Naturopathic And Dietary Interventions In The Management Of Rheumatoid Arthritis: A Case Study Report

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Abstract: Rheumatoid arthritis (RA) is a long-term autoimmune disorder that primarily affects joints. It typically results in warm, swollen, and painful joints. Pain and stiffness often worsen following rest. Most commonly, the wrist and hands are involved, with the same joints typically involved on both sides of the body. The disease may also affect other parts of the body. This may result in a low red blood cell, inflammation around lungs and heart. Fever and low energy may also be present. Often, symptoms come on gradually over weeks to months.

Rheumatoid arthritis (RA) and the so called seronegative spondyloarthropathies (SpA) including the subgroups of ankylosing spondylitis (AS), reactive arthritis (ReA), undifferentiated spondyloarthropathies (USpA) and psoriatic arthritis (PsA) are both characterised by chronic synovial inflammation. In these rheumatism a similar synovial pathology is observed: the synovia is infiltrated by T cells, plasma cells and macrophages, although some distinguishing immunohistological features have been suggested.

Naturopathy, also termed as nature cure, is the science of curing the ailments with the help of nature. It is both the way of life and concept of healing that uses various natural means of treating human infirmities and disease state. Studies showed the elimination of certain food items led to an improvement of RA patients.

Here in this case, effectiveness of naturopathic and dietary interventions in treating arthritis has been shown to be without side effects.

Keywords: Rheumatoid arthritis, Dietary changes, Naturopathic interventions

1. INTRODUCTION

RA affects about 24.5 million people as of 2015. This is between 0.5 and 1% of adults in the developed world with 5 and 50 per 100,000 people newly developing the condition each year. Onset is most frequent during middle age and women are affected 2.5 times as frequently as men. In 2013, it resulted in 38,000 deaths up from 28,000 deaths in 1990. The first recognized description of RA was made in 1800 by Dr. Augustin Jacob Landre Beauvais (1772–1840) of Paris.

The term rheumatoid arthritis is based on the Greek for watery and inflamed joints.

RA typically manifests with signs of inflammation, with the affected joints being swollen, warm, painful and stiff, particularly early in the morning on waking or following prolonged inactivity. Increased stiffness early in the morning is often a prominent feature of the disease and typically lasts for more than an hour. Gentle movements may relieve symptoms in early stages of the disease. These signs help distinguish rheumatoid from non-inflammatory problems of
the joints, such as osteoarthritis. In arthritis of non-inflammatory causes, signs of inflammation and early morning stiffness are less prominent with stiffness typically less than one hour, and movements induce pain caused by mechanical arthritis [13]. The pain associated with RA is induced at the site of inflammation and classified as nociceptive as opposed to neuropathic. [14] The joints are often affected in a fairly symmetrical fashion, although this is not specific, and the initial presentation may be asymmetrical.

Naturopathy is the science and art of healing which enables the human body to get rid of its abnormal condition by itself with the aid of natural, vital and purifying therapeutic modalities. It potentiates inherent healing processes thus helps to restores and maintains the highest possible degree of healing. Naturopathy is the system of treatment which recognizes the existence of a vital curative force within the body. And Rheumatoid arthritis is an autoimmune chronic inflammatory disorder. The characteristic feature of RA is inflammatory which poses cavities, usually involving peripheral joints in a symmetric distribution. Where synovium becomes inflamed causing warmth, redness, swelling and pain. Some common prognosis possibilities for rheumatoid arthritis patients include; continued joint inflammation, pain, stiffness, restricted range of motion and progressive joint deterioration.

Patients with RA are considered to be at nutritional risk for many reasons. One cause of poor nutritional status in this patient population is thought to be the result of the weight loss and cachexia linked to cytokine production. In patients experiencing chronic inflammation the production of cytokines, interlukin-1 and tumor necrosis factor, increases resting metabolic rate and protein breakdown.

Hence, this study aims to study the effects of naturopathic and dietary interventions on rheumatoid arthritis.

II. CASE REPORT

A 45 year old married woman visited Sri Dharmasthala Manjunatheswara Hospital Shanthivana in 2016 with complaints of pain, stiffness, and decreased range of movements in right shoulder joint, right wrist joint, both knee joints, right jaw, both ankles, and swelling in both legs. Additional symptoms and conditions included headache, gastritis, and constipation. She underwent conventional management in private hospital. Symptoms began with moderate to severe pain associated with swelling, stiffness in multiple joints especially over small joints.

Pain and swelling started on the second left toe. And swelling on the left leg. Then she applied ice and after one month swelling started on left feet and doctors prescribed for bandage. Later pain started on right elbow and right knee joint on March 2011 and started allopathic medications. Again pain started on right jaw and showed BDS doctor and diagnosed as arthritis and took tablets for one month. Pain aggravated and radiated to right shoulder joint, both knee joints, both ankle joints, and swelling on both legs associated with walking difficulty.

2015 she visited KIMS hospital and got admitted in St.John’s hospital with walking difficulty and severe pain in all joints.

On 2016 she visited Sri Dharmasthala Manjunatheswara Yoga and Nature Cure Hospital and followed naturopathic and dietary interventions with yogic interventions. Along with the tablets she followed naturopathic and dietary interventions. Till the next visit after 6 months. From the next visits she dropped all the tablets and followed only the dietary changes with the treatments with turmeric in every sip of water and food. A recent blood report suggests a clear change in the CRP levels.

She was under medications like FOLITRAX 5mg, FEPANIL 650mg, TACROMUS 0.5mg, CALTEN-D 500mg, MEDROL 8mg, ACUVIN 500mg, EVION-600mg, NAPROSYN SR, FOLIMAX 5mg, TACROMUS 0.5mg.

After careful examination, patient was treated with these naturopathic and dietary interventions along with yogic interventions.

TREATMENT SITTINGS ARE AS FOLLOWS

<table>
<thead>
<tr>
<th>DAY</th>
<th>TREATMENT</th>
<th>NIGHT TREATMENTS</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Steam bath with cold chest pack &amp; neutral immersion bath with salt</td>
<td>Hot arm and foot bath with Epsom salt</td>
<td>20 minutes &amp; 20 minutes</td>
</tr>
<tr>
<td>2</td>
<td>Neutral enema, Full body massage with infrared ray</td>
<td>Hot arm and foot bath with Epsom salt</td>
<td>30 minutes &amp; 20 minutes</td>
</tr>
<tr>
<td>3</td>
<td>Neutral enema, Reclining steam bath</td>
<td>Hot arm and foot bath with Epsom salt</td>
<td>20 minutes &amp; 20 minutes</td>
</tr>
<tr>
<td>4</td>
<td>Neutral enema, Neutral hip bath</td>
<td>Hot arm and foot bath with Epsom salt</td>
<td>20 minutes &amp; 20 minutes</td>
</tr>
<tr>
<td>5</td>
<td>Neutral enema, Full body massage with infrared rays</td>
<td>Hot arm and foot bath with Epsom salt</td>
<td>30 minutes &amp; 20 minutes</td>
</tr>
<tr>
<td>6</td>
<td>Neutral enema, steam bath Hot mud to bilateral knee joints</td>
<td>Hot arm and foot bath with Epsom salt</td>
<td>20 minutes &amp; 20 minutes</td>
</tr>
<tr>
<td>7</td>
<td>Neutral douche to whole body</td>
<td>Hot arm and foot bath with Epsom salt</td>
<td>20 minutes &amp; 20 minutes</td>
</tr>
<tr>
<td>8</td>
<td>Neutral spinal bath Full wet sheet</td>
<td>Hot arm and foot bath with Epsom salt</td>
<td>20 minutes &amp; 20 minutes</td>
</tr>
</tbody>
</table>
One hour daily yoga was done for 24 days, consisting of a set of sukshma vyayama, Asanas, pranayama and relaxation techniques.

### DIETETIC REGIMEN FOLLOWED FOR 15 DAYS

<table>
<thead>
<tr>
<th>Days</th>
<th>pack</th>
<th>Hot arm and foot bath with Epsom salt</th>
<th>30 minutes</th>
<th>20 minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Salt glow oil massage Hot mud to bilateral knee joints</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Neutral arm and foot bath with Epsom salt Hot mud to bilateral knee joints</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Partial massage Hot mud to bilateral knee joints</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Full wet sheet pack Mustard pack to painful areas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Neutral douche Mustard pack to painful areas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Sauna bath Mustard pack to painful areas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Neutral half bath with salt Ganji turmeric bath</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Partial massage with infra red rays Neutral hip bath</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Salt glow oil massage GH pack</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Full wet sheet pack Neutral immersion bath with salt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Neutral under water massage Mustard pack to painful areas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Neutral immersion bath with salt Mustard pack to painful areas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Neutral immersion bath with salt Mustard pack to painful areas</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2
Curcumin (diferuloylmethane), a yellow coloring agent extracted from turmeric is also used as a remedy for the treatment and prevention of inflammatory disease [16].

Orange, tomato, pineapple and carrot juices are all high in vitamin C, which means they have antioxidant properties, which can neutralize free radicals that lead to inflammation. Tart cherry juice has been shown to protect against gout flares [17].

### III. PATIENT’S PRE AND POST REPORTS

#### BLOOD REPORTS AND GENERAL PARAMETERS

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Variables</th>
<th>Pre data</th>
<th>Post data</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRP</td>
<td>-</td>
<td>122.7mg/dl</td>
<td>1.4mg/dl</td>
</tr>
<tr>
<td>RBC</td>
<td>-</td>
<td>3.29millions/cmm</td>
<td>3.45millions/cmm</td>
</tr>
<tr>
<td>WBC</td>
<td>-</td>
<td>11,700cells/mm</td>
<td>4,700cell/mm</td>
</tr>
<tr>
<td>Hemoglobin</td>
<td>-</td>
<td>12.6gm/dl</td>
<td>12.0gm/dl</td>
</tr>
<tr>
<td>Platelet count</td>
<td>-</td>
<td>3.6 lakh/cmm</td>
<td>1.10 lakh/cmm</td>
</tr>
<tr>
<td>Blood pressure</td>
<td>Systolic Diastolic</td>
<td>140</td>
<td>90</td>
</tr>
<tr>
<td>General parameters</td>
<td>Weight Height</td>
<td>69.8kg 163cm</td>
<td>64.3kg 163cm</td>
</tr>
</tbody>
</table>

Table 1

One hour daily yoga was done for 24 days, consisting of a set of sukshma vyayama, Asanas, pranayama and relaxation techniques.
### IV. DISCUSSION

RA primarily starts as a state of persistent cellular activation leading to autoimmunity and immune complexes in both joints and other organs where it manifests. The initial site of disease is the synovial membrane, where swelling and congestion leads to infiltration by immune cells. Three phases of progression of RA are an initiation phase, due to nonspecific inflammation, an amplification phase, due to T cell activation and chronic inflammatory phase with tissue injury, due to cytokines, IL-1, TNF-α and IL-6[18].

In this case report, CRP, has been improved considerably. Though there is no evidence till date which addresses influence of naturopathy and dietary intervention on seronegative arthritis on CRP test, they have indirect influence on CRP test.

### PROBABLE MODE OF ACTION

According to naturopathy accumulation of morbid matter is the cause of diseases, hence eliminating those morbid matter is the cure of disease. To reduce pain and other symptoms, use of complementary and alternative medicine which includes thermotherapy, acupuncture, massage etc.....has increased for RA patients. Acupuncture and massage therapies are commonly employed for most of the pain management. Mud was shown to have anti-inflammatory effect and sauna was assumed to reduce pain and swelling by producing analgesic effect and perspiration. Electro acupuncture can effectively improve severity of articular inflammatory swelling and lower ESR, serum CRP, and RF contents and suppress synovial TNF/α-Kb protein signaling in RA rats.

Diet may play a significant role in health of an individual. It is evident that patients with moderate-to-severe RA, who switch to a very low-fat, vegan diet can experience significant reductions in RA symptoms.

Therefore naturopathy and dietary interventions including hydrotherapy, yoga therapy, massage therapy, acupuncture plays a significant role in patients with seronegative rheumatoid arthritis.

### V. CONCLUSION

The case report shows remarkable changes in Rheumatoid arthritis status that improved from 21 days of dietary management and naturopathic interventions. The change was sustainable through simple lifestyle modification and by adopting few simple Dietary changes and naturopathic interventions at home. Considering the effects achieved in this case, Dietary changes and Naturopathic interventions could be used as safe and beneficial management for Rheumatoid arthritis.

### ACKNOWLEDGMENT

We would like to thank Dr. Prashanth Shetty, Chief Medical Officer, SDM Yoga and Nature Cure Hospital, Shanthivana for his support and encouragement.

### REFERENCES


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