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Relationship of *PCSK9* and *MTRR* Variants with Myocardial Infarction in Southern Punjab Population of Pakistan

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Abstract

Myocardial infarction (MI) being the most common disease is leading cause of mortality across the world, being a multifactorial disease. It is caused by several environmental and genetic factors. We investigated the association of single nucleotide polymorphism in *PCSK9* and *MTRR* and the effects of different demographic factors like age, gender, education, family history, hypertension, diabetes and smoking habit with Myocardial Infarction in 200 individuals suffering from MI and 155 healthy individuals. The polymerase chain reaction technique was used with TETRA-ARMS primers to investigate the single nucleotide polymorphism, and genotypes of individuals in the *PCSK9* and *MTRR* genes. There is a significant difference in the genotypic frequency of SNP rs2479409 and rs1801394 in patients and normal individuals ($P < 0.05$). Our results also indicate that both polymorphisms of *PCSK9* and *MTRR* were associated with risk of MI in the population of Southern Punjab, Pakistan

