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Association study of two single nucleotide polymorphisms rs10757278 and rs1333049 with atherosclerosis, a case-control study from Iraq

Ahmed Abduljabbar Suleiman1,*, HananYassin Muhsin2 , Rafid A. Abdulkareem3 , Farah Amer Abed4

1) University of Anbar, College of Science, Iraq

2) University of Baghdad, College of Education for Pure Sciences (Ibn- AL-Haitham)

3) Department of Genetic Engineering, Institute of Genetic Engineering and Biotechnology for Post Graduate Studies, University of Baghdad, Baghdad, Iraq

4) Ministry of Science and Technology, Baghdad, Iraq

ABSTRACT Atherosclerosis is one of the most important coronary artery disease (CAD) caused by lipid accumulation, hypertension, smoking, and many other factors such as environmental and genetic factors. It has been recorded that genetic variations in rs10757278 and rs1333049 are correlated with CAD. In the present study, 100 blood samples were collected (50 CAD patients and 50 appeared to be healthy controls), who referred to Ibn-Albytar general hospital/in Bagdad city for heart disease from February to March 2019. Genotyping for two SNPs rs10757278 and rs1333049, were done by Tetra ARMS method. For the rs10757278 polymorphism, the GG genotype verses to AA genotype was significantly associated with the risk of CAD (OR=5.16, 95% CI:1.02-26.0, P=0.047). For the rs10757278 polymorphism, there was no significant associatin between genotypes and the susceptibiulity to CAD. In the present study, the rs10757278 polymorphism showed an association with CAD.

Keywords: rs10757278; rs1333049; Tetra ARMS; CAD; SNPs