

Peroxisome Proliferator Activated Receptor Gamma (PPAR γ) Pro12Ala Gene Polymorphism and Oxidative Stress in Menopausal Women with Cardiovascular Disease from North Indian Population of Punjab

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KEYWORDS Candidate Gene. Coronary Artery Disease. Expression. LDL Carbonyl Content. Malondialdehyde. Predictor

ABSTRACT The present paper investigated the association of PPAR γ Pro12Ala polymorphism with cardiovascular disease (CVD) and oxidative stress (OS) in menopausal women from North Indian population of Punjab. 265 diagnosed CVD women as cases and 258 women with no evidence of heart disease as controls were screened for lipid profile, serum malondialdehyde (MDA), serum LDL carbonyl protein and serum superoxide dismutase (SOD). Genotyping was performed by ARMS-PCR method. Significant differences ($p < 0.05$) in the levels of hypertension (HTN), lipid profile, MDA, LDL carbonyl protein and SOD were observed between women with and without CVD. However, no significant difference ($p > 0.05$) in the distribution of genotype and allele frequency was observed. Further in logistic regression analysis, hypertension (HTN), high density lipoprotein-cholesterol (HDL-C) and OS variables were significantly correlated with CVD but, Pro12Ala was not observed to be an independent predictor of CVD. The paper depicts PPAR γ (Pro12Ala) polymorphism is not associated with the risk of CVD as such but, significant rise in LDL carbonyl protein in CC homozygotes with CVD implies OS. Both OS and PPAR γ also act as early indicator of cardiovascular events. Further, studies on association between Pro12Ala polymorphism and CVD should be carried out on a larger population of Punjab.