

**TITLE**

**Interaction of gene polymorphisms in diabetic-cad patients from hyderabad- a cosmopolitan city in india**

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**T**ype 2 diabetes mellitus (T2DM) is a major cause of coronary artery disease (CAD) and is responsible for a great deal of morbidity and mortality in Asian Indians. By the year 2025, India will have the largest number of diabetic subjects in the world and due to their unique lipid profile characterized by high triglycerides, low high-density lipoprotein (HDL), and increased lipoprotein levels, they have increased risk of CAD.

Genetic variations underpin the basis for disease susceptibility and are used as biomarkers for identifying risk for complex traits and diseases. We investigated the association of likely candidate genes and their interactions in individuals with T2DM and CAD.

Genomic DNA was isolated from the blood of 520 individuals for identifying 1131T>C polymorphism of apolipoprotein A-V (APOAV), Cholesterol ester transfer protein (CETP) -629C>T polymorphism, I/D polymorphism in the Angiotensin Converting enzyme (ACE) gene and Q192R polymorphism in the *PON1* gene. Analysis was carried out between 160 CAD+T2DM patients, 150 T2DM without CAD and 90 non-diabetic CAD along with 120 ethnically age and sex matched controls.

Results indicate that CC/CT of APOAV, CC of CETP, QR of PON1 and DD of ACE confer a high risk for CAD without T2DM. CETP and APOAV positively interact to increase risk of CAD without T2DM.

This is a pilot study carried out for the first time in a South Indian population. It suggests that gene polymorphisms that confer susceptibility may serve as a panel of biomarkers and thereby, contribute to prevention of these conditions.

**Biography**

Dr. G MALA has completed her Ph.D from Osmania University and she is presently a Senior Technical officer at the prestigious Centre for Cellular and Molecular Biology, Hyderabad India. Presently working on the Analysis of Mitochondrial Genome of individuals with type 2 Diabetic Patients and Cardiovascular Disease. She is also working on the Proteomics of the cell lines from periodontal tissues from Chronic Periodontitis patients and normal individuals. She has published and co-authored papers in Proteomics and Cell biology work in reputed journals.