“Association of Lipoprotein (a) and Carotid intima media thickness in Rheumatoid Arthritis patients in prediction of Cardiovascular risk”

Background:

Rheumatoid Arthritis (RA) patients are more prone to develop atherosclerosis. There is an necessity for highly sensitive biomarkers for the early detection of CVD in RA since there are fewer diagnostic tools are available to identify the cardiovascular risk in RA patients. There were no prior studies that linked Serum Lipoprotein (a)[Lp(a)] levels and Carotid Intima Media Thickness(CIMT) in Rheumatoid Arthritis patients to evaluate the cardiovascular risk.

Aim:

To Evaluate the association of Serum Fasting Lipoprotein (a) and lipid profile & Carotid Intima Media Thickness in Rheumatoid Arthritis patients in prediction of Cardiovascular Risk.

Methodology:

This was a case control study that included 50 RA subjects and 50 healthy control subjects; adhering to inclusion and exclusion criteria, fasting blood samples were collected and analysed for fasting lipid profile, Lp(a). Serum Lp(a) was estimated by immunoturbidimetry method and lipid profile by enzymatic method. Carotid Intima Media Thickness on both sides was measured by carotid artery doppler.
**Results:**

Statistical analysis of the tabulated data was done using Excel software. There were statistically significant difference was observed in serum Lipoprotein (a) levels (p value <0.001) and carotid IMT (p<0.001) in RA patients when compared to controls. A strong positive correlation was absorbed between Serum Lipoprotein(a) and Carotid Intima Media Thickness. Duration of disease showed positive correlation with serum Lp(a) and CIMT.

**Conclusion:**

Lp(a) should be integrated and monitored as independent CV risk factor in existing screening tests and treatment algorithms of RA patients. The results from the present study support, the use of Carotid ultrasonography as a predictor of CV events in RA patients. Subclinical atherosclerosis [increase CIMT, Lipoprotein(a)] is common in RA and correlated well with disease duration. So, every patient of RA should be evaluated for atherosclerosis.

**Key Words:** Cardiovascular disease, Carotid intima media thickness, Lipoprotein(a), Rheumatoid arthritis.