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Association of Lipoprotein Lipase Gene (HindIII rs320) Polymorphisms with Moderate Hypertriglyceridemia Secondary to Metabolic Syndrome

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Abstract : Lipoprotein Lipase (LPL) is a key enzyme for lipid metabolism; its genetic polymorphism can be a candidate for modulating lipids parameters in metabolic syndrome. The objective of the present study was to determine whether lipoproteins lipase polymorphisMetS (LPL-HindIII) could be associated with moderate hypertriglyceridemia (secondary to metabolism syndrome). The polymorphism Hind III (rs320) was assessed by PCR-RFLP in 51 MetS patients and 17 healthy controls from the hospital in Tlemcen. The logistic regression analyses showed no significant association with Hind III genotype and hypertriglyceridemia (TG ≥ 1,5g/l or TG lower treatment) (P=0,455), metabolic syndrome (P=0,455), hypertension (P=0,802) and type 2 diabetes (P=0,144). In terms of plasma biomarkers, although not statistically significant, there was a difference in TG levels (P > 0,05), which was lowest among carriers of the homogenous mutant allele (H-). In this study, there was no association between the rare allele (H-) and disease protection, and between the frequent allele (H+) and disease prevalence (hypertriglyceridemia, metabolic syndrome, hypertension, type 2 diabetes).

Keywords : moderate secondary hypertriglyceridemia, metabolic syndrome, lipids, polymorphism lipoprotein lipase, HindIII(rs320)
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