.74	0.6399	0.1652	<0.001	HS
	Gr. C	3.13	0.80	2.33	74.44	0.6172	0.1594	<0.0001	HS

<b>Angamard a</b>	Gr. A	2.60	1.26	1.33	51.15	1.447	0.373 7	<0.01	HS
	Gr. B	2.93	1.33	1.60	54.60	1.056	0.272 6	<0.001	HS
	Gr. C	3.26	0.73	2.53	77.60	0.516 4	0.133 3	<0.0001	HS
<b>Aruchi</b>	Gr. A	1.93	0.66	1.26	65.28	1.100	0.284 0	<0.001	HS
	Gr. B	2.06	0.86	1.20	58.25	0.774 6	0.200 0	<0.001	HS
	Gr. C	3.20	0.93	2.26	70.62	0.457 7	0.118 2	<0.0001	HS
<b>Trishna</b>	Gr. A	1.93	1.40	0.53	27.46	0.833 8	0.215 3	>0.05	NS
	Gr. B	1.46	1.00	0.46	31.50	0.639 9	0.165 2	<0.05	S
	Gr. C	2.80	0.66	2.13	76.07	0.639 9	0.165 2	<0.0001	HS
<b>Alasya</b>	Gr. A	2.26	0.93	1.33	58.84	0.975 9	0.252 0	<0.001	HS
	Gr. B	2.40	1.00	1.40	58.33	0.828 1	0.213 8	<0.001	HS
	Gr. C	3.20	1.20	2.00	62.50	0.534 5	0.138 0	<0.0001	HS
<b>Gaurava</b>	Gr. A	2.33	1.13	1.20	51.50	0.560 6	0.144 7	<0.001	HS
	Gr. B	2.53	1.00	1.53	60.47	0.639 9	0.165 2	<0.0001	HS
	Gr. C	3.13	0.73	2.40	76.67	0.507 1	0.130 9	<0.0001	HS
<b>Jwara</b>	Gr. A	0.93	0.33	0.60	0.006	0.910 3	0.235 0	>0.05	NS
	Gr. B	1.00	0.26	0.73	73.00	0.703 7	0.181 7	<0.01	HS
	Gr. C	2.60	0.60	2.00	76.92	0.534 5	0.138 0	<0.0001	HS
<b>Apaka</b>	Gr. A	1.13	0.46	0.66	58.40	0.723 7	0.186 9	<0.01	HS
	Gr. B	1.66	0.46	1.20	72.28	0.676 1	0.174 6	<0.001	HS
	Gr. C	2.93	0.46	2.46	83.95	0.639 9	0.165 2	<0.0001	HS
<b>Bahu- mutrata</b>	Gr. A	2.13	1.73	0.40	18.66	0.736 8	0.190 2	>0.05	NS
	Gr. B	2.40	1.46	0.93	38.75	0.798 8	0.206 3	<0.01	HS
	Gr. C	2.80	0.86	1.93	68.92	0.457 7	0.118 2	<0.0001	HS

(Gr.: Group, BT: Before treatment, AT: After treatment, Diff.: Difference, SD.: Standard Deviation, SE: Standard Error, P: P value, HS: Highly Significant, S: Significant, NS: Non Significant)

In Group A, showed highly significant results regarding Subjective parameters – pain in joint, stiffness of joint, swelling of joint, tenderness at joint, *Angamarda*, *Aruchi*, *Alasya*, *Gaurava* & *Apaka* with relief of 59.97%, 59.97% , 51.21%, 60.75%, 51.15%, 65.28%, 58.84%, 51.50%, 58.40%, respectively. In case of other Subjective parameters i.e. *Jwara*, *Trishna* & *Bahumutrata* there was non significant result with relief of 0.006%, 27.47%, 18.66% respectively.

In Group B, showed highly significant results regarding subjective parameters - pain in joint, stiffness of joint, swelling of joint, tenderness at joint, *Angamarda*, *Aruchi*, *Alsaya*, *Gaurava*, *Jwara*, *Apaka* & *Bahumutrata* with improvement of 54.83%, 52.18%, 58.84%, 41.74, 54.60%, 58.25%, 58.33%, 60.47%, 73.0%, 72.28%, 38.75% respectively. In case of *Trishna* there was significant result with relief of 31.50%.

In Group C, showed highly significant results regarding all subjective parameters - pain in joint, stiffness of joint, swelling of joint, tenderness at joint, *Angamarda*, *Aruchi*, *Trishna*, *Alsaya*, *Gaurava*, *Jwara*, *Apaka* & *Bahumutrata* with improvement of 74.77%, 84.45%, 65.33%, 74.44%, 77.60%, 70.62%, 76.07%, 62.50, 76.67%, 76.92% , 83.95% & 68.92% respectively .

### Inter group comparisons in Subjective Parameters.

#### {Kruskal-Wallis Test}-

After this statistical analysis of inter group comparison we got that Pain in joint, Stiffness in joint, Swelling of joint, Tenderness at joint, *Aruchi*, *Trishna*, *Gaurava*, *Jwara*, *Apaka* & *Bahumutrata* have shown highly significant difference between the groups. While *Angamard* & *Alasya* have shown just significant changes.

#### {Dunn's Multiple Comparisons Test (Post Test)}-

On intergroup comparison, by the post test, group A Vs group B all sign & symptoms have shown non significant difference. Thus both the groups have shown similar effect.

On intergroup comparison of group A Vs group C Pain in joint, Swelling of joint, Tenderness at joint, *Aruchi, Trishna, Gaurava, Jwara, Apaka & Bahumutrata*, group C have shown highly significant difference. In Stiffness in joint & *Angamard* have shown significant difference. While *Alasya* has shown non significant difference. Thus group C has shown better results than group A.

On intergroup comparison of group B Vs group C Pain in joint, Stiffness in joint, Tenderness at joint, *Aruchi, Trishna, Gaurava, Jwara, Apaka & Bahumutrata*, have shown highly significant difference. In *Angamard* there was significant difference. Swelling of joint & *Alasya* have shown non significant difference. Thus group C has shown better results than group B.

#### Intra group comparisons in Objective Parameters. (Paired 't' Test)

Variable	Group	Mean		Mean Diff.	% Relief	SD $\pm$	SE $\pm$	T	P	S
		BT	AT							
<b>Hb%</b> (gm %)	Gr. A	11.34	11.52	0.186	1.64	0.5397	0.1393	1.340	>0.05	NS
	Gr. B	12.02	12.25	0.233	1.93	1.172	0.3026	0.7710	>0.05	NS
	Gr. C	10.77	10.89	0.120	1.11	1.314	0.3392	0.3538	>0.05	NS
<b>TLC</b>	Gr. A	7100	6260	840	11.83	1424.7	367.8	2.284	<0.05	S
	Gr. B	7606.7	7453.3	153.3	2.01	1326.0	342.38	0.4478	>0.05	NS
	Gr. C	6933.3	6620.0	313.3	4.51	1299.9	335.64	0.9335	>0.05	NS
<b>ESR</b>	Gr. A	35.00	21.93	13.06	37.14	10.180	2.629	4.971	<0.001	HS
	Gr. B	35.933	21.333	14.60	40.63	15.343	3.961	3.685	<0.001	HS
	Gr. C	53.20	27.46	25.73	48.36	17.107	4.417	5.826	<0.0001	HS

(**Hb**-Haemoglobin; **TLC**-Total Leucocytes Count; **ESR**-Erythrocyte Sedimentation Rate,

In group A- ESR has shown highly significant result with an improvement of 37.14% (percentage of decrease), TLC has shown significant results with an improvement of 11.33% (percentage of decrease), & Hb% has shown non significant results with an improvement of 1.64%.

In group B- Hb% has shown non significant result with (percentage of increase) relief of 1.93%. TLC has shown non significant results with improvement of 2.01%, and in case of ESR highly significant results was found with improvement of 40.63%.

In group C- Hb% has shown no significant result with (percentage of increase) relief of 1.11%. TLC non significant results was found with improvement of 4.51%, and ESR has shown highly significant results with improvement of 48.36%.

### Inter Group comparisons in Objective Parameters- (ANOVA test)

No significant difference was observed between the groups that was the changes in groups were not difference from each other.

### Overall effect of therapy -

In group A -Excellent relief was found in 6.66% of patients, while moderate relief in 13.33% whereas 53.33% were found mild relief, while in group B- Excellent relief was found in 6.66% of patients, while moderate relief in 13.33% where as 60 % were found mild relief. In group C- Excellent relief was found in 13.33% of patients, while moderate relief in 33.33% whereas 46.66% were found mild relief.

**Probable mode of action of Ajamodadi Vataka**-In this combination, *Katu, Tikta* are dominant *Rasa*, thus help in digestion of *Ama* & finally in breakage of pathogenesis of disease. Besides this, there is dominancy of *Laghu, Ruksha Gunas* in the *Ajamodadi Vataka* which also helps in *Kapha Shamana*. 11 *Dravya* out of 13 in the formulation possess *Laghu Guna* & 6 *Dravya* have *Ruksha Guna*. This formulation also has 10 *Dravya* with dominantly *Ushna Virya* which also helps to pacify the *Vata Dosha*. 2 *Dravya* have *Shothahara* & 2 *Dravya* have *Anulomana* properties. With these properties *Ajamodadi Vataka* is able to digest *Ama* & to control the *Vata Dosha*. Most of the drugs having *Deepana* & *Pachana* properties which stimulate the *Agni* and digest the *Ama Dosha*.

- ✓ *Sunthi* is also proved beneficial for in terms of rheumatic and musculoskeletal disorders provided relief from pain and swelling<sup>vi</sup>

- ✓ *Haritaki* having *Rasayana*, *Tridosahara* & *Virechana* properties<sup>vii</sup> helps in reducing the swelling in the joints.
- ✓ *Vidhara* has been reported as immunomodulator, analgesic & anti-inflammatory Activity<sup>viii</sup>.

**Probable mode of action of *Erandadi Kwatha*** -In this combination, *UsnaVirya* is dominant thus helps in digestion of *Ama* & *Vata* & *Kapha Shamana*. 02 *Dravya* out of 05 in the formulation possess *LaghuGuna* & 04 *Dravya* with *Ushna Virya* which also help to pacify the *Vata* & *Kapha Dosha*. 01 *Dravya* also have *Shothahara* & 02 *Dravya Anulomana* properties. With these properties *Erandadi Kwatha* is able to digest *Ama* & to control the *Vata Dosha*. Most of the drugs having *Deepana*, *Pachana*, *Shothahara* & *Anulomana* properties, which the *Agni*, digest the *Ama Dosha* & reduce the swelling.

- ✓ *Eranda* root extract has been reported for its Anti-inflammatory effects<sup>ix</sup>.
- ✓ *Gokshura* with their diuretic properties, help in reducing the swelling in the joints, so it is *Vata Shamaka*<sup>x</sup>.
- ✓ *Rasna* as antipyretic, analgesic, laxative and nervine tonic<sup>xi</sup> anti-inflammatory activity of this is established in a study done over the rats<sup>xii</sup>.
- ✓ *Boerhavia Diffusa* has been reported for its analgesic and anti-inflammatory properties<sup>xiii</sup>.

## Conclusion-

- ❖ *Amavata* is not described as a separate disease in *Brihattrayi*, first time its detailed description is available in *Madhava Nidana*.
- ❖ It can be concluded that hypo-functioning of *Agni* otherwise termed as *Mandagni* is largely responsible for the formation of *Ama* which is chief pathogenic factor of the disease.
- ❖ It is observed that symptomatology of *Amavata* very closely resembles with the disease Rheumatoid Arthritis.
- ❖ '*Ajamodadi Vataka*' (Group A), '*Erandadi Kwatha*' (Group B) & '*Ajamodadi Vataka*' & '*Erandadi Kwatha*' (Group C)- has provided better relief in most of the cardinal features & ESR of the disease at highly significant level. So these drugs are effective in treatment of *Amavata*.
- ❖ On comparing the effect of three groups it can be concluded that Group C ('*Ajamodadi Vataka*' & '*Erandadi Kwatha*') provided better relief than Group A

(*Ajamodadi Vataka*) & Group B (*Erandadi Kwatha*) in most of the sign and symptom of the disease at significant level.

### Future Recommendation for the Study:

❖ In the present study the size of sample was small and period of study was limited. Hence it is difficult to draw a definite conclusion regarding this study. In this context, it is suggested that the study should be continued with large sample and treatment for longer duration.

Objective parameters like CRP, ASL-O, RA Factor etc. should be measured by quantitative method i.e. titration for the better assessment of response of therapy.

### REFERENCES

1. Harrison T.R. et al; Harrison's principles of Internal Medicine; Vol. II, chapter 314, 17<sup>th</sup> International edition, published by mcgraw-Hill Book o. Singapore; 2007; 2083.
2. Tripathi Indradev Commentator, Chakrapani krit *Chakradutta*, *Amavatachikitsa prakaran* 25/1, 1<sup>st</sup> edition, Chaukhabha Sanskrit Sansthan Varanasi. 2012;166
3. Madhavakara; *Madhava Nidana* with *Madhukosha Amavatanidanam Adhyaya* 25/6 Sanskrit commentry by Vijayarakhita and Srikanthadatta, Vidyotini hindi commentry by Ayurvedacharya Sri Sudarshana Shastri; 29<sup>th</sup> edition, Chaukhambha Sanskrit Samsthan, Varanasi, 1999;511.
4. Ibidem Chakrapani krit *Chakradutta* (2), *Amavatachikitsa prakaran* 25/49-55;170.
5. Govindas krit *Bhaishjyarnavali*, Siddhiprada hindi commentary, Edited by prof. Siddhi Nandan Mishra *Amavatarogadhikara* 29/19;597.
6. Database on medicinal plants used in ayurveda ccras -volume 1.p.c.sharma t.j denis m.b.yelne 2000
7. DR.J.L.N.Sastry; *Dravyaguna Vijnana* Foreword by Prof K.C.Chunekar volume II; Chaukhambha Orientalia, Varanasi, 2012;747.



8. Ashish J. Modi, S. S. Khadabadi, I.A.Farooqui, S.L. Deore Department of Pharmacognosy and Phytochemistry.
9. DR.J.L.N.Sastry; *Dravyaguna Vijnana* Foreword by Prof K.C.Chunekar volume II; Chaukhambha Orientalia, Varanasi ;Reprint edition 2012 page no.-486.
10. Ayurvedic Pharmacopoeia of India, Published by Ministry of Health & Family Welfare, volume 1. 1<sup>st</sup> Edition, 2003.
11. Telang RS et al, Studies on analgesic and anti-inflammatory activities of *Pluchea lanceolata* Linn. Indian Journal Pharmacol.1999; 31: 363–6
12. Bansod M S et al, Therapeutic effect of a poly-herbal preparation on adjuvant induced arthritis in Wistar rats. International Journal of Pharmacy and Pharmaceutical Sciences. 2011, ISSN-0975-1-491.Vol 3, Suppl 2.
13. Hiruma-Lima CA et al, The juice of fresh leaves of *Boerhaavia diffusa* L. markedly reduces pain in mice. J Ethnopharmacol. Epub 2000 Jul; 71(1-2):267-74.

### सारांश-

**प्रसंग :** आयुर्वेद ने गंभीर रोग के प्रबंधन में सबसे महत्वपूर्ण जगह ले ली है। नैदानिक उपस्थिति के कारण आमवात (गठियावात) कि तुलना रुमाटाईड अरथ्रायटिस के साथ की जा सकती है। इस रोग कि व्यापकता के कारण, समाज में ज्यादा प्रसार और प्रभावी दवा की कमी के कारण, इस रोग को अध्ययन के लिए चुना है। जनसंख्या का लगभग 0.8% की व्यापकता है।

**उद्देश्य:** आमवात (रुमाटाईड अरथ्रायटिस) के प्रबंधन में अजमोदादि वटक एवं एरंडादि क्वाथ के प्रभाव का आकलन करने के लिए अध्ययन।

**सेटिंग्स और डिजाइन :** एकल केंद्रित, रान्डमाइज और खुली नैदानिक अध्ययन।

**विधियाँ और सामग्री:** आमवात के 45 चिकित्सकीय निदान रोगियों को लॉटरी पद्धति द्वारा चुना गया। अजमोदादि वटक को 2 वटक ) प्रत्येक 3 ग्राम (दिन में तीन बार गुनगुने पानी के साथ भोजन के बाद 30 दिनों

के लिए दिया गया और एरंडादि क्वाथ को 20 ग्राम )40 मिलीलीटर(दिन में दो बार भोजन पूर्व 30दिनों के लिए दिया गया।

**सांख्यिकीय विश्लेषण :**इन स्टैटिस्टिक पैड 3 सॉफ्टवेयर इस्तेमाल किया गया था।नान पैरामीट्रिक डेटा Wilcoxon matched pairs signed rank टेस्टके लिए मिलान जोड़े ,जबकि पैरामीट्रिक डेटा Paired't टेस्ट किया गया था और इंटर ग्रुप कि तुलना,के लिए Kruskal-Wallis Test & Dunn's Multiple Comparisons Test (Post Test) और ANOVA टेस्ट समूह इस्तेमाल किया गया था।

**परिणाम :**सांख्यिकीय विश्लेषण के आधार पर जब अजमोदादि वटक एवं एरंडादि क्वाथ को एक साथ प्रयोग करने के बाद ईएसआरमें सांख्यिकीय अत्यधिक महत्वपूर्ण सुधार पाया गया और आमवात के लक्षणों में अत्यधिक महत्वपूर्ण परिणाम पाये गये हैं। और 13.33% रोगियों में उत्कृष्ट राहत देखी गई, 33.33% रोगियों मध्यम राहत मिल गई, 46.66% रोगियों को हल्की राहत मिली है।

**निष्कर्ष :**आमवात (रुमाटाईड अरथ्रायटिस) के चिकित्सा प्रबंधन में अजमोदादि वटक एवं एरंडादि क्वाथ में प्रभावी है।

**मुख्य शब्द :**आमवात, अजमोदादि वटक, एरंडादि क्वाथ, रुमाटाईड अरथ्रायटिस

### How to cite this article:

Dr. Kanti Lal Mali, Dr. Uday Raj Saroj, Prof. Ram Kishor Joshi, Clinical evaluation of efficacy of 'Ajamodadi Vataka' and 'Erandadi Kwatha' in the management of Amavata with special reference to Rheumatoid arthritis; *International Journal of AYUSH* 2018;7(2) 801-818.