

Efficacy of whole system Ayurveda protocol for rheumatoid arthritis – A case series

Case Report

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Abstract

Introduction: Rheumatoid arthritis (RA) is a chronic inflammatory disease that shows etiological and clinical association with *Aamavata*, specified by Ayurveda. RA is a component of the medical condition complex, *Aamavata*. The mainstay of treatment for RA is a class of medications known as DMARDs; however, they have several drawbacks when used in the long term. Drugs with strong efficacy and low toxicity profiles are required to treat this crippling condition. Therefore, the whole system Ayurveda protocol for RA was designed. **Objective:** To evaluate the efficacy of the whole system of Ayurveda protocol for rheumatoid arthritis. **Methods:** Patients attending OPD of the Department of Kayachikitsa, diagnosed with rheumatoid arthritis according to the 2010 ACR classification Criteria for RA along with symptoms of *Aamavata* according to Ayurved. In the present clinical case series, eight patients with RA were diagnosed and recruited, of which four completed the treatment. *Deepan-Pachan, Snehapana, Virechan, and Vaitrana Basti* with herbomineral drug combination given for 60 days according to the treatment protocol of *Aamavata* described by Chakradatta. Assessments were done through various clinical measures, like the 2010 ACR classification Criteria, RA factor, ESR, WOMAC score, and *Sandhishool* with VAS Score. **Results:** The Ayurved treatment protocol showed a significant reduction in the signs and symptoms of *Aamavata*, the 2010 ACR Criteria, RA factor, ESR, WOMAC score, and *Sandhishool* with VAS Score. **Conclusion:** The treatment protocol for *Aamavata* described in the classical text of Ayurved can be effective in *Aamavata*, which significantly improves the patient's quality of life.

Keywords: Rheumatoid Arthritis, *Aamavata, Virechan, Vaitaran, Basti*, Case series.

Introduction

Rheumatoid arthritis is a chronic inflammatory disease that affects one percent of the global population and causes severe morbidity and mortality. It has a significant financial burden in addition to its medical and psychological costs. The prevalence of RA in India is estimated to be 0.7%, which is greater than the 0.46% global prevalence. (1) RA is the most common form of chronic inflammatory arthritis and can result in articular cartilage and bone destruction and functional disability if persistently active. Therefore, it is essential to diagnose and treat this disease early and aggressively before damage ensues. RA is a systemic disease that can lead to a variety of extraarticular manifestations, including fatigue, subcutaneous nodules, lung involvement, pericarditis, peripheral neuropathy, vasculitis, and hematologic abnormalities, which must be managed accordingly (2). Despite a great deal of studies conducted by medical professionals over the past fifty years to identify several routes of inflammation in RA, the exact cause of the disease

remains unknown. Recent studies have identified numerous biological medicines that inhibit inflammatory pathways and offer much-needed comfort to a considerable number of patients. However, these medications come with a high price tag, require constant observation, have adverse reactions, and must be used forever. A significant number of patients continue to suffer and require more effective relief and search for improved therapies. Moreover, the chronicity, incurability, complications, morbidity, and paralyzing character of *Aamavata* (~rheumatoid arthritis) present a challenge to the clinician. In Ayurveda, the primary pathogenic event in RA, also known as *Aamavata*, is the creation and deposition of *Aama* at all physiological levels of the body, including the gastrointestinal tract and the macro and microchannels of the body's internal transport system. (3) The Ayurvedic principles for treating *Aamavata* include *Langhana* and *Swedana*. Medications containing *Tikta, Katu Rasa, Deepana, Virechana, Snehapana, and Basti* are also recommended. (4) However, scientific evidence needs to be produced for a lot of Ayurvedic formulations that are said to be beneficial in *Aamavata*. A whole system of Ayurveda protocol for rheumatoid arthritis is designed to address these issues and provide better relief to patients.

Criteria for Diagnosis and Assessment

The diagnosis was mainly based on the 2010 ACR classification Criteria for RA (5) and signs and

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symptoms of *Aamavata*. Further Assessment of RA patients was done before (zero day) and after the treatment given. Assessments were done through various clinical measures like RA factor, ESR, WOMAC score (6), and assessment of *Sandhishool* with VAS Score (7).

Case series

Case 1

A 52-year-old female patient housewife, of *Pitta-Vataj Prakriti*, residing in an urban area, visited the outpatient department of *Kayachikitsa*. The patient had significant morning stiffness, constipation, intermittent fever, restricted joint movement, and various joint discomfort for three years. With a surgical H/O appendectomy 25 years ago, there was no K/C/O-HTN/Type 2DM/any other serious illness. She had H/O-Chickungunya 10 years ago H/O Malaria 2 months back H/O Covid-19 infection 1 year back. According to family history, the patient's father passed away from MI. She has spent the last three years taking NSAIDs SOS for pain. The patient was unable to carry out her everyday tasks because of the excruciating discomfort she had when walking, standing, and sitting.

Thus, the patient was diagnosed with *Aamavata* (rheumatoid arthritis) based on signs and symptoms, the 2010 ACR/EULAR criteria as well as blood workup (CBC, ESR, and RA Factor). The patient took oral ayurvedic medications for one week on an outpatient basis before being admitted to our hospital's IPD. She received classical ayurvedic treatment for about sixty days as the treatment began. Her signs and symptoms began to gradually reduce, on following the course of treatment, her RA factor and ESR level values decreased as well. Both the VAS and WOMAC scores dropped. The patient's quality of life exhibited good improvement. The diet regimen was continued after discharge.

Case 2

A 21-year-old male patient presented to the outpatient department of *Kayachikitsa* with classic signs and symptoms of rheumatoid arthritis and was diagnosed with RA 4 years back. Initially, he had pain in his wrist joint and felt fatigued then symptoms increased gradually. For the previous 4 years, the patient had pain in any of the joints with mild swelling and morning stiffness and was suffering from painful walking for 4 years. The pain was treated with NSAID oral drug and DMARD for the past 2-3 years. Before treatment, he was having difficulty walking, intermittent fever, morning stiffness, and painful movements of joints. He came to the OPD, for better treatment since the patient was afraid of complications of the disease and to further deterioration of his condition. The patient was also worried that side effects and dependency on the medications would increase. He had H/O Bronchial Asthma for 20 years and was taking oral medications tab. Deriphylline 300mg SOS. There was no history of addiction/Diabetes Mellitus /hypertension/any other major illness.

When the patient came to our hospital he was diagnosed as *Aamavata (RA)* based on signs and symptoms as per the Ayurveda classical text. However, to confirm the diagnosis, the 2010 ACR/EULAR criteria and the blood investigations ESR, CBC, Hb, and RA factor were taken. After admission to the hospital, the patient underwent a 60-day course of traditional Ayurvedic medicine therapy as described. During treatment, the patient reported joint pain and swelling reduced leading to improvement in his walking. By discharge (Day 60), he had no episode of fever, local tenderness, joint pain, swelling, or stiffness had reduced and he reported improvements in energy, and physical activity, and decreases in fatigue and other symptoms. The ESR and RA Factor level, WOMAC score, and VAS score had reduced.

Case 3

A 34-year-old woman initially had symptoms like noticeable stiffness in both hands, wrists, and ankles in the morning for the last 9 months. she has been treated with ibuprofen 800 mg 3 times daily, which initially worked but then stopped working. After that, she was treated with methotrexate 10 mg per week orally and increased that to 15 mg after 4 weeks but 3 months later she had only minimal relief; she had continuous stiffness, pain, and swelling in the wrists. she complains of now being even more unproductive in her work because of her joint pain. When she came to us, she presented with multiple joint pain and swelling, generalized weakness, morning stiffness, and severe pain while walking, and standing for 3 years. Her laboratory investigations were done. It showed rheumatoid factor and ESR were raised and on assessment, she had an Euler score of 9 and was diagnosed with RA. She had H/O chikungunya 17-18 years ago and H/O PTB 10 years ago and had taken a full course of treatment. had Family H/O- HTN and Type2 DM. She had started Ayurvedic treatment on admission as described below for RA (*Aamavata*).

Case 4

A 19 yrs male patient visited *Kayachikitsa* OPD he was suffering from multiple joint pain, swelling, and local temperature, difficulty while walking for 1 month he had previously suffered from intermittent joint pain interphalangeal joint pain for 2 years was taking symptomatic treatment he has no significant family history. There was no history of addiction/diabetes/hypertension/ any other major illness. He had Surgical H/O- circumcision 13 years back. He was diagnosed with rheumatoid arthritis based on signs and symptoms and laboratory investigations which include RA Factor, ESR, CBC also EULAR score and treatment planned according to classical treatment for *Aamavata* for 60 days. Initially he had taken 15 days treatment on OPD basis then he was admitted to hospital for further treatment.

Treatment Timeline

These 4 patients are treated with the treatment protocol of *Aamavata* described by Chakradatta.

Table 1: Treatment Timeline

Duration of treatment	Drugs Used	Dosage	Rationale of Drug Use	Results
1 st week	<i>Ajamodadi churna</i>	3gm BD	<i>Deepana, Pachana</i>	Reduction in <i>Aam</i> signs
	<i>Ruksha Swedana</i> with <i>Waluka pottali</i>	Morning & Evening 15min	<i>Local Aamavachan, shoolaprashaman</i>	Reduction in local pain
	<i>Shunthi siddha Erandsneha</i>	10ml HS	<i>Vata anulomana</i>	Relieves constipation
2 nd Week	<i>Snehapan</i> with <i>Panchtiktaghrita</i>	30ml increases daily by 30ml upto 7 days	<i>Purva karma</i>	Increase and liquefy <i>dosha</i> prior to <i>Shodhan</i>
	<i>Sthanika Snehana swedana</i>	1 day	<i>Purva karma</i>	Brings liquified <i>dosha</i> to <i>Koshtha</i>
	<i>Virechana</i> with <i>Ichhabhedhi ras</i>	1 day	Pacifies <i>pitta</i> and <i>vata dosha</i> clears all channels in the body	<i>Srotovishodhan, Vataanuloman</i>
3 rd Week	<i>Sansarjan krama</i>	3- 7 days	Gradual <i>Agnivardhan</i>	Increases digestive fire
4 th Week	<i>Ruksha Swedana</i> with <i>Waluka pottali</i>			Reduction in local pain
	<i>Simhanada Guggulu</i>	500mg BD With <i>Rasnasaptak Kwath</i> 20ml	<i>Srotoshodhana, Aamapachan</i>	Analgesic and anti-inflammatory action.
5 th week- 6 th week	Same as 4 th week			
	<i>Vaitaran Basti yog basti</i> along with <i>anuvasan</i> with <i>saidhavadi tail</i> 80ml	240ml/day	It breaks the obstructions and expels out the morbid material from all over the body	<i>Vatashaman</i>
8 th week	Same as 4 th week			

Table 2: Assessment of cases

	EULAR score	Assessment of RA patients		
		Investigations	Before treatment	After treatment
Case1	More than 10 joints-5 points High positive RA-3 points More than 6 weeks- 1 points Total- 9 points	RA factor	160.88 IU/ml	43 IU/ml
		ESR	84 mm/hr	68 mm/hr
		Hb	10.4	10.9
Case 2	More than 10 joints-5 points Low positive RA-2 points More than 6 weeks-1 points Total- 8 points	RA factor	42.62 IU/ml	34.11 IU/ml
		ESR	45 mm/hr	42 mm/hr
		Hb	12.6	13.9
Case 3	More than 10 joints-5 points High positive RA-3 points More than 6 weeks-1 points Total-9 points	RA factor	103.4 IU/ml	61.2 IU/ml
		CRP	5.4 mg/dl	--
		ESR	75 mm/hr	67 mm/hr
Case 4	More than 10 joints-5 points Low positive RA-2 points More than 6 weeks-1 points Total-8 points	RA factor	21 IU/ml	10 IU/ml
		CRP	32 mg/L	20 mg/L
		ESR	63 mm/hr	55 mm/hr
		Hb	10.4	12.9

Figure 1: Changes in RA factor before and after treatment

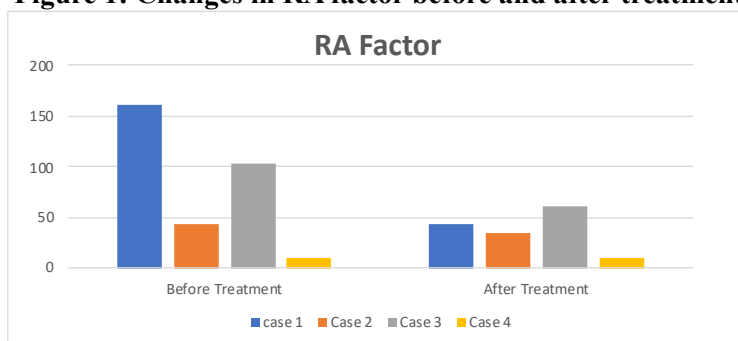


Table 3: WOMAC Score & VAS Score Assessment before and after treatment

cases	Assessment	Before treatment	After treatment
Case 1	WOMAC score	67	35
	VAS score	8	3
Case 2	WOMAC score	44	15
	VAS score	7	4
Case 3	WOMAC score	68	32
	VAS score	6	2
Case 4	WOMAC score	73	27
	VAS score	6	3

Discussion

Rheumatoid arthritis leads to disability and great psychological suffering in patients. Especially in patients at young age, as they are in their most active years of life. and their health state makes it difficult for them even to walk. Out of the four patients in this case series, two are young. Furthermore, it is a debilitating illness that affects people of various age groups. Duration for drug administration has to be decided after evaluation of each patient individually i.e. 3- 7 days. *Shunthi siddha Erandsneha* (8) was given for *Aamapachan*, *Anuloman*. *Zingiber officinale*, commonly known as ginger, and has several mechanisms that may contribute to its effects on rheumatoid arthritis immunomodulator, anti-inflammatory, bioavailability enhancer agents, antioxidants, and analgesic. Castor oil is deemed safe and tolerable, with strong anti-inflammatory, anti-nociceptive, analgesic, and antioxidant properties.

Based on their signs and symptoms, these four patients of Rheumatoid arthritis were diagnosed as *Aamavata*, and they were all treated according to the treatment routine recommended in the Chakradatta, classic literature of Ayurveda. The treatment strategy was initiated based on the patient's current condition as evaluated according to the literature. The pathogenesis of *Aamavata* includes *Aama* (~metabolic toxins produced due to undigested food), so *Pachan*(~digestion) and *Deepan* (~increase appetite) were given to patients using *Ajamodadi churna* (9). Sharma V. et al showed *Ajamodadi churna* associated with a reduction in acute arthritis-related TNF- α and IL-6 levels in an animal study.

When the first patient's history was taken, they mentioned the habit of eating stale food, *Vegavidharan* (~suppression of natural urges), *Vishamashan* (~irregular quantity and timing of the meal), and *Divaswap* (~daytime sleeping). In case 2, the patient has a history of physical activity just after eating, as well as taking *Abhishyandi Aahara* (~diet that will obstruct channels) and *Divaswap*. In case three, the patient frequently took *Abhishyandi*, *Snigdha*(~oily), and *Ruksha*(~dry) diet before working on a farm. The patient in case 4 provided no specific history. *Aama* and *Vata* are the first elements, of the pathogenesis of *Aamavata*. *Viruddha-Ahara Sevana* (~taking an incompatible diet) and doing moderate to severe exercise after meals were found as prominent etiological/ promoting factors (10) and most of these patients gave a history similar to it.

Dietary changes were suggested to all patients starting with *Langhan* (~Fasting) and light exercise.

In addition to this, *Ruksha Swedana with Waluka Pottali* is an Ayurvedic therapeutic approach that combines dry sweating (*Ruksha Swedana*) with a specific method of application using heated sand poultices (*Waluka Pottali*). Animal experiments concerning the effects of systemic hyperthermia and of local heat applications upon experimentally induced inflammations show that some inflammations are significantly reduced (11) Subsequently, once *Aama* symptoms subsided, *Snehapan*(~Uction) was administered in increasing doses with *Panchatiktaghrita*. It aids *Aama Pachan* and *Snehan* to increase and liquefy dosha before *Shodhan*. Afterward, *Virechan*(~therapeutic purgation)was given, followed by *Sansarjan-krama*(~specific dietary pattern) according to *Shudhhi*. *Virechana* is the most suited therapy for *Pitta Dosha* and helps in normalizing the *Vata*. Waste products wherever present in the body, in extracellular, intracellular, or plasma, can be brought into intestine by *Snehan* and *Swedana*. from where they can be eliminated from the body by the action of the intestine, which is induced by the *Virechana* drug. *Virechana* may also have a direct effect on *Agnisthana*. (12)

After *Shodhan*(~detoxification), *Simhanad Guggulu* (13) with *Rasnasaptak Kwath* (14), was given which helps in *Srotoshodhana*(~clears and opens the channels). It relieves the symptoms of *Sandhishoola* (~Joint pain), *Shotha* (~Inflammation), *Aalasya* (~Lethargy), and *Aruchi* (~Aversion) by its analgesic and anti-inflammatory action.

Basti (~therapeutic enema) in general is a prime treatment in *Ayurveda*. *Vaitaran Basti* in particular is said to be the best for *Aamavata*. *Basti Dravya* after reaching large and small intestines gets absorbed from the intestine and spreads all over the body. It digests *Aama* by *Laghu*, *Ushna*, *Tikshna*, and *Ruksha Guna* of *Vaitarana Basti Dravya*. It also breaks the obstructions and expels out *Vata*, thus by acting on *Aama* and *Vata* it helps in breaking down the pathogenesis of the *Aamavata*. (15)

Based on the results of this case series, we noted significant relief in the signs and symptoms of the disease. After treatment mean reduction in *Sandhishool* in 4 patients based on VAS score was 3.75. All patients experienced relief from symptoms. There was a reduction in the RA Factor and WOMAC scores. A reduction in ESR value was observed in three patients.

A mild improvement in the hemoglobin concentration was observed after treatment. Moreover, patients provide feedback about significant improvement in their quality of life based on daily work and activities. This can also be elicited through a mean reduction in the WOMAC score of 35.75. It can be inferred that there was a significant improvement as treatment acts on the root cause and also reduces local and systemic inflammation and tissue damage, which leads to serious stiffness and major disability.

In this study, we also observed that in case 4, the RA factor was within the normal range, and only a mild increase in the CRP level was observed. However, case 4 had the highest WOMAC Score before treatment compared with the other three cases. Therefore, from this observation, we can conclude that the RA factor level alone cannot be used as a measure of the severity of rheumatoid arthritis.

Previous studies have been conducted on RA with Ayurvedic drugs and therapies with different combinations of interventions like *Virechana* with diet, *Panchmuladi Kalbasti*, *Alambushadi Ghana Vati*, and *Vaitarana Basti*, *Simhanad Guggulu* and *Rason Rasnadi Ghanvati* comparative study, *Ajamodadi Churna*, *Ashwagandha Churna* and *Siddha Makardhwaja*, *Guduchi* and *Sunthi Churna* compared with HCQs, Highly Bioavailable Curcumin Formulation, etc.; however, treatment, including the whole system medicine approach of Ayurveda for RA, has rarely been studied. Therefore, it can be an effective management option in the case of patients with RA, but patients with chronic disease require long-term treatment, as all four patients were not completely cured of the disease. Whole-system Ayurveda medicine appears to be effective in reducing Rheumatoid Arthritis-related parameters and improving the quality of life. The holistic nature of the Ayurvedic treatment protocol, which addresses multiple aspects of health, may contribute to positive outcomes. Further research with larger sample sizes and longer follow-up periods is recommended to confirm these findings and explore the underlying mechanisms.

Conclusion

From this case series we can conclude that the holistic treatment protocol of ayurvedic drugs can be validated further and can be used as a potential promising treatment protocol for the management of Rheumatoid arthritis.

References

1. Bagepally, B.S., Kumar, S.S., Sasidharan, A. et al. Household catastrophic health expenditures for rheumatoid arthritis: a single centre study from South India. *Sci Rep*. September, 2023; 13, 15385. <https://doi.org/10.1038/s41598-023-42623-y>.
2. Flier J.S. Flier E.M. Immune-Mediated, Inflammatory, and Rheumatologic Disorder, *Harrison's Principles of Internal Medicine*, 20e. McGraw Hill; 2018. page no. 2528
3. Basisht, G. K., Singh, R. H., & Chandola, H. Management of rheumatoid arthritis (Amavata) using symbiohealth healthcare system. *Ayu*, 2012; 33(4), 466–474. <https://doi.org/10.4103/0974-8520.110513>
4. Tripathi I. Chakradutta, *Amavata Chikitsa Adhikara*, chapter 25/14; 1st edition, Varanasi; Chaukhambha Sanskrit series; 2012. 167p.
5. Aletaha, D., Neogi, T., Silman, A. J., Funovits, J., Felson, D. T., Bingham, C. O., 3rd, Birnbaum, N. S., Burmester, G. R., Bykerk, V. P., Cohen, M. D., Combe, B., Costenbader, K. H., Dougados, M., Emery, P., Ferraccioli, G., Hazes, J. M., Hobbs, K., Huizinga, T. W., Kavanaugh, A., Kay, J., Hawker G. Rheumatoid arthritis classification criteria: an American College of Rheumatology/European League Against Rheumatism collaborative initiative. *Arthritis and rheumatism*. 2010; 62(9), 2569–2581. <https://doi.org/10.1002/art.27584>
6. Bellamy N., Buchanan W. W., Goldsmith C. H., Campbell J., & Stitt L. W., Validation study of WOMAC: a health status instrument for measuring clinically important patient relevant outcomes to antirheumatic drug therapy in patients with osteoarthritis of the hip or knee. *The Journal of rheumatology*. 1988; 15(12), 1833–1840.
7. Åström M., Thet Lwin Z.M., Teni F.S. et al. Use of the visual analogue scale for health state valuation: a scoping review. *Qual Life Res*. 2023; 32, 2719–272. <https://doi.org/10.1007/s11136-023-03411-3>.
8. Yuandani, Jantan I et al. Immunomodulatory effects and mechanisms of the extracts and secondary compounds of Zingiber and Alpinia species: a review. *Front Pharmacol*. 2023 Jul 18; 14:1222195. doi: 10.3389/fphar.2023.1222195. PMID: 37533631; PMCID: PMC10391552.
9. Sharma V, Shukla SS, Gidwani B, Pandey RK. Antiarthritic Activity and Inflammatory Mediators Modulation Effect of Traditional Ajmodadi Churna on Arthritis Experimental Model. *J Pharmacopuncture*. 2023; 26(3):257-264. doi:10.3831/KPI.2023.26.3.257
10. Rakshita V, Dutta S, Shastri S, Upadhyaya Y. Madhava Nidana Part. I MadhukokoshaVyakya with Vidyotini Hindi Commentary, Madhavakara. Ed 26, Varanasi. Chaukhambha Sanskrit Sanathana. 1996; 460-64p.
11. Schmidt KL, Ott VR, Röcher G, Schaller H. Heat, cold and inflammation. *Z Rheumatol*. 1979 Nov-Dec; 38(11-12):391-404. PMID: 394512.
12. Gupta, S. K., Thakar, A. B., Dudhamal, T. S., & Nema, A. Management of *Amavata* (rheumatoid arthritis) with diet and *Virechanakarma*. *Ayu*, 2015; 36(4), 413–415. <https://doi.org/10.4103/0974-8520.190688>
13. Mahto RR, Dave AR, Shukla VD. A comparative study of Rasona Rasnadi Ghanavati and Simhanada Guggulu on Amavata with special reference to Rheumatoid arthritis. *Ayu*. January 2011; 32(1):46-54. doi: 10.4103/0974-8520.85724. PMID: 22131757; PMCID: PMC3215416.

14. Narendra Kumar Gautam, Aparnesh Pandey, O.P. Singh. Comparative Clinical Evaluation of Rasnasaptak Kwath and Vaitarana Vasti in the Management of Amavata (Rheumatoid Arthritis). International Journal of Ayurveda and Pharma Research. 2023;11(8):49-55.
15. Sasane P, Saroj UR, Joshi RK. Clinical evaluation of efficacy of Alambushadi Ghana Vati and Vaitarana Basti in the management of Amavata with special reference to rheumatoid arthritis. Ayu 2016; 37:105-12.
