

THERAPEUTIC MANAGEMENT OF AAMVATA (RHEUMATOID ARTHRITIS) THROUGH SHUNTHI, GUGGULU AND GODANTI:A CLINICAL STUDY

Om Prakash¹, P. L. Bharati¹, A. K. Dixit², A. D. Jadhav¹

¹Clinical Research and Hospital Section, NRIASHRD, CCRAS, Ministry of AYUSH, Government of India, Gwalior, India

²Pathology and Biochemistry Section, NRIASHRD, CCRAS, Ministry of AYUSH, Government of India, Gwalior, India

ABSTRACT :

Aamvata (Rheumatoid arthritis) is one of the crippling diseases of the locomotor system, claiming the maximum loss of human power and is named after its important predisposing factors i.e. Aama and Vata. It is chronic, systemic autoimmune disorder associated with inflammation and tissue damage in joints (arthritis) and tendon sheaths. In Ayurvedic context, abnormal Aama and Vata are the important predisposing factors. *Shunthi* is a good *Pachak*, *Kaphaghna*, *Vatahara*, and *Uttejak* drug and *Guggulu* is *Rasayana*, *Tridoshaghana*, *Vrishya*, *Balya*, *Sansaran*, *Vatanulomak*, *Amashayottejak*, *Deepan*, *Vatahar* *Vatanadi Pushtikar* *Uttejak* *Kaphanissarak* property while *Godanti* is having a property of *Jwarahara*, *Daha* and *Trisha Samana*. The present study was carried out to scientific validate the effects of these drugs in clinical conditions of Aamvata. Both the drugs exhibited significant amelioration of the clinical symptoms of Aamvata and improved the physical well-being of the patients. Thus, the investigations conclude that *Shunthi*, *Guggulu*, *Godanti* have clinical efficacy in the treatment of *Aamvata*.

Key words :Aamvata, Rheumatoid arthritis, *Shunthi*, *Guggulu*, *Godanti*, Immunomodulator

INTRODUCTION: *Aamvata* (Rheumatoid arthritis) affects 15% people i.e. over 180 million people in India and is prevalent worldwide in all races, sexes, age and climates¹⁻³. It is a chronic, systemic autoimmune disorder associated with inflammation and tissue damage in joints (arthritis) and tendon sheaths. If left untreated the diseases affects the other systems of the body and worsen the life⁴. The etiology of this disease is unknown and predisposing factors are improper food habits and life styles⁵⁻⁶. This disease is termed as “*Aamvata*” in *Ayurveda*. The word ‘*Aama*’ means to toxic unwholesome product, which is produced in the body due to weakening of digestive fire. This ‘*Aama*’ is then carried by ‘*Vayu*’ and travels through the channels of the body and accumulates in the joints, which is the seat of ‘*Kapha*’³⁻⁴. As this process continues, all the joints are gradually affected resulting in severe pain and swelling in the joints. When ‘*Pitta*’ gets aggravated, it causes burning. *Aamvata* is a particular type of disease that is mentioned in *Ayurveda* since the period of *Madhavkar*, under the category of Vata – *Kaphaja* disorder⁷⁻⁸. *Ayurvedic* treatment was individualized according to the degree of imbalance of the *doshas*, and included internal herbal medicines and external application of analgesic pastes. In spite of the description of multiple drug therapy on *Aamvata* in different classics of *Ayurveda*, potential and durable results are not found due to non-removal of the basic

cause. In modern medicine, treatment of rheumatoid arthritis optimally involves a combination of patient education, rest, exercise, joint protection, medications i.e. NSAIDs, DMARDs, TNF alpha inhibitors, IL-6 inhibitors, T-cell activation inhibitors, B-cell depletors, JAK inhibitors, immunosuppressants and steroids and occasionally surgery. Hence, special emphasis should be put into searching for a standard and suitable drug for *Aamvata*.

Since the disease has auto-immune factor and persistent inflammation, the drugs which possess immunomodulatory and anti-inflammatory property are best suited. Among such drugs, *Shunthi*, *Guggulu*, *Godanti* are recommended drugs for *Aamvata* in *Ayurvedic* classics^{6,10}. *Shunthi* is known to have *Pachak*, *Kaphaghna*, *Vatahara*, property and clears all obstructed channels of the body, reduces the joint inflammation and helps in quick relief from the disease and *Guggulu* is *Rasayana* (immunomodulator), *Tridoshaghna*, *Vrishya*, *Balya*, *Sansaran*, *Vatanulomak*, *Amashayottejak*, *Deepan*, *Vatahar* *Vatanadi* *Pushtikar* *Uttej* *Kaphanissarak* property and decreases the joint pain and improves movements. While *Godanti* is having *Jwarahara*, *Daha* and *Trisha Samana* property and reduces all complications of fever which is one of the important symptom of *Aamvata*.

Although these drugs are widely used in management of *Aamvata*, there are no scientific claims and their validation. Therefore, the present study has been undertaken to evaluate the efficacy of *Sunthi*, *Guggulu* and *Godanti* in the management of *Aamvata* in a scientific methodical manner.

MATERIAL AND METHODS:

SELECTION OF PATIENTS: A total number of 128 patients of *Aamvata* were selected for the clinical study from the OPD and IPD of the Central Research Institute (Ay), Gwalior. The selected cases were recorded in a prescribed proforma provided by the CCRAS, New Delhi.

Criteria for the Selection:

A. Inclusion Criteria:

1. Age between 12 years to 60 years.
2. Chronicity between 6 weeks to 5 years.
3. Patients having signs and symptoms of Rheumatoid Arthritis i.e. joint pain in the feet, hands, and knees, swollen joints, fever, tender joints, loss of joint function, stiff joints, fatigue, joint redness, rheumatoid nodules, joint warmth, joint deformity etc. with positive RA factor.
4. Positive Radiographic evidence of Rheumatoid Arthritis.

B. Exclusion Criteria :

1. Age below 12 years and more than 60 years.
2. Chronicity less than 6 weeks and more than 5 years.
3. Patients having systemic diseases like tuberculosis, hypertension, renal failure, diabetes mellitus, urinary calculi, osteoporosis, osteomyelitis, malignancy etc.
4. Pregnant or lactating women.

Criteria for routine examination and

assessment: The full details of history and physical examination of the patient were recorded in proforma provided by the Council. The assessment of result was done according to the effect of the drugs on each of the cardinal manifestations of the disease, general functional ability of the patient and the pathological/bio-chemical changes. A score system has

been evolved as mentioned for gradation of the severity of the disease¹¹.

Pain

- Grade 0 - No pain - score-0
Grade 1 - Mild pain - score-10
Grade 2 - Mild pain at rest, severe on movement - score-20
Grade 3 - Moderate pain at rest/ severe on movement -score-30

Stiffness of joint

- Grade 0 - Stiffness of joint less than 5 minutes - score-0
Grade 1 - Stiffness of joint 5 minutes to 1 hour - score-10
Grade 2 - Stiffness of joint 2 to 8 hours - score-20
Grade 3 - Stiffness of joint more than 8 hours - score-30

Onset of fatigue

- Grade 0 - Not feeling of tiredness after 12 hours activity - score-0
Grade 1 - Feels tired after 8 hours activity - score-10
Grade 2 - Feels tired after 5 hours activity - score-20
Grade 3 - Feels tired after 1/2 hour activity - score-30

Swelling of joint

- Grade 0 - No swelling at all - score-0
Grade 1 - Swelling noticeable but not masking the bony prominence - score-5
Grade 2 - Swelling sufficient to cover the bony prominence - score-10
Grade 3 - Swelling with covering the bony prominences with fluctuation - score-15

Range of Movement

- Grade 0 - No restriction of movement - score-0
Grade 1 - 10% or less restriction of movement - score-4
Grade 2 - 20% or less restriction of movement - score-8
Grade 3 - 30% or less restriction of movement - score-16

General function/Functional class

- Grade 0 - Carry out normal physical activities without any discomfort - score-0
Grade 1 - Carry out normal physical activities with some discomfort - score-3
Grade 2 - Carry out normal physical activities with some discomfort - score-6
Grade 3 - Incapacitated and bed ridden unable self care - score-9

Grip strength

- Grade 0 - Can raise the mercury column above 250 mm. of Hg. by pressing the cuff - score-0
Grade 1 - Can raise the mercury column less than 200 mm. of Hg. by pressing the cuff - score-10
Grade 2 - Can raise the mercury column less than 100 mm. of Hg. by pressing the cuff - score-20
Grade 3 - Can raise the mercury column less than 20 mm. of Hg. by pressing the cuff - score-30

Joint Count

- Grade 0 - If the joint count recorded as per above is less than 5 - score-0
Grade 1 - If the joint count recorded, is up to 50 - score-10

Grade 2 - If the joint count noted, is up to 100 - score-20

Grade 3 - If the joint count is above 150 - score-30

Elevated ESR/presence of subcutaneous nodules/ deformity/low grade fever

Grade 0 - ESR within normal limits no subcutaneous nodules, deformity of joints and low grade fever - score-0.

Grade 1 - Presence of any one of the four i.e. raised ESR subcutaneous nodules, deformed joints, or low grade fever - score-3

Grade 2 - If any of the two is present - score-6

Grade 3 - If all of the four are present - score-9

Type of study : Single blind

Level of study : IPD& OPD

Period of study : 3 months

Follow-up : For a period of three months on a regular interval of 15 days

Selection and Source of Drugs: Shunthi, Guggulu and Godanti is recommended drugs for Aamvata in Ayurvedic classics. Shunthi is known to have Pachak, Kaphaghna, Vatahara, property and clears all obstructed channels of the body, reduces the joint inflammation and helps in quick relief from the disease and Guggulu is Rasayana (immunomodulator), Godanti is having Jwarahara, Daha and Trisha Samana property and reduces all complications of fever which is one of the important symptoms of Aamvata. Trial drugs were supplied by the Central Council for Research in Ayurveda and Siddha, New Delhi.

Method of preparation, Dosage and administration of drug: A combination of Sunthi churna 500 mg, Suddha Guggulu 1gm and Godanti Bhasma 500 mg was given three times a day with water for a period of six weeks.

Table 1. General Observations:

S.No.	Observations	Percentage
1.	Age group (40-60 years)	73
2.	Female Patients	69
3.	Hindu	93
4.	Illiterate	31
5.	Field Worker with labour	70
6.	Vegetarian	66
7.	Chronicity\ (6-12 months)	45
8.	Morning stiffness	100
9.	Joint Pain	100
10.	Swelling	100
11.	Restriction of joint	45
12.	Fever	31
13.	Constipation	88
14.	Loss of appetite	55
15.	Anorexia	38

Table 2. Effect of Sunthi, Guggulu and Godanti on subjective parameters:

Symptoms	Mean Score		
	BT	AT	P value
Morning stiffness	19.45 ± 0.53	9.844 ± 0.51	<0.0001
Joint Pain	22.03 ± 0.35	13.86 ± 0.43	<0.0001
Swelling	9.336 ± 0.20	3.672 ± 0.26	<0.0001
Restriction of joint	1.938 ± 0.20	0.656 ± 0.13	<0.0001
Fever	0.391 ± 0.05	0.148 ± 0.04	<0.0001
Constipation	1.461 ± 0.06	0.679 ± 0.58	<0.0001
Loss of appetite	0.710 ± 0.06	0.320 ± 0.04	<0.0001

BT- Before treatment, AT- After treatment, Values are presented as Mean ± SE.

DISCUSSION: In view of the involvement of auto-immune component in the Pathophysiology of the Aamvata and presence of persistent inflammation, the influence of *Sunthi churna*, *suddha Guggulu* and *Godanti bhasma* well known *Rasayana* (immunomodulator) and analgesic-anti-inflammatory drugs, was studied in patients of Aamvata. The analysis demographic data of the investigations indicated that the disease has maximum prevalence in the age group of 40-60 years and more prevalence in the women. The illiterates had more prevalence than the other educated persons which substantiates the above-mentioned fact that ignorance towards the life style and food habits due to non-education is the important underlying cause of the disease.

The results of the clinical investigations revealed that trial drugs exhibited significant anti-arthritis potential as indicated by reduction in the joint pain, swelling, morning stiffness, and fever, and freeness of joint movement. These finding substantiates the analgesic and anti-inflammatory potential of *Guggulu* and *Godanti bhasma*. The investigations further indicated that the treatment has improved the appetite and relieved the constipation. These findings reflect the

Aampachana property of *Shunthi*. These investigations did not directly show influence on immune system and it is beyond the scope of the investigation. In this clinical study all the results were statistically highly significant on the parameters of clinical features and functional capacity. Hence, these combined therapy of Ayurvedic treatment helped to reduce the manifestations of Aamvata and to break down the *samprapti* (pathogenesis) of Aamvata.

CONCLUSION: The results showed that selected trial drugs i.e. *Sunthi Churna*, *Suddha Guggulu* and *Godanti bhasma* have significant potential to alleviate Aamvata clinical features like pain, swelling morning stiffness etc. and significant improvement was noticed in digestive impairment. A definite improvement was noted and subjectively maximum patients had a feeling of well-being. Based on observations, it may conclude that the combination of *Sunthi churna*, *Suddha Guggulu* and *Godanti bhasma* is a balanced and judicious formulation, which synergistically acts in breaking the complex of pathogenesis of the disease Rheumatoid arthritis (Aamvata). Besides, the mineral drug Godanthi, a natural purified calcium

supplement plays an important role in bone nourishment. No side effects were reported during and after the treatment.

Acknowledgment:The author expresses sincere thanks to the Director General, Deputy Director (Tech.) CCRAS, New Delhi for providing financial and Technical support for this project. Authors are grateful to the patients who had participated in the clinical study, other experts and staff for their continuous support and cooperation for this clinical study.

REFERENCES:

1. Madhavakara, Rakshita V, Dutta S, Shastri S, Upadhyaya Y. Madhava Nidana (Madhukokosha Vyakya with Vidyotini Hindi Commentary), Ed 26, Part. I, Chaukhamba Sanskrit Sansthan, Varanasi, 1996, 460-464.
2. Malaviya, AN, Kapoor SK, Singh RR, Kumar A, Pande I. Prevalence of rheumatoid arthritis in the adult Indian population. Rheumatol Int. 1993; 13(4):131-4.
3. Chakrapanidutta, Sengupta D, Sengupta U, Sensharma K, Bhattacharya S. Chakradutta, Aamvata Chikitsa, Ed 1, Deepayan, Kolkata, 1999, 138-141.
4. Madhava Nidana. By Madhavakara, Madhukosha Sanskrit commentary by Shri Vijayrakshita & Srikanthadatta and Vidyotini English commentary and 6th edition 1968 by Prof.K.R.SrikantahMurthy ,Chaukhamba Sanskrit Sansthan Varanasi.
5. Mahajan BK. Methods in Biostatistics, Sixth Edition, Published by Jaypee Brothers Medical publishers Pvt. Ltd., B - 3 Emca House, 23/ 23B Ansari road, Daryaganj post Box 7193, New Delhi 110002, India.

6. Caraka Samhita - Agnivesh Revised by Caraka and Dridhabala, Vidyotini Hindi commentary by Brhmananda Tripathi 1st edition, published by Chaukhamba Subharati Publications, Varanasi. 1988.
7. Introduction to Kaya Chikitsa, written by Dwaraka Nath. C published by Chowkamba Sanskrit Samsthan Varanasi.
8. Davidson's Principles & Practice of medicine, edited by Nicholas A. Boon, Nicki R. Colledge, Brain R. Walker, International Editor John A. A Hunter 20th edition page no.1101.
9. The Ayurvedic Formulary of India, Part-I, published by Govt. of India, Ministry of Health and Family welfare, Department of Indian System of Medicine & Homeopathy, second revised English edition Page no 212/15-8.
10. Agnivesha, Charaka, Dridhbala, Nag B. Charaka Samhita, Chikitsa sthan, Pratham adyaya, Ed 1, Nabapatra, Kolkata, 1988, 27-28.
11. Stewart B, Lancaster G, Lawson J, Williams K, Daly J (July 2004). Validation of the Alder Hey Triage Pain Score. Arch. Dis. Child. 89 (7): 625-630.

Corresponding Author: Dr.Om Prakash
National Research Institute of Ayurveda
Siddha Human Resource
Development,CCRAS, Ministry of
AYUSH, Government of India,Amkho,
Gwalior, Madhya Pradesh, India – 474009;
Email: om_prakash66@rediffmail.com