



Association of lipase lipoprotein polymorphisms with high-density lipoprotein and triglycerides in elderly men

L.M.Q. Araújo¹, M.S. Cendoroglo¹, C.O. Gígek², E.S. Chen² and M. de A.C. Smith²

¹Disciplina de Geriatria e Gerontologia, Universidade Federal de São Paulo, São Paulo, SP, Brasil

²Disciplina de Genética, Universidade Federal de São Paulo, São Paulo, SP, Brasil

Corresponding author: L.M.Q. Araújo
E-mail: lara.mqaraujo@gmail.com

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ABSTRACT. Lipoprotein lipase is essential for triglyceride hydrolysis. The polymorphisms S447X in exon 9 and *Hind*III in intron 8 have been associated with lower triglyceride levels and lower cardiovascular risk in adult men. We examined the association of these lipoprotein lipase polymorphisms with high-density lipoprotein (HDL) and triglyceride levels in elderly men. Blood samples were obtained from 87 elderly men, 48 of whom had cardiovascular disease and 39 (controls) had no history of cardiovascular events. The lipoprotein lipase polymorphisms were analyzed by PCR-RFLP. Allele frequencies were H- = 27.9% and X = 21.5%. There were no significant differences in allele frequencies or blood lipid levels between cardiovascular disease and control groups. However, the X allele was associated with a lower triglyceride/HDL ratio, 2.30 vs 3.02 for X allele absent ($P = 0.03$); the H-X haplotype was associated with lower triglyceride levels compared to the H+S haplotype (1.22 vs 1.58 mM, respectively) and a lower triglyceride/HDL ratio (2.29 vs 3.26, respectively). The X allele and H-X haplotype were associated with lower triglyceride/HDL ratios in these elderly men, independent of the history of cardiovascular events.

Key words: Lipoprotein lipase; Polymorphism; Triglycerides; HDL cholesterol; Elderly