

# Serum Lipid in Early Rheumatoid Arthritis

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## **Abstract**

**Background:** Several investigators reported an excess of cardiovascular morbidity and mortality among RA patients. The majority of cardiovascular deaths results from accelerated atherosclerosis.

Elevated plasma total cholesterol (TC) and low –density lipoprotein cholesterol (LDL-C), decreased high – density lipoprotein cholesterol (HDL-C) are strong factors for atherosclerotic events.

**Objectives:** This study was done to:

- 1- Show the changes of serum lipid profile in patients with ERA.
- 2- Explain the pathological role of changing lipid profile in ERA and to demonstrate the changes of atherogenic ratio in ERA patients.
- 3- Presenting the correlation between lipid profile and different inflammatory markers especially ESR and CRP.

**Method:** Twenty five patients with ERA who met the American college of rheumatology (ACR) 1987 criteria for rheumatoid arthritis (RA) had early disease with disease duration of less than one year without prior use of disease modifying antirheumatic drugs (DMARDs) and or systemic steroids were examined for their lipid profile level and the relation of the atherogenic ratio to their disease were investigated during the period between March –December 2006 in the department of

rheumatology at Al –Kadymia teaching hospital .Lipid profil (TC,LDL-C,HDL –C and TG)ESR and C-reactive protein were determined for both the patients and control groups.

**Results:** The results of the study revealed that ERA patients exhibited higher serum levels of total cholesterol (TC) low- density lipoprotein cholesterol (LDL) and triglycerides (TG) .Where as their serum high –density lipoprotein cholesterol (HDL –C) levels were significantly lower compared to control .As a consequence the atherogenic ratio of TC /HDL –C as well as that of LDL-C/HDL –C was significantly higher in ERA patients compared to controls and these changes were correlated with laboratory changes especially GRP and ESR .

**Conclusion:** ERA patients are characterized by an atherogenic profile in comparison with the healthy control subject .Recognition and treatment of early rheumatoid arthritis and reduction of these and other cardiac risk factor has greater impact on the course of the diseases.

**Keywords:** Lipid profile – rheumatoid arthritis

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## **Introduction**

Rheumatoid arthritis (RA) is a chronic, systemic, inflammatory disorder of unknown etiology that primarily involves joints. Extra – articular features of RA including anemia fatigue subcutaneous (rheumatoid) nodules

pleuropericarditis neuropathy sclerities splenomegaly sjogrens syndrome vasculitis and renal disease may occur during the course of the disease <sup>(1)</sup>.

There is an increased risk of premature death due to coronary artery disease in patients with RA and there may be an increase risk of heart failure <sup>(2)</sup>. The risk for decreased life expectancy and early cardiovascular mortality in particular, among people with rheumatoid arthritis is increasingly recognized. The increased

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