

TITLE

**Interleukin-7
is associated
with monocyte
chemoattractant
protein-1 in
peripheral blood of
T2DM patients at
higher risk of CAD**

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Diabetes mellitus is a metabolic disorder that also involves the vascular system. It is the most potent risk factor for coronary artery disease (CAD); imposes a great burden on health care worldwide. Many interleukins (IL) play a very important role in the pathogenesis of CAD in which IL-7 is a major regulator of T-cell homeostasis which is concerned in the stimulation of leukocyte-endothelial cell adhesion during inflammatory events. We hypothesized that circulating IL-7 is associated with activation of monocytes and natural killer cells, leading to enhanced production of inflammatory cytokines and chemokines observed in atherosclerosis and acute coronary syndromes. Plasma levels of IL-7, hs-CRP and MCP-1 were measured by an immunoenzymatic ELISA technique. Fifty patients with type 2 DM were divided into two groups: those with higher risk of CAD (n=25) and those without CAD (n=25). Twenty healthy subjects of same age group were included for control.

Plasma IL-7 concentration was significantly correlated with plasma MCP-1 concentration and the correlation remained after adjustment for age and body mass index (BMI). Plasma IL-7 levels also showed significant positive correlations with plasma levels of hs-CRP. We conclude that there is a relationship between circulating IL-7, MCP-1 and hs-CRP, and that IL-7 may play a role in the promotion of clinical instability in coronary artery disease of T2DM by enhancing the expression of MCP-1 in monocytes.

Biography

Awadhesh K. Arya has completed his M.Sc. in Biotechnology from University of Calicut and presently pursuing Ph.D from Department of Medicine, Institute of Medical Sciences, BHU, India from January 2007 under the supervision of Dr. Kamlakar Tripathi, who is renowned scientist and physician in the field of diabetes mellitus. He is working to find out various immunological markers which are responsible for the pathogenesis of diabetes and its complications. In this series he has found out very good results which are under the process of publication. He has published four papers and one book chapter in reputed journals.