Abstract

Coron Artery Dis. 2008 May;19(3):125-131.

Lipoprotein(a) is associated with coronary heart disease independent of metabolic syndrome.

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AIM: To assess (i) the association between lipoprotein(a) [Lp(a)] with the likelihood of coronary heart disease and metabolic syndrome (MS) and (ii) its covariates in Turkish adults.

METHODS: Cross-sectional evaluation of 1309 adults, who had serum Lp(a) determinations by Behring nephelometry, and followed for a mean 1.0 year. MS was defined by ATPIII criteria modified for male abdominal obesity.

RESULTS: Mean age of the sample was 56.8+/-11.3 years. After adjustment for sex, age, and smoking status, log-transformed Lp(a) levels were associated significantly with coronary heart disease likelihood in both sexes combined [odds ratio: 1.53 (95% confidence interval: 1.06; 2.20)]. This association persisted after additional adjustment for MS [odds ratio: 1.57 (95% confidence interval: 1.09; 2.26)]. The Lp(a) mid-tertile (5-17 mg/dl), accompanied by significantly lower serum triglycerides than the two remaining tertiles, was inversely associated significantly with MS in either sex; in women, this association was independent of waist circumference. In a linear regression comprising seven variables, excepting total cholesterol, only gamma-glutamyltransferase in women (P=0.002) and waist circumference (P=0.057) in men were inverse covariates of modest magnitude of Lp(a).

CONCLUSION: Coronary heart disease likelihood, significantly associated with Lp(a) concentrations, is independent of MS and insulin resistance. Suggestive evidence was provided that intermediary Lp(a) concentrations, when accompanied by the presence of MS, could accelerate progression of vascular disease, especially in women.

PMID: 18418227

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