

**TITLE**

**Role of IR and IL-12 in endothelial dysfunction and progression of cardiovascular complication in diabetics**

**Kamlakar Tripathi**

Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005, India

The role insulin resistance and IL-12 in acceleration of endothelial dysfunction, well in advance to the development of diabetes is under critics. The present study was aimed to evaluate the soluble endothelial dysfunction markers (EDM) [VCAM-1, ICAM-1] and proinflammatory cytokines (IL-6, IL-12, TNF) in family members of type 2 diabetes mellitus patients and correlate these markers. For this study, we recruited 1968 family members of diabetic patients and 349 had abnormal glucose level. Out of 349, 197 subjects were diagnosed as T2DM as per ADA guidelines and further investigated for cardiovascular abnormalities. 63 T2DM were found to have hsCRP level more than 3.0mg/l and cardiovascular complications. A total of 150 subjects, 50 healthy (H), 50 T2DM (D1) and 50 T2DM with cardiovascular complications (D2) were enrolled for further investigations. The soluble markers were estimated with flowcytometry and ELISA. Biochemical tests were performed with Synchron CX5 autoanalyzer and HOMA calculator v2.2.2 used for insulin resistance calculations. The levels of FBS, PPBS, HbA1c%, blood pressure, IL-12, ICAM-1, VCAM-1, NOx, TNF, IL-6 and lipid profile abnormality were highest in D2 group. Correlation and regression study showed that IL-12 level was dependent on hsCRP, IR, VCAM-1, ICAM-1, TC, LDL and HDL. This study demonstrates that, even at the first time diagnosis of T2DM, subjects with higher levels of insulin resistance and abnormal lipid profile have elevated serum IL-12, endothelial dysfunction markers (EDM) & proinflammatory cytokines. The findings suggest that, increased hsCRP enhance IL-12 level which up-regulate cardiovascular disease progression or vice versa.

**Biography**

Dr. K. Tripathi had completed his MD, DM from IMS, BHU, India. He is also awarded with FRCP from Edinburg. He is the professor of Medicine since last 15 years at IMS, BHU. He has more than 200 research publications in his credentials. He has written many books and book chapters related to diabetes and nephrology. He has been the president of many associations, viz. RSSDI, Indian society of wound healing, Indian Hypertension Society, UP Diabetes association. He is very well known physician of NorthernIndia.