



**Case Study**

**AN ALTERNATIVE APPROACH TO THE TREATMENT OF ARTHRITIS**

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**ABSTRACT**

Arthritis, also known as joint inflammation, is the swelling and tenderness of one or more joints in the body. With the main symptoms being stiffness of joints and pain, arthritis can severely affect the quality of life. It worsens with age and typically shows itself in adult ages. This case study is of a very young, 19-year-old woman, who was diagnosed with rheumatoid arthritis at the age of 18. After Ayurvedic assessment, she was recommended the use of herbal blends, oils, Ayurvedic diet, and lifestyle changes. This was done in gradual phases and lasted for about six months. The American College of Rheumatology's Arthritis Impact Measurement Scales were used for pre and post assessment. Post Ayurvedic management, the client's situation is greatly improved after Ayurvedic management and she still follows Ayurvedic recommendations for maintenance. This case study provides positive insights and alternatives into the management of Arthritis.

**INTRODUCTION**

There are two common types of arthritis: osteoarthritis and rheumatoid arthritis. In osteoarthritis, the cartilage, the hard slippery that covers the end of bones, breaks down. In rheumatoid arthritis, the immune system attacks the joints in the body, beginning with the lining of joints. Sometimes joints could be inflamed or painful because of an external injury and may heal over time on their own with rest and icing<sup>[1]</sup>. However, if symptoms of stiffness, inflammation, and pain are persistent, they may indicate a more serious underlying pathological issue. The presence of too much uric acid in the blood can cause gout. Additionally, diseases like psoriasis can cause other types of arthritis also called psoriatic arthritis<sup>[1]</sup>.

According to the Centers for Disease Control and Prevention, in the United States, 24% of all adults, or approximately 58.5 million people suffer from arthritis. It is one of the leading causes of disability. Due to arthritis, it is estimated that there is an associated cost of approximately \$303.5 expended in either medical care or loss in earnings. More than half of the patients who suffer from a diagnosis of arthritis

are of working age in the age range of 18-64 years<sup>[2]</sup>. Since they suffer from arthritis symptoms of pain, aching, stiffness, and inflammation, arthritis limits their ability to climb stairs or walk from a parking lot to their desk, thus reducing their efficiency at their workplace. Statistics about the widespread prevalence of arthritis reveal that approximately one in every four adults has arthritis, one in four adults with arthritis reports severe joint pain, and one in every ten adults performs limited activities due to arthritis<sup>[2]</sup>.

Prior studies published on Ayurveda and Arthritis support that Ayurvedic medicines are safe in nature for the treatment for Arthritis, but also propose a validation of a combined therapeutic approach (Ayurveda and modern medicine) for its management<sup>[3-4]</sup>. Researchers have extensively tested the efficacy of Ayurvedic medicines on the management of Rheumatoid arthritis<sup>[3-7]</sup>. For instance, approximately 68% of the 394 patients that were treated for rheumatic disorders using alternative methods sought relief. Of these methods, Ayurvedic medicine was the most popular and provided relief for a longer duration as compared to other methods<sup>[4]</sup>. Studies that have compared three treatment groups (Ayurvedic medicine, combination of methotrexate and Ayurvedic medicine, and only methotrexate) in a double blinded randomized controlled experiment, have found that adverse events were much fewer in the group that took only Ayurvedic medicine<sup>[5]</sup>. Throughout the Indian sub continent, Ayurvedic medicines have been found to be effective for the treatment of rheumatoid arthritis<sup>[6-9]</sup>.

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For instance, Two Ayurveda formulations, *Maharasnadi quath* and *Weldehi choorna* used by Ayurvedic medical practitioners in Sri-Lanka for the treatment of RA patients were studied for efficacy and it was found that *Maharasnadi quath* is effective in improving the total serum iron and Hb concentrations, but not with the *Weldechi choorna*. At the end of a three month treatment period, the RA patients significantly improved their total serum and iron<sup>[6]</sup>.

In another study that specifically examined stiffness and mobility of joints as is used in the Arthritis assessment scale by the American College of Rheumatology, found that generally when patient and physician assessments for severity of pain and morning stiffness were used as scales, there was not benefit of using a placebo, but there were beneficial effects of using Ayurvedic medicine <sup>[8]</sup>. Ayurvedic medicinal plants that are used traditionally have shown to be a promising alternative for the management of arthritic symptoms because they have been found to be safe and effective. By reducing tenderness of joints, pain in joints, swelling, bone and cartilage damage, Ayurvedic medicines have been demonstrated to improve arthritic symptoms <sup>[9]</sup>. Ayurvedic treatment furthermore has helped improve knee flexion, distance walked, and engagement in sport activities, and these positive effects are mediated through cellular mechanisms including inhibition of inflammatory markers <sup>[7-9]</sup>.

### Case Study

A 19-year-old female client named Amy (name changed) presented with symptoms of rheumatoid arthritis and a confirmed diagnosis of Rheumatoid arthritis by a western medicine doctor. She had pain in her fingers and ankles. Joints in both the fingers and ankles were swollen. She was given prednisone to control the symptoms which were for a short duration. Then, she was given methotrexate to control the symptoms. The methotrexate was supposed to be taken once a week. More recently she has seen a lot of swelling, redness in the right knee. Some pain in the fingers had been alleviated with the allopathic medicines but she was looking for more help. Also, both the girl and her mother are inclined toward taking Ayurvedic treatment for her condition instead of allopathic medicines. This is because they understand that it is a long-term problem and will take some time to resolve fully. In fact, they are aware that the daughter may have to control symptoms by taking prednisone and methotrexate for many years. In that case, they firmly believe that it is better to take Ayurvedic herbs long term than a longer duration of allopathic medicine course, to take care of the

daughter's health issue in a more holistic and natural way.

Amy is a college-going student and going through flare-ups of pain and inflammation of joints hinders her ability to perform well in her courses. At the initial visit, she reported having approximately 5-6 flare-ups a month. She reported that when her pain and inflammation flared up, she lost the ability to focus on her studies, and her mobility reduced. Upon further assessment, she revealed that she eats red meat at least twice a week, and sea food at least once a week. She had stopped dairy and dairy-containing products by herself. She frequently consumes leftover foods, sour foods, and spicy foods. Tomatoes were a big ingredient in all her foods. There was no family history found for any type of arthritis. After *Prakriti* analysis, it was found that she was predominantly Vata prakriti, and the sub dominant *Dosha* was *Pitta*, followed by *Kapha*. After her *Prakriti* analysis, it was concluded that she had a tendency to develop *Vataja* disorders and also *Pittaja* disorders.

### Pariksha (Assessment)

1. *Nadi pariksha* (Ayurvedic assessment of the pulse)- *Pitta Vata*
2. *Jihva pariksha* (Ayurvedic tongue examination)- *Nirama* or no indication of presence of toxins
3. *Kostha pariksha* (examination of the abdomen)- *Mridu* or no tenderness, hardness or pain to touch
4. Personality- calm, not very aggressive
5. *Agni pariksha- Tikshna* (very sharp)
6. Body strength- Low. Cannot walk many steps, cannot do many activities
7. Thirst- medium
8. Stress level- high due to stress of performance in college
9. Sleep- 6 hours, undisturbed

### Chikitsa (Treatment)

After a sharp reduction in symptoms after 6 months of treatment, the treatment of this client is ongoing for maintenance purposes. The following ayurvedic recommendations were given:

- Prepare a decoction (*Kashayam*) of the following herbs. To prepare a decoction (*Kashayam*), add 16 oz of water to half a teaspoon of the herbal powder blend. Boil it in a pan on medium heat until the quantity of water reduces to 4 oz. Filter using a strainer and then cool it. Drink this decoction twice a day, the first dose at 7 am in the morning and the second one at 5 pm in the evening. The purpose of this decoction is to enable *Rakta pachan* (digestion of toxins) in the joints. Thai decoction is to be consumed for the first six weeks of treatment.

**Table 1: Formulation for *Kashayam* for *Rakta pachan***

Herbs	Properties and action
<i>Guduchi (Tinospora cordifolia)</i>	Bitter, tonic, warm, light, useful in Vatarakta and balances Vata [11,12]
<i>Musta (Cyperus scariosus)</i>	Cooling, bitter, induces <i>Agni</i> , eliminates toxins from blood, balances <i>Pitta</i> and <i>Kapha</i> [13]
<i>Kutki (Picrorhiza kurrooa)</i>	Bitter, astringent, dry, cooling, induces <i>Agni</i> , eliminates toxins from blood, light [14]
<i>Patol (Tricosanthes dioica)</i>	Balances <i>Kapha pitta</i> , reduces inflammation, bitter, astringent [15]
<i>Neem (Azadirachta indica)</i>	Cooling, light, good for skin issues, improves lack of appetite, nausea, good for fever, inflammation [16]

- *Yograj guggula* tablets- 6<sup>th</sup> week to 12<sup>th</sup> week
- Maharasnadi quath tablets- 6<sup>th</sup> week to 12<sup>th</sup> week
- Herbal blend mix of *Bala (Sida cordifolia)* and *Aswagandha (Withania somnifera)*
- *Pranayam*- A 15 minute routine consisting of *Anulom vilom* for 5 minutes, *Kapal bhati* for 5 minutes and *Bhasrika* for 5 minutes.
- *Mahanarayan*, and *Balaswagandha* oils for joints
- Light yoga
- Ayurvedic diet (*Aahar*)- From the *Nidaan parivarjana* perspective (elimination of causative factors), avoiding too many tomatoes, hot and spicy foods, inflammatory foods, and sour foods. Amy was recommended to reduce her meat consumption and eat more vegetables and fruits. Vegetables should be mostly cooked and food should be fresh as much as possible.
- Ayurvedic lifestyle (*Vihaar*)- Since Amy is a college student, her routine is determined by how many hours of study she needs to put in. She was recommended to follow a good sleep hygiene whereby she sleeps every night at 10 pm and wakes up at 6 am.

## RESULTS

1. First follow-up session: Amy internally consumed the *Kashayam*, and found that the redness and inflammation started to decrease. She also felt some relief from her pain. Now, that the toxins were digested, she was advised to take B and C from the list above for phase two of the treatment. In the first phase, the treatment mostly focused on cleansing and in the second phase, with the aim to improve the *Vata* balance to relieve the pain.
2. Second follow-up session: Amy consumed *Yograj Guggulu* and *Maharasnadi* tablets from the 6<sup>th</sup> week to the 12<sup>th</sup> week. This helped greatly in relieving her pain. But we needed to continue the pain relief. For the third phase of the treatment, she was advised to take both the tablets, and D

from the list above. The herbal blend mix of *Bala* and *Ashwagandha* at this stage was expected to strengthen the weak joints while alleviating the pain further. *Bala* is a herb that is meant to strengthen the bones, muscles, and joints. *Ashwagandha* is a very revered herb and is used as a *Rasayana* (tonic). [15]

3. Third follow-up session: Amy consumed both the tablet and the herbal blend mix in D above from 6<sup>th</sup> to 12<sup>th</sup> week. By the end of the 12<sup>th</sup> week, she noticed a significant reduction in pain, redness, and inflammation. She also experienced greater mobility. At this session, she reported seeing flare-ups 2-3 times a month as compared to previously when it was 9-10 times a month. The flare-ups that happened were manageable and not very intense and painful.
4. Fourth follow-up session: After 4 months, Amy reported walking 17,000 steps on a certain day, which pleasantly surprised her. She has followed all of the herbs and Ayurvedic diet and lifestyle changes that were recommended to her. There was no inflammation or flare-ups since the last visit. The legs felt sore but she thought it was due to the greater amount of mobility.
5. Fifth follow-up session and current situation: Now, after 6 months of Ayurvedic treatment, Amy walks on an average of 6000 steps every day. Her mobility has greatly increased. She does yoga two times a week. The flare-ups happen only when it is a cold day and are very mild, otherwise, they do not happen. At this time, the western medicine doctor has modified her dosage for methotrexate to 4 pills per week. Before she started Ayurvedic treatment, this dosage used to be 10 pills in a week. As Amy started recovering, her western doctor modified the dosage of methotrexate to 6 pills in a week, which is now reduced to 4 pills in a week. Additionally, her doctor advised her to stop taking prednisone since she was feeling much better.

**Table 2: Assessment using American College of Rheumatology's Arthritis Impact Measurement Scale I for Objective Assessment, and Subjective Assessment [17]**

Arthritis Impact Measurement Scales I (9 scales)	Before treatment	After treatment
Mobility	Limited. Could not go to college campus. Could walk only 1000 steps Stiffness in joints- 7 on a scale of 1 through 10 with 10 being extremely stiff, and 1 being least stiff.	Goes to college campus and work site regularly. Walks more than 5000 steps without a flare up. Stiffness in joints- 1-2 on a scale of 1 through 10 with 10 being extremely stiff, and 1 being least stiff.
Physical activity (walking, bending, lifting)	Limited walking, bending, and lifting Only able to do 1 in 10 times. Even a little bit of walking would cause pain.	Can walk 5000-6000 steps in one day. Able to bend and lift 8-9 times out of 10 times. Now, she can walk long distances without pain.
Dexterity	Efficient	Efficient
Household activity	inadequate	Adequate
Social activity	Not enough. High dosage of allopathic medicines caused drowsiness and tiredness leading up to not getting socially involved.	Enough social activity. Since the dosage of allopathic medicines has reduced significantly, there is no more tiredness and drowsiness. Due to this, she is able to get socially involved.
Activities of daily living	Efficient	Efficient
Pain	7 on a scale of 1 through 10 with 10 being the highest amount of pain, and 1 being the lowest amount of pain.	1-2 on a scale of 1 through 10 with 10 being the highest amount of pain, and 1 being the lowest amount of pain.
Depression	Not available	Not available
Anxiety	Not available	Not available

### Ayurvedic interpretation of Arthritis

Ayurvedic classical literature describes a similar condition to arthritis as *Vatarakta*. *Vatarakta* can also be interpreted as rheumatoid arthritis and psoriatic arthritis, although there may not be a direct correlation between these two disorders<sup>[18]</sup>. *Vatarakta* as a disorder is associated with the consumption of too much of salty, sour, spicy foods, canned, tinned, or fermented foods, leftover foods, consumption of nightshade vegetables, eating before a meal is fully digested, stale food, red meat, and some types of seafood. Consumption of incompatible foods, alcohol, acidic foods, oily and fried foods, and sugary foods may also cause a vitiation of *Vata* leading up to arthritis. Lifestyle abnormalities such as too much anger, being short-tempered, irritable, sleeping during the daytime, staying up late in the night, too much device usage, not exercising, and any other wrong or untoward lifestyle behaviors. People with low energy and who do not remain active, obese, and the ones who are less motivated, and sit for long periods of time may be more susceptible to having *Vatarakta* (arthritis)<sup>[18]</sup>.

A lot of the symptoms that are manifested in the case of gout, arthritis, or psoriatic arthritis are similar to the symptoms that have been explained in *Vata rakta*. Therefore, *Vata rakta* can be understood in the context of gout, arthritis, and psoriatic arthritis.

### Ayurvedic Pathogenesis

*Vata* gets vitiated by all of the above diet and lifestyle abnormalities, too much travel, long-distance travel either on-road or by plane. Once *Vata* is aggravated, it combines with aggravated *Rakta dhatu* (blood tissue). The *Rakta dhatu* could get aggravated by spicy, very hot, and acidic foods, raw foods, uncooked vegetables, and too much exposure to the sun or heat. The imbalanced *Rakta dhatu* becomes a barrier to the normal flow of *Vata*, and blocks its way throughout the body especially in the joints causing *Vata* to combine with vitiated blood and become localized in joints of the body. Later, the aggravated *Vata* and imbalance *Rakta* in combination, get localized in the legs. Eventually, this *Vatarakta* combination becomes strongly vitiated and is known as *Vatarakta*.

Similarly, the vitiated *Rakta dhatu* also imbalance the *Pitta* and *Kapha doshas* [18].

Gradually but surely, the *Vatarakta* vitiated combination travels upwards through the body from the legs onto the joints in the hands and legs, causing pain, tingling sensation, numbness, and itching in the joints. At this point, a practitioner can see the joints become red and inflamed. In psoriatic arthritis, we see inflammation, redness, itching, and also patches on the skin which is similar to *Vatarakta* as described in the *Ayurvedic samhitas*.

**Pitta prominent Vatarakta**

Symptoms for *Vatarakta* in which *Pitta* imbalance is prominent will show more burning sensation than when there is a prominence of *Vata* or *Kapha* in *Vatarakta*. In *Pitta* prominent *Vatarakta* joints in the legs such as the knee joint and ankle joint are slightly inflamed, are warm to the touch, and have redness. [18]

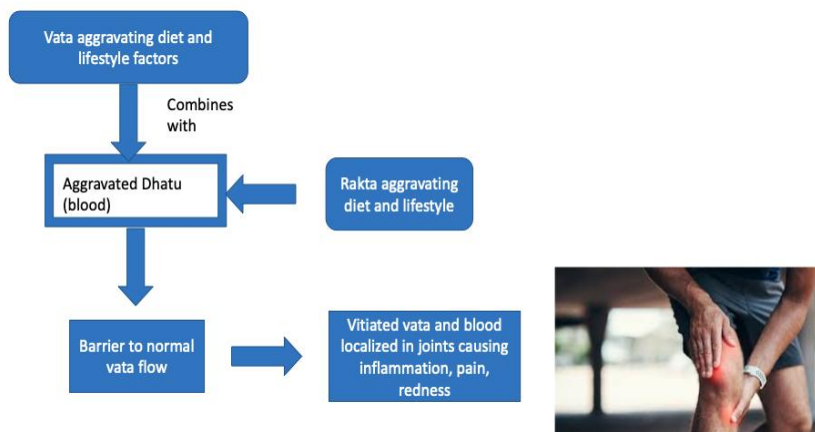
**Kapha prominent vatarakta**

Symptoms for *Kapha* prominent *Vatarakta* show more itching than the ones in *Pitta* or *Vata* prominent *Vatarakta*. There may be more whiteness, flakiness, and peeling in this type. [18]

**Vata prominent Vatarakta**

Symptoms for *Vata* prominent *Vatarakta* include pain, tingling sensation, numbness, swelling, dryness, and blackishness on the skin. Additionally, the inflammation may go up and down without any consistent pattern. The individual might complain that swelling increases at night and goes down during the day. *Vata* prominent *Vatarakta* is also characterized by stiffness in joints and coldness to touch. The individual might report that swelling, pain and any other symptoms increase during the cold weather and goes down during the hot weather [18].

**Figure 1: Ayurvedic Pathogenesis of Arthritis/ Rheumatoid Arthritis (Vata Rakta)**



**DISCUSSION AND CONCLUSION**

The aim of this paper was to present a case study of a young college-going female client’s successful treatment from rheumatoid arthritis. Studies in the past have affirmed positive results in the case of rheumatoid arthritis patients using Ayurveda treatment. Prior studies also corroborate the safety of Ayurvedic medicines in the treatment of arthritis [3-7]. Similar to prior studies, we also support the administration of a combined therapeutic approach using both Ayurvedic and modern medicine for the treatment of arthritis. For instance, in this case Amy felt huge relief after taking Ayurvedic herbs, but she still continued her on allopathic drugs in reduced dosages. In the study that compared treatment across the two groups, one with methotrexate only, the other with Ayurvedic medicines and methotrexate found that the group that only took Ayurvedic medicines had fewer adverse events [5]. While our study supports the combined therapeutic approach using allopathic drugs and Ayurvedic remedies, Amy is cognizant of the fact that leaning too much only on allopathic drugs can cause adverse events. As she has reported on the

subjective and objective assessment using American College of Rheumatology’s Arthritis Impact Measurement scale as shown in Table 2 above, prior to using an Ayurvedic lifestyle and treatment, allopathic drugs caused her heavy drowsiness which made her incapable to study. Similar to prior studies, in this case study we have used *Maharasnadi qwath* tablets as one of the remedies, [5] however we have also used many other remedies in addition to it. These are given in the *Chikitsa* (treatment) section above. Also similar to prior studies we have seen that the treatment of RA also has helped in improving iron levels [5] of the patient. Additionally, our study also found an association between Ayurvedic treatment and improvement of redness, inflammation of joints, reduction in tenderness of joints, as presented in the Arthritis Impact Measurement Scale in Table 2.

In conclusion, the above case study provides favorable insights into successful Ayurvedic management of arthritis, in particular Rheumatoid arthritis. The use of herbal blends, *Vatis* (tablets), and

oils provided great relief to the client's symptoms. The Ayurvedic management of her disease was done in combination with her allopathic prescription and the Ayurvedic herbs, diet and lifestyle turned out to be complementary to the western medicine prescription. She achieved great benefits from both systems of medicine and therefore was able to improve her quality of life.

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