High sensitivity C-reactive protein (hs-CRP) and insulin resistance in patients with Metabolic syndrome.

ABSTRACT

**Background:** Metabolic syndrome is not a disease; rather, it is a constellation of metabolic derangements which is a common cause of the development of cardiovascular diseases. Several studies have suggested hs-CRP to be associated with MetS and cardiovascular risk.

**Aim:** The aim of this study is to evaluate the association of hs-CRP with components of metabolic syndrome and insulin resistance in patients with metabolic syndrome compared to healthy controls.

**Material & methods:** Patients diagnosed with metabolic syndrome (n=100) using criteria of NCEP ATP III and healthy control (n=50) were included in the study. Anthropometric measurements, blood pressure, fasting plasma glucose, insulin & lipid profile, serum hs-CRP and HOMA-IR were calculated. Subjects with hs-CRP >10 μg/ml were excluded from the study.

**Result:** The levels of hs-CRP, HOMA-IR and components of MetS were significantly higher in patients with MetS as compared to healthy controls. hs-CRP was positively correlated with BMI, WC, HOMA-IR and triglycerides and highly significant (p<0.001). Using the cut-off value of 2.5 μg/ml hs-CRP can be used for predicting metabolic syndrome with sensitivity of 97% and specificity of 96%.

**Conclusion:** Patients with metabolic syndrome were associated with elevated hs-CRP levels probably increasing the cardiovascular risk. Hs-CRP can be accepted as a surrogate marker for the prediction of metabolic syndrome.

**Key words:** Metabolic syndrome, insulin resistance, HOMA-IR, hs-CRP