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Vascular risk polymorphisms and serum atherogenic biomarkers

Lola Corzo, S Rodriguez, J C Carril, Ivan Tellado and R Cacabelos
EuroEspes Biomedical Research Center, Spain

The increasing involvement of vascular risk in different pathologies has generated a great interest for the development of predictive vascular markers. We evaluated different serum parameters in 192 persons presenting vascular signs: Total cholesterol (TC), HDL-cholesterol (HDL), LDL-cholesterol (LDL), triglycerides (TG), apoA1, apoB, apoE, folate, vitamin B12 (B12), homocysteine, fibrinogen (FB), lipoprotein (a) (LP) and ultrasensitive-PCR (PCR). Vascular-associated genes included: *APOC3*, *APOB*, *APOE*, *CETP*, *LPL*, *NOS3*, *ACE*, *AGT*, *IL1B*, *IL6*, *IL6R*, *TNFA*, *F2*, *F5*, and *MTHFR*. Higher LDL levels were found in patients homozygous for *APOE*-4. Higher TG concentrations and apoB/apoA1 index were observed in patients with the *APOB* T7673T genotype. Subjects presenting *CETP* GG had lower levels of HDL and apoA1. The *ACE* D/D genotype was associated with lower levels of TC and TC/HDL index. The *AGT* T235T genotype was associated with decreased FB and PCR levels. *IL6R* A1510C polymorphism correlated with higher concentrations of B12. *F5* G1691A polymorphism was found in patients with higher levels of HDL, apoA1, TC and LP. Lipid dysfunction-related genotypes (*APOE* allele4, *APOB* T7673T, *CETP* GG) were associated with increased atherogenic and decreased atheroprotective lipid levels. However, *ACE* D/D, *AGT* T235T and *IL6R* A1510C genotypes, involved in endothelial impairment, hypertension and immune response, respectively, were not associated with an atherogenic effect.

Biography

Lola Corzo has completed her Bachelor of Pharmacy from University of Santiago de Compostela, Spain in 1991 and qualified as a Specialist in Medicine Laboratory from Complutense University and Clinical University Hospital in Santiago de Compostela in 1995. She has achieved a certificate of Research Proficiency at the Biochemistry Department of Santiago University Medical School in 1997. She is the Director of Medical Laboratory at the EuroEspes Biomedical Research Center. She has published more than 30 papers in reputed journals and has collaborated as a Reviewer in forefront international journals. Her research work is centered on the study of possible blood biomarkers.

diagnosticdigital@eurospes.com

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