



Case Study

SILAJATHU RASAYANA IN MANAGEMENT OF RHEUMATOID ARTHRITIS

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ABSTRACT

Rheumatoid Arthritis is a systemic autoimmune disease characterized by inflammatory arthritis and extra-articular involvement. Considering the pathophysiology, clinical features, and extra-articular manifestations it can be correlated to *Vataraktha* in Ayurveda. In this case, a 24-year-old female patient who was diagnosed with Juvenile Rheumatoid Arthritis at the age of 15 and was under Disease-modifying anti-rheumatic drug therapy for several years, complaints of pain and swelling over symmetrical joints of upper and lower limbs along with morning stiffness, and evident boutonniere deformity. She also had pain in her left hip for 4 years. Ayurvedic treatment was initiated with a primary focus on *Amapachana*, *Shodhana*, and *Rasayana* therapies. Patient assessment was conducted using a Visual analog scale, DAS28 score, HAQ-DI score, and *Ama* assessment tool on the 0th and 69th day. DAS 28 score improved from 7.73 to 3.19, and HAQ-DI score improved from 1.63 to 0.88. The visual analog scale was improved from 8 to 4. Following 69 days of treatment incorporated with Ayurvedic treatment procedures coupled with *Rasayana* therapy, demonstrated a notable amelioration of symptoms, an enhancement in the overall quality of life, and an improvement in laboratory parameters.

INTRODUCTION

Rheumatoid Arthritis (RA) is a systemic autoimmune disease characterized by inflammatory arthritis and extra-articular involvement^[1]. The prevalence of RA is approximately 0.8–1.0% in Europe and the Indian subcontinent, with a female-to-male ratio of 3:1^[2]. About 7 million people in India are affected by RA with a prevalence of 0.75%^[3]. It is a chronic inflammatory disorder caused by infection, genetics, and environmental factors^[4]. It typically starts in small peripheral joints, is usually symmetric, and progresses to involve proximal joints if left untreated. Joint inflammation over time leads to the destruction of the joint with loss of cartilage and bone erosions. RA, if untreated, is a progressive disease with morbidity and increased mortality^[1]. Considering the pathophysiology, clinical features, and extra-articular manifestations in RA, it can be correlated to *Vataraktha*^[5].

It is a chronic disease causing deterioration of joint structures resulting in deformity and disability such as *Khanjam* and *Pangu*. Exacerbation and remission are the unique features of the *Vataraktha*.

The patient was under Disease-modifying anti-rheumatic drug (DMARD) therapy for several years. Despite medication administration, the patient continued to experience challenges in performing routine daily activities. While admitted to Vaidyaratnam Ayurveda College Hospital (VACH), Ayurvedic treatment was initiated with a primary focus on *Amapachana*, *Shodhana*, and *Rasayana* therapies. These interventions aim to enhance the patient's quality of life and mitigate the progression of the disease.

Patient Information

A 24-year-old female patient was admitted to VAC hospital on September 17, 2022, presenting with complaints of pain and swelling over multiple joints of upper and lower limbs along with morning stiffness for 12 years. She had pain in her left hip for 4 years. The onset of the patient's complaints traces back 12 years ago, with initial manifestations of pain and swelling over the bilateral knee joint. Gradually she developed pain and swelling over the bilateral ankle joint. She consulted an Orthopedic doctor and took medicine for

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3 years but only got slight relief. During this period pain followed by swelling gradually progressed over multiple joints mainly on the bilateral shoulder joint, elbow joint, wrist joint, and interphalangeal joints of both hands along with morning stiffness lasting for around 1 hour. Then she consulted a Rheumatologist and was diagnosed with Juvenile Rheumatoid Arthritis. She has been under DMARD therapy to date. 6 years back, boutonniere deformity was developed in both middle fingers. 4 years before, she developed pain over the hip joint (left). 2 years back, she was diagnosed with avascular necrosis of the left hip joint. The pain and swelling in all joints are severe and episodic. The pain was pricking in nature. She also complained of itching over her bilateral foot and legs. The condition got aggravated in winter, cold environments and night and was relieved by using the hot application. She feels excessive sweating of body and constant warmth in her body.

Psychosocial History

She is co-operative and belongs to a lower-middle-class family. [6]

Family History

She had a positive family history of Rheumatoid Arthritis (her mother also had a history of RA).

Personal History

She had a mixed diet with preferably spicy food, fried items, and soft drinks. She had a habit of munching. She was allergic to eggs. Her sleep was occasionally disturbed due to pain.

Treatment History

Tab. Folic acid 5mg – twice a week, Tab. Calcium + Vitamine D3 0-0-1, Tab. Indocap S R – 0-0-1, Tab. Wysolone 5mg – 0-0-1, Tab. Igaratimod 25mg 0-0-1, Tab. Zerodol 100mg -sos

Clinical Findings

General Examination

The patient was extremely obese with a BMI of 35.65, had a waddling gait, cushing facies, and stooped posture.

Physical Examination

In the upper limb, there were Boutonniere deformities in both middle fingers, and in the lower limbs the left one little shorter than the right (right lower limb – 94cm, left lower limb – 93cm).

Systemic Examination

On examination of the cervical spine, mild swelling was present over the nape of the neck, and on palpation, there was warmth, tenderness grade 1, and flexion was possible with pain. Lumbar region revealed swelling, tenderness grade 1, flexion, extension, and lateral bending were possible with pain. On examination of joints of the upper limb there was swelling over the bilateral shoulder, elbow, wrist, metacarpophalangeal, and interphalangeal joints, and on palpation revealed warmth and grade 1 tenderness in these joints. All movements in bilateral shoulder and elbow joints were possible with pain. In bilateral wrist, metacarpophalangeal, and interphalangeal joints flexion and extension were possible with pain. On examination of muscles of the upper and lower limbs, there was no wasting, normal muscle power, and grade 1 tenderness.

Diagnostic Assessment

Laboratory investigation

Hematological test on 17/09/2022

ESR – 35mm/hr, CRP – 16.8 IU/ml, RA – 40 IU/ml

On 17/09/22 - According to ACR EULAR criteria 2010⁽⁷⁾, the patient scored 7, suggesting a definite Rheumatoid Arthritis. DAS28 (a measure of disease activity in Rheumatoid Arthritis)^[2] scored 7.74, suggesting high disease activity. Disability Index (HAQ-DI)^[8] scored 1.63, suggesting severe disability.

X-ray of the knee joint on 21/06/21

Degenerative changes are visible and severe space reduction is present. According to Kellegrance Lawrence's grading system – grade 4 in the right knee joint and grade 3 in the left knee joint. Chondromalacia patella present bilaterally. (Fig.1)

X-ray of the hip joint on 21/06/21

Sclerotic changes are present with avascular necrosis of the left femoral head. (Fig.2)



Fig.1 Fig.2

Ayurvedic diagnostic parameters

Prakrithi - Kapha pitha (assessed using the *Prakrithi* assessment tool)

Dosha -Vatha pradhana tridosha (Vyana vata, Pachaka pitha, Sleshaka kapha)

Dooshyas - Rasa, Raktha, Mamsa, Medas, Asthi, and Majja

Upadhathu - Sandhi

Srotas - Rasavaha, Rakthavaha, Mamsavaha, Medovaha, Asthivaha, and Majjavaha

Rogamargam - Madyamam

Sara - Madyamam

Satwam - Madyamam

Satmya - Avara (Ekarasa)

Aharasakthi - Abyavaharana Sakthi & Jarana Sakthi - pravaram

Vyayamasakthi - Avaram

Vaya - Madyamam

Kalam - Kshanadi: Sarath, Vyadhi Avastha: Purana

Desam - Bhoomi: Sadaranam, Deha: Sandhi

Nidana panchaka

The patient's predisposing factors include intake of spicy food, fried items, and soft drinks. She had a habit of munching, having heavy meals before

Outcomes

Assessment tools	Before treatment- 17/09/2022	After treatment- 24/11/2022
DAS28 score	7.73	3.19
HAQ-DI score	1.63	0.88
Visual analog scale	8	4
Ama assessment	44.4 %	11.1%

Therapeutic Intervention

Treatment is mainly concentrated on improving the quality of life of the patient by reducing the clinical symptoms. Detailed descriptions of internal medicine and external procedures administered are provided in Tables 2, 3 and 4.

Internal medicine

Date	Medicine	Dose	Anupana	Time
17/09/22 -30/10/22	<i>Amrithotharam kashaya</i>	15 ml	45ml lukewarm water	2 times a day before food
17/09/22 -25/09/22	<i>Vettumaran tablet</i>	1 tablet	With <i>Arishta</i>	1-0-1, after food
17/09/22 -30/10/22	<i>Amritharishram</i>	30 ml		2 times a day after food
17/09/22 -30/10/22	<i>Guggulu panchappala choornam</i>	½ tsp	With honey	2 times a day, after food
01/11/22- 07/11/22	<i>Mustadi marma kashayam</i>	15 ml	45ml lukewarm water	2 times a day before food
01/11/22- 07/11/22	<i>Gandataialm capsule</i>	2 capsule	With <i>Kashaya</i>	2 times a day before food
01/11/22- 07/11/22	<i>Balarishtam + Aswagandarishtam</i>	30 ml		2 times a day, after food

External treatment

Date	Treatment	Observation
18/09/22 - 27/09/22	<i>Dhanyamladhara</i>	Swelling and tenderness in the joints are reduced
28/09/22 - 01/10/22	Rest due to periods	
02/10/22 - 26/10/22	<i>Choorna pindaswedam</i> with <i>Kottamchukkadi choornam</i> in <i>Dhanyamlam</i>	Pain and swelling in the joints were relieved. Reduced the duration of morning stiffness to less than 15 min.
27/10/22 - 30/10/22	<i>Patrapotali sweda</i> with <i>Madhuyastyadi tailam</i>	Improved range of motion of joints
31/10/22 - 07/11/22	<i>Pizhichil</i> with <i>Madhuyastyadi tailam</i>	
31/10/22 - 07/11/22	<i>Matravasthi</i> with <i>Madhuyastyadi tailam (Mezhukupakam)</i>	
31/10/22 - 07/11/22	<i>Kadeepichu</i> with <i>Murivenna</i>	Pain in the left hip region was relieved
08/11/22	<i>Virechanam</i> with <i>Avipathi choornam</i> 15 gm with water at 6 am	10 Vegas Appetite at - 12.40 pm
08/11/22 - 10/11/22	<i>Peyadikrama</i>	
11/11/22 - 22/11/22	<i>Silajathu rasayanam</i>	
23/11/22 - 25/11/22	<i>Peyadikrama</i>	
25/11/22	Patient discharged	

Silajathu rasayanam

Date	Medicine	Anupana
11/11/22 - 13/11/22	<i>Gugguluthikthakam gritham</i> - 20gm	<i>Kanji</i>
14/11/22 - 16/11/22	Purified <i>Silajathu</i> - 12gm	<i>Triphala kwatham</i> - 48ml
17/11/22 - 19/11/22	Purified <i>Silajathu</i> - 12gm	<i>Patola kwatham</i> - 48ml
20/11/22 - 22/11/22	Purified <i>Silajathu</i> - 12gm	<i>Yasthimadhu kwatha</i> - 48ml

DISCUSSION

Based on the etiology, pathophysiology, clinical features, and extra-articular features in RA, it can be considered as *Vataraktha* in Ayurveda. *Beejadosh*, and *Mityaahara-vihara* are considered the major etiological factors for *Vataraktha*, and in RA genetic and environmental factors are the causes. Due to these *Nidanas agnimandya* occur and this hypoactive *Agni* will lead to the formation of *Ama* at different levels. The non-articular and constitutional symptoms explained in RA are considered the symptoms of *Ama*. These may include generalized aching, stiffness, fever, weight loss, and fatigue. These symptoms may appear several months before the RA symptoms appear. The concept of *Ama* can be correlated with the concept of free radicals. Parallely due to above *Nidanas* there is vitiation of *Raktha* and *Vata* occur and *Rakthavarana* happens to *Vatha*. The obstructed *Vata* vitiates the *Raktha* again and moves in *Thiryakgati*, entering the *Sandi*, *Asthi*, and *Majja* producing cutting pain and joint deformities. In RA the free radicals damage the articular tissue producing inflammation. The synovial

membrane becomes hyperplastic, synoviocytes increase, and inflammatory cells infiltrate mainly macrophages, B-lymphocytes, and T- lymphocytes. T-cell activities lead to abnormalities of synovial structures. The main changes that occur in RA are synovial inflammation, proliferation, bone erosion, and thinning of the cartilage [5].

Selection of *Shodhana* and *Samana* therapy in the first stage of treatment is critical. *Vagbhata* indicated the concept of *Shodana* and *Samana*. In chronic illness (*Chirakari roga*) the *Doshagati* is *Tiryak*. In that condition, *Samana* is indicated. While using *Samana* the *Doshas* move towards the *Koshta*. When *Dushta dosha* reaches *Koshta* it can be eliminated by appropriate *Shodana kramas*, after assessing the *Dehabala* and *Agnibala*.

Applying this concept *Amapachana* is considered as the first step of the treatment. *Amrithotharam kashaya* was selected for *Amapachana*, as explained in *Sahasrayogam Jwara chikitsa*, having *Tridoshahara* property. Which contains phenolic acids

such as quinic acid, protocatechuic acid, gallic acid, and chebulic acid were identified in the formulation along with some flavonoids. The constituents possess antioxidant and anti-inflammatory properties. In RA *Amrithotharam Kashayam* is useful as it possesses antioxidant and anti-inflammatory drugs^[5]. *Amritharishtha* is *Tridosahara*, *Amapachana*, *Agnideepana*, *Malanulomana*, *Sophahara*, *Soolahara*, and *Rasayana*.^[9] *Vettumaran* tablet is *Kaphavata samana*, *Vatanulomana*, *Deepana*, *Srotoshodana* and *Soolaprasamana*. It also possesses anti-inflammatory properties^[9]. Basic Ayurvedic principles were applied in the external treatment also. In the first stage, *Rookshana* was administered. Initially, *Dhanyamladhara* was used. *Dhanyamala* is *Ushna veerya* and helps to mitigate *Vata* and *Kapha dosha*. Due to its *Amla rasa*, it acts as *Deepana* and gets rid of *Ama*, and also corrects metabolism. It effectively reduced the features of rheumatoid arthritis like stiffness, pain, tenderness, and swelling of the joints. *Choornapinda sweda* helps to relieve muscle spasms, reducing inflammation. It also increases collagen extensibility increasing the range of movements. *Choornapindasweda* was done with *Kottomchukkadi choornam* in *Dhanyamla* which is effective in *Vathakaphaja* disorder and helps to relieve pain and swelling.

In the second stage, *Mustadi marma kashaya* was prescribed to deal with the pain^[10]. *Ganda taila* possesses properties like *Vatahara*, *Brahmana*, and *Asthidhatu vardhaka*. It helps to increase bone mineral density^[11]. *Balarishta* and *Aswagandarishtha* possess anti-inflammatory, anti-oxidant, and anti-arthritis potential. Thus the combination of these internal medications helps to decrease inflammation, and pain and thus improves the movements of the joints^[12]. Externally, *Patrapotali swedam* with *Madhuyastyadi tailam* was administered. It is *Vatahara* in nature as it contains *Lavana amla madura pradhana vatahara* leaves, it relaxes, rejuvenates, and nourishes the affected area. It improves blood circulation, reduces inflammation, and relieves pain and stiffness. *Pizhichil* and *Matravasti* were also done with *Madhuyashtyadi tailam* which was explained in *Vataraktha chikitsa* and indicated for *Chathushprayoga*. *Pizhichil* is a combination of *Snehana* and *Swedana*. So it may cause *Dosha utklesha* and the morbid *Dosha* then moves from *Sakha* to *Koshta*, this accumulated *Dosha* can be removed using a *Virechana*, so after *Pizhichil virechana* was given with *Avipathi choorna*^[13].

Silajathu rasayana is found to be very beneficial in Rheumatoid Arthritis as it nourishes the joints and reduces the inflammation and pain^[14]. According to *Acharya Vagbhata*, the washed and dried *Silajathu* should be soaked in the decoction of drugs suitable to the disease and diseased. *Rasnaerandadi*

Kashaya was selected here. It is explained in *Sahasrayogam Vataraktha kashaya prakaranam*. It has high phenolic content and antioxidant properties. So the *Kashaya* has a protective and corrective effect in *Vataraktha*^[15]. Before the administration of purified *silajathu Gugguluthikhthaka gritham* was given to the patient for 3 days which was indicated for *Sandhi asthimajjagatavata*, and possesses anti-inflammatory properties.

CONCLUSION

The incorporation of Ayurvedic treatment procedures, coupled with *Rasayana* therapy, demonstrated a notable amelioration of symptoms, an enhancement in the overall quality of life, and an improvement in laboratory parameters.

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