

### Decrease in the number of circulating CD34+VEGFR2+ endothelial progenitor cells in Premature Coronary artery disease patients

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Coronary artery disease (CAD) is a multifactorial disease and its prevalence is very high among young Indians compared to other ethnic groups. Increased susceptibility of Indians to develop premature CAD is not known. Endothelial dysfunction and impairment of its repair can contribute to atherosclerosis and thereby leads to CAD. Circulating endothelial progenitor cells (EPC) are known to be involved in the neovascularization and maintenance of vascular homeostasis, whose impairment may have an important role in the pathogenesis. Various studies have reported the number and role of Circulating EPCs in various diseases including Coronary artery disease. However the number of circulating endothelial progenitor cells in the patients of Premature Coronary artery disease patients especially in Indians is not reported. So we studied the number of circulating endothelial progenitor cells in the patients of Premature Coronary artery disease patients and healthy Controls. A number of 50 Premature CAD patients and 50 Non diabetic control subjects who are  $\leq 50$  years of age were recruited. Blood samples, Demographic data and written informed consent were collected from the subjects. The number CD34+VEGFR2+ endothelial progenitor cells were measured by flow cytometry using FITC-CD34 and PE-VEGFR2 antibodies. Inter and intra assay variation was measured. We observed a strongly significant reduction in the numbers of Circulating endothelial progenitors in the Premature Coronary artery disease patients compared to normal controls. ( $P < 0.001$  (after adjusting for Confounders)). EPC number was also correlated with other risk factors for CAD.

### Biography

Kranthi Vemparala completed his Masters in Biotechnology from Andhra University, Visakhapatnam, INDIA. He currently pursuing PhD and writing his PhD Thesis in the Department of Cardiac Biochemistry, All India Institute of Medical Sciences, New Delhi, INDIA. He is one of the authors in two papers in National and International journals and is one of the authors in oral presentation presented in the ACBI conference in INDIA.