Summary and Conclusion

Monocyte chemoattractant protein-1 is a member of chemokines which plays a prominent role in the trafficking of immune cells and is upregulated in inflammatory and fibrotic processes. MCP-1 is produced predominantly by macrophages and endothelial cells and is also secreted from adipocytes. The present study aimed to assess the serum levels of MCP-1 in metabolic syndrome and to correlate it with the accumulation of the number of components of this syndrome.

This study included 50 patients with metabolic syndrome (mean BMI: 45.07 ± 5.9) and group-II included 20 normal weight healthy individuals (mean BMI: 21.9 ± 2.9) were included as a control group in the present study. All patients were subjected to full history taking and clinical examination. Blood samples were drawn from all subjects to assess serum levels of MCP-1, CRP, lipid profile, F.B.S and Insulin level.

The present study showed that MCP-1 level is significantly higher in group I than group II.

CRP is a sensitive marker for systemic inflammation. In the present study a statistically significant difference in serum levels of CRP was found between group I and control group (group II). Also, the present study showed significant relations in metabolic syndrome patients between CRP and the other clinical and biochemical parameters where CRP was significantly correlated to and each of the following: BMI, WC, and LDL-cholesterol, systolic &diastolic blood pressure. In addition, it was negatively correlated to HDL-cholesterol. It shows also a significant positive correlation between CRP and the number of this component collectively.

The present study has shown a significant positive correlation between MCP-1 and CRP in group I (patient group). Significant positive correlations were also demonstrated in the same group between MCP-1 and each of the components of Metabolic syndrome as WC,LDL-cholesterol and total cholesterol, triglyceride systolic &diastolic blood pressure and the accumulation of the number of this component collectively. Whereas, HDL-cholesterol was found to be negatively correlated to MCP-1 .

***In conclusion*:** Based on the findings of previous studies and the present study it has been demonstrated that serum levels of MCP-1 and CRP related to metabolic syndrome components such as BMI, WC, total cholesterol , LDL-levels, high blood pressure and the number of these components , thus MCP-1 may be a potential candidate linking obesity with obesity related metabolic complications and that MCP-1 may play a potential role as an inflammatory biomarker.