ABSTRACT

Background: Inflammation is one of the major components of atherosclerosis, which is the underlying disorder that leads to various diseases including coronary artery disease (CAD). CD14 receptor is an important mediator of inflammatory reactions and its expression is under genetic control. The allelic variant of the CD14 polymorphism located in the promoter region of the CD14 gene is associated with receptor expression and ischemic risk.

Aim of the work: assessment the effect of the CD14 genotype polymorphism on high sensitivity C- reactive protein (hs-CRP) levels in patients with CAD.

Patients and methods: We studied 70 patients, 50 pts aged (53.42±8.09; men) (cases) with angiographically proven CAD, 20 pts aged (48.25±5.66; men) (controls) with normal coronary angiography.CD14 genotypes were determined by a Polymerase Chain Reaction (PCR) Restriction Fragment Length Polymorphism Analysis (RFLP) technique. High sensitivity C- reactive protein (hs-CRP) levels measured by immunoflorocent technique using (immulite). ®

Results. Patients with CAD had a significantly higher frequency of the TT genotype than patients with normal coronaries 42% vs. 20% p value 0.04. TT subjects had increased (hs-CRP) levels (10.8 mg\l) compared with carriers of the C allele (CC (4.8 mg\l) - CT (5.07 mg\l)) p value 0.03. Incidence of MI is high in TT subjects. There as no significant association between genotypes, or allele frequencies, and severity of CAD p value NS.

Conclusion. T homozygotes of this functional polymorphism represent a genetically determined risk factor for the development of CAD.

Keywords: *CD14 receptor; Polymorphism; Coronary artery disease; Inflammation; Atherosclerosis*