

## ABSTRACT

**Objectives:** Rheumatoid Arthritis (RA) is an autoimmune disorder that predominately affects synovial joints .Statins introduced as hypolipidaemic agents have shown to possess pleiotropic property . This study is aimed to evaluate the effect of Pitavastatin as an adjuvant to methotrexate on inflammatory markers,clinical parameters, lipid profile and safety in patients with active rheumatoid arthritis treated at a tertiary care hospital.

**Methods:** 90 active RA patients who were randomized into three groups (n= 30 ) belonging to both sex in the age group of 36-60 years. Group one active RA on Methotrexate monotherapy. Group two,active RA on Methotrexate and Rosuvastatin. Those with active RA on Methotrexate and Pitavastatin were allocated under group three. DAS 28 scoring,blood sample collection and investigation done to detect the immunological parameters like,RF,AntiCCP,acute phase reactants like ESR & CRP , biochemical parameters including determination of blood sugar, blood urea and serum creatinine(renal function test)liver function test - SGOT , SGPT,ALP and lipid profile including total cholesterol, triglycerides, HDL, LDL.

**Results:** The results were analyzed by proper statistical methods at the end of fourth, eighth and twelfth weeks respectively. Significant reduction in DAS,RF ,Anti- CCP, serum LDL,total cholesterol, triglycerides were found and increment in serum HDL levels was noted.

**Conclusions:** Combinations of Methotrexate with Pitavastatin significantly reduced inflammatory markers, Disease Activity Score, LDL cholesterol, and serum triglycerides, total cholesterol, low density lipoprotein, as compared to methotrexate monotherapy in active RA. A significant increase in high density lipoprotein levels was observed. This study suggests Pitavastatin as an adjuvant to methotrexate may improve the quality of life in active RA with good control over the disease activity.

**Keywords:** Rheumatoid Arthritis, Methotrexate, Pitavastatin, Rosuvastatin, Inflammation.