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## **Integrated Approach to Comprehensive Management of Rheumatoid Arthritis.**

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### **ABSTRACT**

Rheumatoid arthritis (RA) is an autoimmune disorder mainly affects synovial joints. RA is a most common in females than male. It is mainly characterized by the Pain, stiffness of joints associated with fever, weakness etc. A melodramatic shift in drug discovery brings a noteworthy change in RA management. But these medicines having their own adverse effects on prolonged use. In recent days it has been seen that health professional community looking towards evidence-based alternative as well as complementary therapies to manage chronic disease conditions like RA. Such an integrative approach is definitely helpful in improving pain pattern as well as lifestyle in RA patients.

**Keywords:** Rheumatoid arthritis, Complementary and alternative therapies, Integrative medicine.

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## INTRODUCTION

The prevalence of rheumatoid arthritis (RA ) in developing countries is standing around 0.1-0.5 % <sup>1</sup>.RA is Characterized by prodromal Symptoms like Morning stiffness, fatigue, pain in multiple joints, weight loss etc. Morning stiffness is one of the invariable features of inflammatory arthritis like RA. It mainly affects the small joint like interphalangeal joints as well as toes. In acute onset, it is often accompanied by symptoms like fever, lymphadenopathy etc. Rheumatoid nodules are the most common cutaneous lesion, mainly observed in ulnar aspect of the forearm. Rheumatoid arthritis can present irrespective of any age and is more common in women.

The most common factors involved in the etiopathogenesis of RA are a Genetic predisposition, oxidative stress, the autoimmune reaction within the synovial membrane cytokines and chemokines IL-1, IL-2, IL-3, IL-4, IL-6, TNF- $\alpha$ , IFN- $\gamma$  etc.

When looking at free radical reactions in RA, several studies have shown that oxidative stress possesses a significantly increased risk of developing RA in those Persons who have low levels of antioxidants or free radical scavengers.

It is observed that antioxidant defense mechanism, especially enzymes like SOD, catalase, and glutathione peroxidase low or absent in the blood plasma, synovial fluid. So the antioxidant defense system of the body cannot work properly. Oxidative stress within the inflamed joints. Especially in rheumatoid arthritis includes Neutrophil which releases a substantial amount of free radicals within the joint space result in lack of oxygen as part of the joint space. The anatomical and physiological aspects of the cellular membranes are extremely complex. When free radical molecules come in contact with these membranes, then they produce lipid peroxidation result in membrane destruction.

It can be diagnosed by the laboratory investigations like rheumatoid factor, C reactive protein. anti-CCP antibodies etc <sup>2,3,4</sup> The treatment of rheumatoid arthritis has observed dramatic shift over since last 20 years. It is mainly due to reliable tools for diagnosis and disease-modifying antirheumatic drugs (DMARD) like methotrexate, sulphasalazine, etc. <sup>5,6</sup> using in combination with low-dose glucocorticoids <sup>7</sup> and NSAIDs. On prolonging use of these drugs usually produces side effects like gastrointestinal toxicity <sup>8</sup>, infections as well as malignancies <sup>9</sup>

RA is a chronic, inflammatory, autoimmune, musculoskeletal disease, and it is observed that there is a certain limitation of conventional management. It had been seen that integrative approach like a conventional system of medicine along with complementary and alternative medicine (CAM) therapies are more beneficial one. Here the main role of CAM is a

supportive one. These integrated practices will help in both scenarios like pain management as well as lifestyle management psychosomatically.

### **Antioxidants and RA.**

Antioxidants cellular damage These particles safely prevent the formation of free radicals they act as scavengers and helps to check cell and tissue injury that could lead to cellular damage and disease. Antioxidants are having a broad range of foods, living tissues, including proteins, carbohydrates, DNA .Especially these antioxidants are flavonoids, Isoflavonoids, beta-carotene etc.<sup>10</sup>. The dietary, as well as nutritional supplements which act as an antioxidant in combating RA, are Turmeric, Ginger, Vitamin A, Vitamin C, and Vitamin E <sup>11</sup> Moreover, selenium, a trace metal is also included in this category. It requires antioxidant enzyme action.

### **Meditation**

Meditation is mainly attentive on stress-related issues. Meditation is a type of complementary therapy which comprises various practices like concentrating on breath, chanting a mantra or prayer. Meditation results in relaxation and reduction of stress especially occupation-related stress. Meditation is also increased cardiac output and cerebral blood flow

Mindfulness, mind-body therapy, and meditation helpful in pain management of RA. As we know RA in general associated with various forms of distress <sup>12</sup>.The meditation is free from side effects and not resulted in any adverse events. Which is useful in the management of stress in RA, especially in case of pain related manifestations.<sup>13</sup>.

### **Use of Herbal analgesic and anti-inflammatory drugs:**

Boswellia acts by directly blocking the conversion of 5-lipo-oxygenase into leukotrienes thus reduces inflammation, as leukotriene stimulates the supra oxide formation. Till now no contraindication has been reported <sup>14,15,16</sup>.

Garlic can be used as an antioxidant, anti-inflammatory, and anti-mutagenic one. But it causes an increase in bleeding tendencies when used along with Nonsteroidal anti-inflammatory drugs(NSAID's) like aspirin. It may also react with Vit E in high concentrations.

Guggulu botanically known as Commiphora mukul, contains Gugguluosteron and oleo-resins decrease the thickness of the joint and edema. When administered simultaneously Guggulipids reduces the actions of propranolol (antihypertensive) and the action of NSAID.

### **Oleation and sudation therapy:**

Castor Oil is the fixed oil expressed from the seeds of *Ricinus communis*. It is composed of triglycerides, about 75% of which is triricinolein, is hydrolyzed by lipases in the duodenum and small intestine to release ricinoleic acid, an irritant and is mainly responsible for the

purgative effect. The main toxic effects are mainly due to Ricin. Which helps in removing toxins from the gut <sup>17</sup>. As Castor oil contains fatty acids considerably decreases the levels of prostaglandins and leukotrienes and thus reduces the intensity of the pain <sup>18</sup>. While sedation is useful in case of the onset of pain and it also produces relaxation of muscle tissue <sup>19</sup>.

### **Diet and Lifestyle.**

Improving diet and lifestyle by consuming a healthy diet and following a healthy lifestyle. The lifestyle modification is mainly focused on healthy body weight, consumption of non-vegetarian food, alcohol and tobacco consumption. It mainly concentrates on a more balanced diet, which one is rich in vegetables and fruits, whole-grain, high-fiber foods articles. Diet and lifestyle can also affect the incidence noncommunicable diseases. Typically, those diseases which involve behavioral risk factors. It plays many roles like as preventive, curative etc. In case of RA, an anti-inflammatory diet which primarily excluding gluten and sugar is more beneficial one.

### **DISCUSSION**

RA is a non-communicable autoimmune disorder mainly due to change in lifestyle. Contemporary science contributed in its own way in diagnosis and management of RA. There are advanced hematological, microscopically, radiological tools are available to diagnose RA, While various pharmacological agents like NSAID's, DMARD's available in the management of RA. But still it is not possible to treat RA completely. Diet and lifestyle, exercise in particular yoga and meditation, various other non-pharmacological and non-device based strategies like use of sudation all help to escalation vagal tone which is a strong anti-inflammatory mediator, and proper as well as integrative practice of evidence-based, anti-inflammatory supplements like Vitamin C, Boswelvia, magnesium, Vitamin A,C,E and D3, many others. These approaches are effective, sustainable, economic one and not associated with the dreadful adverse events associated with the anti-rheumatic drugs in RA.

### **CONCLUSION:**

It is the right time for the healthcare professional to start doing what is good for the patient. The whole scenario of health care delivery is changing day by day. Nowadays people are showing more interest in searching alternative measures in conditions like pain management, depression and we are also seeing publications in main-stream high impact medical journals on the benefits and efficacy of alternative therapies like yoga, and lifestyle modification. It is time for the healthcare professionals to wake up and deliver the best.

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