

EFFECT OF DHANYNA-NAGAR KWATHA IN THE MANAGEMENT OF AMAVATA

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ABSTRACT

Rheumatoid arthritis (RA) is a long-lasting autoimmune disorder that primarily affects joints. It typically results in warm, swollen, and painful joints. Pain and stiffness often worsen following rest. Till date the cause of rheumatoid arthritis is not clear, it is believed to involve a combination of genetic and environmental factors. The underlying mechanism involves the body's immune system attacking the joints. This results in inflammation and thickening of the joint capsule. It also affects the underlying bone and cartilage. In Ayurveda RA can be correlated with *Amavata* due to similarity of sign and symptoms of disease. In present study Total 30 patients of Amavata were selected from OPD and IPD of RA Padar Ayurvedic Hospital Mumbai, *Dhanyna-Nagar Kwatha* was given to these patients for one month. Statistically significant improvement was found in ESR, RA factor (quantitative) and also significant results were found in symptoms of *Amavata*.

Keywords: *Amavata, Dhanyna-Nagar Kwatha, Rheumatic Arthritis.*

INTRODUCTION:

Rheumatoid arthritis (RA) typically manifests with signs of inflammation, with the affected joints being swollen, warm, painful and stiff, particularly early in the morning on waking or following prolonged inactivity. Increased stiffness early in the morning is often a prominent feature of the disease and typically lasts for more than an hour. RA affects between 0.5 and 1% of adults in the developed world with between 5 and 50 per 100,000 people newly developing the condition each year.¹ Onset is most frequent during middle age and women are affected 2.5 times as frequently as men. In 2013, it resulted in 38,000 deaths up from 28,000 deaths in 1990². Modern lifestyle, urbaniza-

tion, industrialization, globalization, and economic liberalization also with the technology up gradation the individual life style is changing. People's faulty dietary habits, consumption of junk foods decreases strength and energy of the defense mechanism of the body. Also induce mental stress and anxiety, adverse habits such as alcohol consumption, smoking and drug abuse all these perpetuate and strengthen the process of *Amavata*.

Amavata is a painful multiple joint involvement chronic systemic disease. In *Ayurveda*, *Madhvakar*(700AD) mentioned first the *Amavata* and discuss in detail pathogenesis of disease. *Ama*(biotoxin) as well as *Vata* plays a predominant role in the sam-

prapti(pathogenesis) of the disease *Amavata*. *Aama* is the main causative factor of *Amavata* is produced due to *Agnimandya* (suppressed digestive fire).³ The disease is initiated by the consumption of *Viruddha Ahara* and simultaneous indulgences in *Viruddha Ahara* in the pre-existence of *Mandagni*⁴. *Amavata* can be correlated with Rheumatological disorders called rheumatoid arthritis, in accordance with their similarities in clinical features, like pain, tenderness, swelling, stiffness, fever, redness, general debility. Modern treatment provides the symptomatic relief but the underlined pathology goes on unchanged due to the absence of effective therapy. modern treatment of RA also have side effects, NSAIDs have gastrointestinal side effects whereas DMARDs have marrow renal and hepatic toxicity.⁵ 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. In *Ayurveda*, it provides the complete cure to this disease. The treatment of *Amavata* mainly emphasis in treating *Ama* and *Vata*. Considering main concept of *chikitsa* of *Amavata* it was decided to evaluate efficacy of the compound which have properties like-1) *Aamapachak* 2) *Vatahar* 3) *Vatanulomak* and easy availability of drugs, simple method of preparation and easy route of administration of drug. For clinical management of *Amavata* (Rheumatoid arthritis) *Dhanya-Nagar Kwatha* was selected from *Sharangdhar Samhita* having above properties, which contains *Dhanyak*, *Shunthi* and *Erandmoola*.⁶

Aims and Objectives

1. To evaluate the efficacy of ‘*Dhanyana-Nagar Kwatha*’ in the patients of *Amavata* .
2. To study the clinical effect of ‘*Dhanya -Nagar Kwatha*’ on degree of disease activity according to ARA criteria.

Material and methods: Total 30 Patients suffering from *Amavata* and attending the O.P.D. and I.P.D. Department of *Kayachikitsa*, R.A. Podar Ayurvedic Hospital, Worli, Mumbai were selected randomly, irrespective of their Age, Sex, Religion and Socio economic status etc. Patients were investigated as per special proforma prepared for the study, including classical signs and clinical features described in modern textbook.

Criteria for selection of patients

1. Clinically diagnosed patients of *Amavata*.
2. Both the cases of RA factor (positive as well as negative)
3. All patients of either sex between 15 -60 years age group.

Criteria for rejection of patients

1. Patients who left the treatment in between.
2. Patients who are steroid dependent for relief of symptoms.
3. Patients presenting with complication like SLE, endocarditis etc.
4. Patients carrying contractures of joints or deformities were not included.

Criteria of diagnosis:

The diagnosis was done on the basis of signs and symptoms in both Ayurvedic classics as well as modern texts. The criterion of diagnosis A.R.A. (1988) was also followed. American criteria are mentioned as follows.

1. Morning stiffness lasting for at least 1 hr. and for > 6 week.
2. Arthritis of 3 or more of 14 possible joints area.
3. Total duration of the Arthritis of hand joints, wrist joints, metacarpophalangeal,

- Interphalangeal, Metatarsophalangeal joints > 6 week.
1. Symmetrical arthritis.
 2. Rheumatoid nodules – Presence of subcutaneous nodules over bony prominence.
 3. Serum Rheumatoid Factor.
 4. Radiological changes.

Grade	0	1	2	3
Grip power	200 or >200mmhg	198 to 120mmhg	118 to 70mmhg	<70mmhg
Foot power	36 to 40kg	31 to 35kg	26 to 30kg	<20kg
Walking time	15 to 20sec	21 to 30sec	31 to 40sec	>40sec

Degree of Disease Activity

For diagnostic and therapeutic purpose, the degree of disease activity was estimated on the basis of criteria laid down by American Rheumatism Association (1967). Details are given in table. In these criteria the

maximum score is 30, which represents an average grade of 3 (several active). By dividing the total score by 10, the grade of the disease is obtained and denoted by grades zero (0) to three (3). The table is described herewith.

Table No. 1 Showing Semi Quantitative Criteria for Estimating of Degree of Disease Activity.

Grade	0	1	2	3
Morning stiffness	No Morning stiffness	Morning stiffness > ½ hrs but < 1 hrs	> 1 hrs but < 6Hrs	All the day through
Fatigue	None	Work fulltime despite some fatigue	Patient must interrupt work to take rest	Fatigue at rest
General Function	All activities without difficulty	Most activities but with difficulty	Few activities care for self	Little self-care mainly chair & bed ridden
Grip Power in mm of Hg	> 200	198–120	118–70	<70
No. of joints involved	None	0 to 5	5 to 10	More than 10
ESR	0 – 20	20 – 40	40 – 60	> 60
Hb gm%	> 12	12 – 10	10 – 9	< 9
Physicians Estimate	Inactive	Minimum	Moderate Activity	Severely active

All routine investigations were carried out to exclude other pathology.

Drug and doses.

Trial Drug:- Dhanya-Nagar Kwatha

Table No.2 Showing contents of Dhanya-Nagar Kwatha

Drug	Latin name	quantity
Dhanyaka	Coriandrum sativum Linn	10 gm

Shunthi	Zingiber officinale)	10 gm
Erandmoola	Ricinus communis	10 gm

Method of preparation:- It was prepared according to Kwatha vidhi described in Sha-rangdhara Samhita.

One part of all dravyas (total 30gm), Water 16 part (480 ml) Boiled & reduced to 1/8(60ml)

Dose :- 30ml twice a day.

Duration:- 4weeks.

OBSERVATION AND RESULTS

In this study 19(63.33%) patients were of Kapha-vataj Prakriti, 6(20%) and 5(16.67%) were of Vaat-pittaj Prakriti and Pitta-kaphaj prakriti respectively. Whereas 18(60%) patients of Amavata had Mandagni. Due to vata dominance 19(63.33%) patients had Krura koshttha, 9

(30%) and 02 (6.67%) patients were having Madhyam and Mrudu koshttha respectively. In present study 26(86.66%) patients were R.A positive, while 4(13.33%) patients were R.A negative. The sensitivity of RF test for established rheumatoid arthritis is only 60-70% with a specificity of 78%.It was observed that after the completion of treatment overall percentage of relief was 53.09%. Effect on Angamarda (General malaise) 62.50%, Aruchi (Anorexia) 66.66%, Alasya (laziness) 53.62%, Agnimandya (suppressed digestive fire), 47.82%, Vidvibandha (constipation) 70% and Pain was 65.51% respectively. All the result were statistically significant P<0.001.

Table No. 3 showing effect on Physical parameters of 30 Patients of Amavata.

Sr. No	Physical Parameters	Mean	SD	SE	T	P
1	Walking time	0.4000	0.4983	0.09097	4.397	<0.001
2	Foot Power	0.3333	0.4795	0.08754	3.808	<0.001
3	Grip Power	0.1667	0.3790	0.06920	2.408	<0.05
4	ROJM	0.2333	0.4302	0.07854	2.971	<0.01

In Walking time and Foot power parameters statistically extremely significant<0.001 results found. While in other p value is

<0.05, <0.01 in Grip power and ROJM respectively, found statistically significant.

Table No.4 Showing Effect on Hematological parameters of 30 Patients of Amavata.

Sr. No.	Hematological Parameters	Mean	SD	SE	T	P
1	Hemoglobin	-0.01667	0.2019	0.03685	0.4522	>0.05
2	Total RBC	-0.01667	0.1177	0.02149	0.7757	>0.05
3	ESR	9.933	4.884	0.8918	11.139	<0.001
4	Total WBC	-0.02667	0.2392	0.04366	0.6107	>0.05
5	SGOT	0.2333	6.585	1.202	0.1941	>0.05
6	SGPT	-0.1333	2.596	0.4740	0.2813	>0.05
7	Sr.Bilirubin	-0.006667	0.1363	0.02488	0.2679	>0.05
8	Blood Urea	0.1000	2.708	0.4945	0.2022	>0.05
9	Sr.Creatinine	0.006667	0.1484	0.02709	0.2461	>0.05

In this study mean differences in ESR was 9.933, so this reduction in ESR was statistically significant when tested by paired 't' test

($p < 0.001$). Thus we can say that *Dhanya-Nagar kwatha* is effective only on ESR out of all above hematological parameters

Table No.5 Showing Effect of Therapy on Degree of Disease Activity of 30 Patients of Amavata.

Sr. No.	Symptoms	Mean	SD	SE	t	P
1	Morning Stiffness	0.7333	0.7397	0.1350	-	<0.001
2	Fatigue	0.5333	0.7303	0.1333	-	<0.01
3	Pain	1.100	0.5477	0.1000	-	<0.001
4	General Function	0.4000	0.6215	0.1135	-	<0.01
5	Grip Power	0.1667	0.3790	0.06920	2.408	>0.05
6	No. of Joint involve	0.1667	0.5307	0.09689	-	>0.05
7	Physicians Estimate	0.2667	0.7849	0.1433	-	>0.05
8	Total Disease Activity	0.4370	0.3327	0.1109	-	>0.05

In the present study statistically highly significant results $p < 0.001$ were found in morning stiffness and pain. Fatigue and gen-

eral function showed statistically significant $p < 0.01$ results, whereas insignificant results $p > 0.05$ were found in all others parameters.

Table No.6 Showing Total Effect of Therapy in 30 Pts. of Amavata.

Sr. No	Total Effect of Therapy On Symptoms	No. of Patients	%
1	Cured	00	00%
2	Markedly Improved	00	00%
3	Improved	21	70%
4	Unchanged	09	30%

In present study out of 30 patients of 21(70%) Improved, whereas 9(30%) was unchanged. But statistically significant results were found in most of the common symptoms of disease after completion of treatment. Which suggest that Drug *Dhanya Nagar Kashay* is effective in *Amavata* and improve Quality of Life in patients.

DISCUSSION

Hypo functioning of digestive mechanism (*Agni*) and impaired digestive power is the basic causative factor for almost all disease. *Ama* means undigested food which stays inside our body and causes many diseases. It is the root cause of nearly

all the diseases. It is produced mainly because of *Mandagni* (decreased digestive and tissue fire) i.e. impairment of the mechanism for the secretion of digestive juices and thereby digestion. Due to hypo functioning of *Agni* proper digestion of food doesn't takes place leading to formation of *Ama*, which is responsible for the manifestation of almost all diseases specially *Amavata*. *Ama* and *Vata* being contradictory in their characteristics, there is difficulty in planning the line of treatment. Derangement of the *Kapha dosha*, especially *Shleshak kapha* in the *Amavata*, which produces joint pain and swelling with tenderness, can be

correlated with rheumatoid arthritis [7]. *Deepana-pachana dravyas* which increase the digestive fire and promote digestion are also indicated for the patients of *Ama* [8]. By *Ushna* (hot by nature), *Ampachak* (means improving metabolic rate & digestion), *Laghu*, *Strotasanugami* (means giving lightness in the body by going in body tissue), nature of *Dhanya-Nagar Kwatha* Effect on pain relief & and other symptoms of disease. It also improves the physical wellbeing causing improvement on quality of life of patient. Decrease in ESR shows anti-inflammatory activity of *Dhanya-Nagar kwatha*. There was no effect of this drug on total degree of disease activity of Rheumatoid arthritis. Though *Dhanya-Nagar Kwatha* is effective on some parameters of degree of disease activity. Hence we can say that though some sign & symptom of *Amavata* shows similarity with some sign & symptoms Rheumatoid arthritis but still to find exact nature of RA in Ayurvedic text we require further study that may be in direction of *Grahani*, *Srotorodhjanya Vatavyadhi*, *Sama Vayu*, *Agnimandya* & other various *Siddhantas* (basic principles) of *Ayurveda*. *Dhanya-Nagar Kwatha* is effective in decreasing sign & symptoms of both RA & *Amavata* in 4 weeks. It is not a complete remedy treatment to cure neither *Amavata* nor RA in short duration. But it definitely improves the Quality of life in patents of *Amavata*. A longer duration of assessment is requiring for assessment of therapy.

CONCLUSION:

Dhanya-Nagar Kwatha is effective in correcting the pathological and clinical conditions of the disease *Amavata*. Also, it gives significant results on rheumatoid fac-

tor and highly significant result on ESR which is used for diagnosis of rheumatoid arthritis.

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Source of support: Nil

Conflict of interest: None declared