SUMMERY 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 purpose of this study is to measure serum protein of inflammation derived from blood vessel wall, (MCP1) in apparently healthy controls, patients with coronary artery disease (CAD), and patients with acute myocardial infarction (MI) to evaluate if this protein can be used to identify individuals with CAD or MI.

This prospective observational study was done on 60 subjects classified into three groups :

Group 1: control group , consisted of 20 apparently healthy individuals, non smoker, non hypertensive, non diabetics and non hyperlipidemics.

Group 2: CAD group**,** consisted of 30 patients suffering from coronary heart disease.

Group 3: MI group, consisted of 10 patients suffering from recent acute myocardial infarction (AMI).

All candidates of the study were subjected to full history taking, clinical examination. Blood samples were obtained from all subjects to assess serum levels of FBS, PBS, high-density lipoprotein cholesterol (HDL-C), low-density lipoprotein (LDL-C) and monocyte chemotactant protein 1(MCP1).

The present study shows a significant difference between the 3 comparative groups in the study as regards age, post prandial blood sugar (PBS), low density lipoprotein (LDL), high density lipoprotein (HDL), monocyte chemotactant protein 1 (MCP1), incidence of diabetes (DM), hypertension (HTN), hypercholesterolemia and smoking.

Our results revealed that there was a significant increase in the level of MCP-1 in patients with atherosclerotic coronary artery disease. This increase was correlated positively with age and (LDL-C) and correlated negatively with (HDL-C).

We found a significance elevation of MCP1 in MI group as compared with CAD group (325.82 ± 128.79 versus 218.46 ± 91.12 pg/ml; P =0.005).

In conclusion, serum levels of MCP-1 may be valuable for risk stratification of patients with CAD. The present demonstration of a crucial role for MCP-1 in the initiation of monocyte accumulation and lipid deposition in atherosclerosis suggest that chemokines and their receptors can serve as new

targets for anti-atherosclerotic drugs that exert their effects in a manner distinct from lipid lowering agents.

A larger-scale study is needed to validate our findings. Also, the effects of MCP-1 inhibition in large mammalian models of infarction should be carefully studied before identifying MCP-1 as a therapeutic target.