ejpmr, 2025, 12(2), 249-253

SJIF Impact Factor 7.065

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Research Article

ISSN 2394-3211

EJPMR

A CLINICAL STUDY TO EVALUATE THE EFFICACY OF *CHITRAKADI CHURNA* IN *AMAVATA*

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Article Received on 10/12/2024 **Article Revised on 31/12/2024** **Article Accepted on 21/01/2025**

ABSTRACT

According to **"रोगा: सर्वेऽपिमन्देऽग्नौ ||"- (अ. ह. नि.12/1)** means the majority of disease occur due to *Mandagni*. *Amavata* is one among them. It is a disease in which vitiation of *Vata Dosha* and accumulation of *Ama* take place in joints. The first detail description of *Amavata* was found in 7th century in a diagnostic manual called "*Madhava Nidana*" by *Acharya Madhava*. In this *Acharya Madhava* describes the aetiology, pathogenesis, symptoms and types of *Amavata*. *Acharya Madhava* has described causative factor for the diseases as *Virudhahara* (Unwholesome diet), *Virudhacheshta* (Erroneous habit), *Mandagni* (Diminished digestive fire), *Nishchalata* (Sedentary life), *Vyayama* (exertion) immediately after taking *Snigdha Ahara*. *Amavata* is generally compared with Rheumatoid Arthritis based on similarities on sign and symptoms. Rheumatoid Arthritis (RA) is a chronic inflammatory, destructive and deforming symmetrical polyarthritis associated with systemic involvement. Due to progressive, chronic nature of disease it affects the quality of life of the patients and decreases their activity at work.

KEYWORDS: *Amavata*, Rheumatoid Arthritis, *Ama*, *Vata*.

INTRODUCTION

From stone age to space age living pattern of people have undergone numerous changes. Countries become more industrialized and technically strong. Depending on high technology machines and transport, hence lack of physical activity combination with fatty fast-food leads to bad effect on health, physically, psychologically and socially. This leads to the sluggish function of *Agni*. Due to *Mandagni* digestion of food does not occur properly that leads to production of *Ama*. *Ama* is most important pathological factor in *Ayurveda* that leads to many diseases. One of the most difficult diseases caused by *Ama* is *Amavata*. *Ama and Vata* are the two chief pathogenic factors in *Samprapti* of *Amavata*. The disease is primarily caused by *Agni* derangement, such as *Jatharagni*, *Dhatvagni*, *Bhutagni* etc., which produces *Ama*. This *Ama* is then circulated throughout the body by vitiated *Vata* and ends up in the *Shleshmasthanas* (*Amashaya*, *Asthisandhi* etc.) causing pain, stiffness and swelling over both small and large joints, ultimately rendering a person lame[1]. *Amavata's* clinical manifestation is quite similar to that of Rheumatoid arthritis.

The first person to describe the principles of treating *Amavata* was *Chakradatta*. These principles included *Langhana*, *Swedana*, drugs having *Tikta Katu Rasa* and *Deepana- Pachana* action, *Virechana*, *Snehapana* and *Anuvasana* as well as *Ksharavasti*.[2]

AIMS AND OBJECTIVES

1. To Evaluate the efficacy of *Chitrakadi Churna* in the management of *Amavata*.
2. To Provide an effective and safe *Ayurvedic* management for *Amavata*.

MATERIAL AND METHODS

Selection of the Patients - In the present study, total 30 patients were registered from the OPD of P.G. Department of *Kayachikitsa*, Rishikul Campus, UAU, Haridwar. The patients were selected on the bases of inclusion and exclusion criteria. Out of which 28 patients completed the trial for the period of 60 days and 2 patients left the trial in between. The study being part of MD was approved by Institutional Ethical Committee.

Drug- *Chitrakadi Churna*

"चित्रकं कटुका पाठा कलिंगातिविषाऽमृता |

देवदारुवचामुस्तनागरातिविषाऽभया |

पिबेदुष्णाम्बुना नित्यमामवातस्य भेषजं ||[3] " – (भा.प्र.म.ख. 26/25)

Table 1: Method of administration of drug.

Kalpa	*Chitrakadi Churna*
Dose	5 gm BD
Route	Oral
Anupana	Warm water
Duration	60 days
Assessment	4 times at an interval of 15 days
Follow up	15 days after completion of treatment

Table 2: Constituents of *Chitrakadi Churna.*

DRUG	BOTANICAL NAME	FAMILY	PART USED	PART
Chitraka	Plumbago *zeylanica*	Plumbaginaceae	*Moola*	1
Katuka	*Picrorhiza kurroa*	Scrophulariaceae	*Moola*	1
Patha	*Cissampelos pareria*	Menispermaceae	*Moola*	1
Kalinga	*Holarrhena antidysenterica*	Apocynaceae	*Twaka*	1
Ativisha	*Aconitum heterophyllum*	Ranunculaceae	*Moola*	2
Amrita	*Tinospora cordifolia*	Menispermaceae	*Kaand*	1
Devadaru	*Cedrus deodara*	Pinaceae	*Kaand-sara*	1
Vacha	*Acorus calamus*	Araceae	*Moola*	1
Musta	*Cyperus rotundus*	Cyperaceae	*Kanda*	1
Nagar	*Zingiber officinale*	Zingiberaceae	*Kanda*	1
Haritaki	*Terminalia chebula*	Combretaceae	*Phala*	1

CRITERIA FOR SELECTING THE PATIENT

(A) Inclusion criteria

- Patients having classical features of *Amavata.*
- Age group of 20-60 years.
- Patients fulfilling American College of Rheumatology (ACR) criteria, 2010.

(B) Exclusion criteria

- Chronicity for more than 10 years.
- Having severe crippling deformity.
- Patient with known case of Cardiac disease, Tuberculosis, Diabetes mellitus, Hypertension.
- Any other serious medically and surgically ill patients.

CRITERIA FOR ASSESSMENT

The assessment of the trial was done on the basis of following parameters:

1. Subjective
2. Objective

1. Subjective: The subjective assessment was done on the basis of improvement in following signs and symptoms of *Amavata* as described in classics.

1.	*Sandhishoola* [Joint pain]	6.	*Jaadya* [Morning stiffness]
2.	*Sandhishotha* [Joint swelling]	7.	*Sparsh-Asahayta* [Tenderness]
3.	*Gaurav* [Heaviness in the body]	8.	*Apaaka* [Indigestion]
4.	*Jwara* [Fever]	9.	*Bahumutrata* [Frequency of micturition]
5,	*Aruchi* [Loss of appetite]	10.	*Utsaha-hani* [Loss of vigour]

2. OBJECTIVE: The objective assessment was done on the basis of changes in clinical findings, relevant laboratory parameters and Functional assessments.

(1). Hb, TLC, DLC
(2). ESR
(3). RA Factor
(4). CRP
(5). Functional assessment- a). Goniometry (Range of motion)
b). Grip strength
c). Foot pressure
d). Walking time.

Table 3: Grading of subjective criteria.

SUBJECTIVE PARAMETERS	GRADE 0	GRADE 1	GRADE 2	GRADE 3
Sandhishoola	No pain	Pain felt only at time of movement.	Persistent pain not affecting daily routine	Persistent pain that affecting daily routine
Sandhishotha [Joint swelling]	No swelling	Joint swelling which is only recognizable to an experienced examiner	Joint swelling obvious even on casual observation	Joint swelling to a maximal abnormal degree
Gaurav [Heaviness in the body]	No Heaviness	Occasionally heaviness in body after meals	Occasionally heaviness even without meals	Persistent heaviness throughout the day
Jwara [Fever]	Absent	Occasionally (99^0 F-100^0 F)	100^0 F-102^0 F	>102^0 F
Aruchi [Lack of desire to eat]	Normal desire for food	Desire for food, little late than normal time	Desire for food only after long intervals	No desire at all
Jaadya (Stiffness)	No Stiffness	Stiffness lasting for 2 hours	Stiffness lasting for more than 2 hours	Stiffness lasting throughout the day
Sparsh-Asahayta [Tenderness]	No Tenderness	Subjective experience of tenderness	Wincing of face on pressure	Wincing of face and withdrawal of the affected part on pressure
Apaaka [Indigestion]	No Apaaka	Occasionally prolonged food digestion period after heavy meals	Occasionally prolonged food digestion period even after normal diet	Consistently prolonged food digestion period even after normal diet.
Bahumutrata [Frequent urination]	<4 times/24 hr	4-6 times/ 24 hrs.	6-10 times/24 hrs.	> 10 times/24 hrs.
Utsaha-hani [Loss of vigor]	No Fatigue with normal desire for work.	Works full time but feels fatigue more than normal.	Interruption of work due to fatigue with loss of desire to work.	Fatigued at rest with loss of desire at work.

OBSERVATION AND RESULTS

1. Maximum patients were belonged to the age group of 31-40 years and 51-60 years (30% in each group).
2. Maximum patients were females (70%)
3. Maximum number of patients were belonged to Hindu community (96.70%).
4. Maximum patients were married (83.4%).
5. Maximum number of patients were from urban area (93.34%).
6. Maximum patients had educational qualification up to higher secondary (26.7%).
7. Maximum patients were belonged to lower middle class (60%).
8. Maximum patients were housewives (56.66%).
9. Maximum patients had no addiction (60%).
10. Maximum patients had disturbed sleep (53.33%) and 46.67% patients had sound sleep.
11. Family history was not present in 83.34% patients.
12. Maximum patients had *Mandagni* (63.66%).
13. Maximum number of patients (93.33%) were vegetarian.
14. Maximum patients (43.3%) were of *Vata-Kaphaja Prakriti* followed by *Kapha- Pittaja Prakriti* (40%).
15. Majority of patients were of *Madhyama Sara* (66.7%), *Madhyama Samhanana* (56.67%), *Madhyama Satmaya* (53.34%), *Madhyama Satva* (63.33%).
16. Maximum patients in the present study had *Avara Abhyavarana Shakti* (50%).
17. Maximum patients in the present study had *Avara Jarana Shakti* (63.3%).
18. Maximum patients in the present study had *Avara Vyayama Shakti* (76.70%)
19. RA Factor was positive in 66.70% patients.
20. CRP was raised in 53% patients.
21. ESR was raised in 60% patients.

Table 4: % Relief in subjective parameters.

Subjective Parameters	% Effect
Sandhishoola	30.55%
Sandhishotha	28.2%
Gaurav	36.1%
Jwara	72.7%
Aruchi	59.2%
Jaadya	27.5%
Sparshasahyata	35.1%
Apaaka	50%
Bahumutrata	21.4%
Utsahahani	38.9%

Table 5: % Relief in objective parameters.

Objective parameters		% Relief
Hb		1.43%
TLC		13.59%
DLC	**Neutrophil**	4.15%
	Lymphocyte	3.47%
	Monocyte	-10.34%
	Eosinophil	2.12%
	Basophil	45.61%
ESR		1.52%
CRP		5%
RA Factor		20.20%

Table 6: % Relief in functional parameters.

Functional Parameters		% Relief
Goniometry		
PIP [Flexion]	RH	3.4 %
	LH	3.6 %
MCP [Extension]	RH	3.4%
	LH	4.71%
MCP [Flexion]	RH	3.23 %
	LH	3%
Wrist [Extension]	RH	4.3%
	LH	3.3%
Wrist [Flexion]	RH	4.98%
	LH	3.6%
Elbow [Flexion]	RH	2.3%
	LH	2.31%
Knee [Flexion]	RL	3.05%
	LL	2%
Ankle [Plantar Flexion]	RL	2.9%
	LL	5.9%
Ankle [Dorsi Flexion]	RL	5.7%
	LL	5.7%
Grip Strength	RH	6.1%
	LH	9.09%
Foot Pressure	RL	6.38%
	LL	6.25%
Walking Time		5.10%

Table 7: Estimation of overall response.

Overall Effect	No. of Patients	Percentage
Marked improvement	5	17.86%
Moderate Improvement	2	7.14%
Mild Improvement	8	28.58%
No improvement	13	46.42%
Total	28	100%

DISCUSSION

While observing subjective assessment following result was found.

- Statistically highly significant result was found in subjective parameters like *Sandhishoola*, *Aruchi*, *Apaaka* and *Utsahahani*.

1. *Sandhishoola.*

Shoola is the result of *Vata* vitiation. This highly significant relief may be due to *Shoolaghna* and *Vatahara* properties of *Chitraka, Ativisha, Devadaru* and *Haritaki*.

2. *Aruchi*

Aruchi is found in *Amavata* because of *Sama* condition. Highly significant result in *Aruchi* may be due to *Ama Pachana* properties of *Musta, Ativisha* and *Nagar*.

3. *Apaaka*

Apaaka occur in *Amavata* because of *Agnimandaya. Agnimandaya* is the root cause of *Amavata.* Highly significant result in *Apaaka* may be due to *Agni-Deepana* properties of *Chitraka, Ativisha, Devadaru* and *Nagar*.

4. *Utsahahani*

Utsahahani occur in *Amavata* because of insufficient nutrition of *Sharir dhatus, Indriya* and *Mana*. Highly significant result in *Utsahahani* may be due to *Rasayan* properties of *Amrita* and *Haritaki*.

- Statistically significant result was found in subjective parameters like *Sandhishotha, Gaurava, Jwara, Jaadya* and *Sparsha Asahayata*.

1. *Sandhishotha*

Significant result in *Sandhishotha* may be justified on the basis of *Ama Pachaka Guna* and *Shothahara* properties of drugs like *Musta, Ativisha, Devadaru, Nagar* and *Haritaki*.

2. *Gaurava*

Significant result in *Gaurava* may be due to *Kapha Shamak* properties of *Chitraka, Katuka, Kalinga, Devadaru, Vacha* and *Musta*.

3. *Jwara*

Significant result in *Jwara* may be due to *Ama Pachana* and *Jwaraghna* properties of *Amrita, Ativisha, Musta, Patha* and *Nagar*.

4. *Jaadya*

Significant result in *Jaadya* may be due to the resolution of *Ama* in affected parts by *Amahara* properties of *Musta, Ativisha* and *Nagar.*

5. *Sparsha- Asahayata*

Tenderness represents the state of *Ama* and *Shotha* at the same time. It may be due to the chronicity and *Avarana* of *Kapha*. The significant relief was observed may be due to the resolution of the *Ama* in affected parts by the *Amahara* properties of drug.

- Statistically non-Significant result was found in *Bahumutrata*.

- In functional parameters statistically non- significant result was found in goniometry, grip strength, foot pressure and walking time.

CONCLUSION

In *Ayurveda* various studies have been done earlier to find out the potential remedy for *Amavata* (rheumatoid arthritis) but due to the complex nature (etiopathogenesis) of the disease no single drug or combination of herbal drug has been proved to be effective in treating it, so the present study aims to finding effective management of *Amavata* (rheumatoid arthritis) without any side effects.

ACKNOWLEDGEMENT

I would like to sincerely thank the faculty members and my colleagues of PG department of *Kayachikitsa*, Rishikul Campus, U.A.U, Haridwar, Uttarakhand.

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