



MANAGEMENT OF AMAVATA (RHEUMATOID ARTHRITIS) WITH YOGA THERAPY

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ABSTRACT

Amavata may be simulated with Rheumatoid arthritis on the basis of clinical manifestation and pathogenesis. In this clinical study, 43 *Amavata* (Rheumatoid arthritis) patients were registered from the O.P.D. of the Maharshi Patanjali Institute for Yoga Naturopathy Education and Research, Gujarat Ayurved University, Jamnagar. Among 43, 3 patients discontinued before completion of the treatment. Yoga therapy i.e. *Prarthana* (Prayer), *Sutraneti*, *Jalaneti*, *Vaman (kunjāl)*, *Kapalbhati*, Stretching and Rotations, *Asana*, *Mudra*, *Pranayam*, Relaxation with *Dharana*, *Omkara* & *Shanti mantra* were designed in the treatment of *Amavata* (Rheumatoid arthritis) patients for three weeks (21 days). The practice was performed on an empty stomach. In the clinical study, 60 % of the participants showed major improvement, 35% minor improvement and 5% no improvement. Complete remission was nil. No complication was found in the clinical study. Maximum participants were women whose age ranged between 30 to 50 years.

KEYWORDS: *Amavata*, Rheumatoid arthritis, Female, 30 to 50 years, Yoga therapy.

INTRODUCTION

In Ayurveda, *Amavata* (Rheumatoid arthritis), was mentioned for the first time by Madhavakar (700AD), as a special disease entity and also that *Ama* (biotoxin) as well as *Vata* (biophysical force) plays a predominant role in the pathogenesis of this disease [1]. The *Amavata* may be simulated with Rheumatoid arthritis. According to modern medicine, Rheumatoid arthritis is not only a chronic but also an active inflammatory, progressive autoimmune arthropathy, characterized by bilateral symmetrical involvement of joints with some systemic clinical manifestations [2]. Aetio-pathogenesis of this disease is still not known precisely but among the hypothesis, 'entero-pathy' do play an important role regarding this disease. This

hypothesis is supported by Indian Medicine also. According to Ayurvedic Pathology book, *Madhav Nidan*, the etiological factors of *Amavata* are *Viruddha ahara* (maldiet habit), *Viruddha chesta* (malwork habit), *Mandagni* (impaired digestive capacity), *Nischalavastha* (sedentary habit), *Singddham bhuktavata annam Vyayam* (physical work immediately after intake of oily food) [3]. Rheumatoid arthritis is a most remarkable problem in the society in modern era. The suitable effective treatment of this disease is not available in the modern medicine till now. Our National economy is badly affected due to this disease. It is not only affecting the younger generation but its bad prognosis is also equally affecting the patients physically as

well as mentally. As a result, it has drawn major attention among the scholars. Yoga promotes a holistic living - a drugless and disease free living while at the same time uniting the physical, mental and spiritual aspect of our life into one. The great news with Yoga is that it is less complicated, hardly expensive, easily affordable and can be practiced by one and all [4]. It is helpful in the prevention and cure of different chronic disease. As a result, we have included certain yoga practices for the management of the Amavata in this clinical study [5].

Objectives

- To ameliorate the clinical features of Amavata and increase the work ability.
- To minimize the periodic fluctuation of the disease.
- To assess the effect of the Yoga management in the Amavata.

MATERIALS AND METHODS

43 patients fulfilled the criteria for the diagnosis of the Amavata (Rheumatoid-arthritis) and were registered for the present clinical study irrespective of their age, sex, religion. Among them, 3 patients discontinued before the completion of the therapy. The patients were selected from the OPD of the Maharshi Patanjali Institute for Yoga Naturopathy Education and Research, Gujarat Ayurved University, Jamnagar as per following criteria:-

I) Inclusion criteria

- Patient between 18 to 60 years (both genders)
- The patients fulfilled the clinical features of Amavata according to Ayurvedic classics.

- The patients fulfilled the American College of Rheumatology (ASIA), 1987-Reversed criteria for Rheumatoid arthritis [6].

II) Exclusion criteria

- Osteoarthritis, Rheumatic arthritis, Septic arthritis, Gouty arthritis, Psoriatic arthritis, Traumatic arthritis, SLE (Systemic lupus erythematosus).
- Diabetes Mellitus, Hypertension, Tuberculosis, Thyroid disorders, Cardiac problems, Renal problems, Liver problems, HIV and any Malignancy.
- Age below 18 years and above 60 years.

The disease was diagnosed on the basis of signs and symptoms as described in Ayurvedic and Modern texts, aided by the revised criteria for Rheumatoid arthritis fixed by the American College of Rheumatology in 1987. R.A.Factor and C Reactive Protein investigations had been done in all the patients for diagnosis and severity of the disease. Routine Blood, Urine and Stool examinations along with serum uric acid, urea, creatinine, ASO titer, ANF, Lipid profile, Liver function test, ECG, TSH, Fasting Blood Sugar had been also done to rule out other pathological conditions of the registered patients. This clinical study was done in 2007 and for the duration of approximately one year.

Plan of Study

Selected patients were given Yoga therapy every day morning at 6 a.m. for three weeks (i.e. 21 days). They did this practice in empty stomach. Check table no. 1 for the details on the yoga therapy practice.

Table 1: Yoga therapy

1 st week	2 nd week	3 rd week
Prarthana(Prayer): 2minutes(min.)	Prarthana: 2 minutes(min.)	Prarthana: 2 minutes (min.)
Suddhi kriya: 40 min. Neti (sutra & jala neti): 6min., (twice in week). Dhouti[vaman(kunjali)]: 30 min., (twice in week).	Suddhi kriya: 40 min. Neti (sutra & jala neti): 6min., (thrice in week). Dhouti[vaman(kunjali)]:30 min., (thrice in week).	Suddhi kriya: 40 min. Neti: (sutra & jala neti): 6min., (twice in week). Dhouti[vaman(kunjali)]: 30 min., (twice in week).

Kapalbhati: 5min. (daily). Stretches & Rotations: 15 min.	Kapalbhati: 5min. (daily). Stretches&Rotations: 15 min.	Kapalbhati: 5min. (daily). Stretches &Rotations: 15 min.
Asana & Mudra: 30 min. Standing: Tadasana Trikonasana Katichakrasana Sitting: Janushirasana Bhadrasana Vakrasana Ardhakumbhasana Supine: Pavanmuktasana Uttanpadasana Setubandhasana Prone: Makarasana Ardhasalbhasana Bhujangasana Niralambasana Mul bandha	Asana & Mudra: 30 min. Tadasana Trikonasana Katichakrasana Paschimottanasana Vakrasana Gomukhasana Ashwini mudra Yoga mudra Ardhahalasana Viparitkaranimudra Matsyasana Shalabhasana Sarpasana	Asana & Mudra: 30 min. Triknosana Vrikshasana Paschimottanasana Ardhamatsyendrasana Akarnadhanurasana Ashwini mudra Yoga mudra Halasana Sarvangasana Matsyasana Shalabhasana Sarpasana Dhanurasana
Pranayams: 10 min. Nadisodhana, Bhamari, Suryabhedana	Pranayams: 10 min. Nadisodhana, Bhamari, Ujjai, Bhastrika.	Pranayams: 10 min. Nadisodhana, Bhamari, Ujjai, Bhastrika
Relaxation with Dharana: 10 min.	Relaxation with Dharana: 10 min.	Relaxation with Dharana: 10 min.
Omkaara & Shanti mantra: 3 min.	Omkaara & Shanti mantra: 3 min.	Omkaara & Shanti mantra: 3 min.

Patients were instructed to avoid cold drinks, ice cream, curds, banana, coconut, black gram, fast food, junk food, non-veg (i.e. egg, fish and meat), tobacco, smoking, alcohol, alcohol containing other beverages, cold water bath and were advised not to sleep in day time and use luke warm water for bath^[7].

Assessment parameters

Three parameters were adopted for the assessment of present clinical study:-

Parameters for Assessment of Clinical Features

The results of the therapy were assessed on the basis of clinical features of the disease Amavata which are mentioned in Ayurvedic classics as well as criteria fixed by American Rheumatology Association in

1988 and implemented those after some modification. *Sandhishula* (Joint pain), *Sandhishotha* (Joint swelling), *Sandhithabdhatata* (Joint stiffness), *Sandhisparshaasahyatva* (Joint tenderness), *Angamarda* (Bodyache), *Gaurava* (Heaviness of the Body), *Agnidourblya* (Impaired digestive capacity) were selected as important common clinical features of *Amavata* (Rheumatoid arthritis) for this study and the scoring pattern was adopted separately for assessment of those clinical features.

Parameters for Assessment of Functional capacity

Functional capacity was assessed with three parameters Walking time, Grip Strength and Foot pressure. Walking time

was measured by asking the patient to walk a distance of 30feets. Time taken was recorded by stop watch before and after the treatment. Grip Strength was measured by ability to compress an inflated ordinary sphygmomanometer cuff under standard conditions (i.e. 20 mmHg) and it was recorded before and after the treatment. Foot pressure was measured by pressing a weighing machine with foot before and after the treatment.

Parameters for Assessment Overall Effect of the Therapy

To assess the overall effect of the therapy, the criteria was collected from ARA (American Rheumatology Association) (1988). It was implemented in this clinical study after some modification. Results were classified into four groups as follows: a) Complete Remission, b) Major Improvement, c) Minor Improvement, and d) No-improvement.

OBSERVATIONS

Maximum numbers of patients i.e. 65.24 % belonged to 30 to 50 years of age group. 84.34% patients were female, 85.44 % patients were Hindu (As, Jamnagar is Hindu majority area), 96.78 % patients were Married, 71.00 % patients were Housewives (as, Maximum patients were middle aged female), 59.89 % were coming from Middle class, 74.34 % were urban habitat, 79.80 % were educated from primary to graduate level. Majority of the patients i.e. 57.88 % were having Negative Family history, 82.34 % patients were having Gradual Onset, 95.43 % patients were having Relapsing Course and 46.56 %

RESULTS AND DISCUSSION

were having Chronicity of less than 2 years. Cold and moist environment was aggravating factor for all the patients. Maximum i.e. 86.56 % patients were vegetarian (as, the diet pattern of Jamnagar people is mainly Veg), 82.40 % patients had poor appetite, and 48.78 % were *Krura Kostha* (constipated). All the patients recorded maximum pain in *Varsha ritu* (Rainy season) and *Shita ritu* (winter season). Wrist joints pain was primary condition in majority of the patients (95.46%) along with Metatarsophalangeal (86.57%), Metacarpophalangeal (83.23%), Ankle (81.04%), Knee (75.46%), Elbow (26.44%), PIP (22.00%), Shoulder (14.33%), Hip (6.57%), Jaw (6.56%), DIP (4.34%), Lumbo-sacral (4.34%) and Cervical (3.21%) joint pain. R.A. factor positive was found in 22.12% patients and negative was found in 77.88% patients, C-Reactive-Protein positive was found in 62.12% patients and negative was found in 37.88% patients, Rheumatoid nodule was present in 33.44% patients and Deformity was observed in 5.78% patients. According to *Pratyatma Lakshana* (Cardinal clinical features) all the patients were suffering from *Sandhi-shula* (Joint-pain), *Sandhi-shotha* (Joint-swelling), *Sandhi-stabdhatata* (Joint-stiffness) and *Sandhi-sparshasahyata* (Joint-tenderness). According to *Samanya Lakshana* (General clinical features) *Angamarda* (body ache), *Gaurava* (heaviness of the body) and *Agnidaurbalya* (impaired digestive capacity) were observed in 70.56%, 66.67% & 85.66% patients respectively.

Table 2: Effect of the therapy on the following Clinical features

Clinical features	Mean Score		% of Relief	S.D.	S.E.	't'	P
	B.T.	A.T.					
<i>Sandhishula</i> (Joint pain)	2.21	0.79	64.66	0.49	0.07	17	<0.001
<i>Sandhishotha</i> (Joint swelling)	1.92	0.74	61.02	0.37	0.05	19.30	<0.001
<i>Sandhi-stabdhatata</i> (Joint stiffness)	2.22	0.79	66.28	0.49	0.07	18.44	<0.001

<i>Sandhi-sparsha-asahyatva</i> (Joint tenderness)	2.02	0.74	62.95	0.44	0.06	17.82	<0.001
<i>Angamarda</i> (Body ache)	2.1	0.70	65.39	0.48	0.08	17.48	<0.001
<i>Gaurava</i> (Heaviness of the Body)	2.1	0.81	60.02	0.42	0.07	18.74	<0.001
<i>Agni-dourblya</i> (Impaired digestive capacity)	2.1	0.94	53.76	0.28	0.05	25.50	<0.001

Table 3: Effect of the therapy on the following criteria of Functional assessment

Criteria	Mean Score		% of Relief	S.D.	S.E.	't'	P
	B.T.	A.T.					
Walking time	12.64	10.64	15.80	0.22	0.03	55.88	<0.001
Grip strength	88.74	97.74	10.13	5.49	0.86	10.32	<0.001
Foot pressure	19.77	22.59	14.28	0.86	0.13	20.44	<0.001

Table 4: Overall Effect of the Therapy

Effects	No. of Patients	Percentage (%)
Complete Remission	00	00
Major Improvement	24	60
Minor Improvement	14	35
No-Improvement	02	05

In this clinical study, the results were statistically highly significant ($P < 0.001$) on the parameters of clinical features and functional capacity which are shown in the Table 2 and Table 3 respectively^[8]. Overall Effect of the Therapy expresses that maximum patients i.e. 60% showed major improvement, 35% showed minor improvement, 5% showed no improvement and complete remission was nil. Probable mode of action of Yoga therapy in the clinical study is that *Suddhi kriya* helped them eliminate the vitiated *Shlesma* (vitiated body fluids) from the body. Stretching & rotations exercises improved joint mobility thereby reducing joint stiffness. *Asanas* improved the muscle tone, muscle strength & also functioning of different organs of the body. *Mudra* enhanced normal functional activity of the glands. *Pranayam* improved the functions of the respiratory and cardiovascular systems of body. Relaxation with *Dharana* decreased anxiety, tension, mental stress and depression. *Omkaara* & *Shanti mantra*

developed the spiritual aspects of the mind and *Prarthana* (Prayer) promoted mental & spiritual wellbeing. Important instructions and advices during therapy helped prevent further formation of *Ama* (biotoxins) into the body.

CONCLUSION

It can be concluded on the basis of the clinical study that Yoga therapy was effective in the management of *Amavata* due to combined practice of *Prarthana* (Prayer), *Sudhi kriya* [i.e. *Sutraneti*, *Jalaneti*, *Vaman (kunjal)*, *Kapalbhati*], Stretching & Rotations, *Asana*, *Mudra*, *Pranayam*, Relaxation with *Dharana*, *Omkaara* & *Shanti* mantra for continuous 21 days. No complication was found in the clinical study. Therefore this drugless, easily adoptable, easily affordable, less economic, free of side effect and more natural alternative treatments may be designed in the management of *Amavata* (Rheumatoid arthritis) for the benefits of the patients.

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