

Abstract

Lipids Health Dis. 2007 Oct 2;6(1):26

Lipoprotein(a): an independent risk factor for ischemic heart disease that is dependent on triglycerides in subjects with Type 2 diabetes mellitus.

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BACKGROUND: Lipoprotein(a) is an independent risk factor for Ischaemic Heart Disease (IHD) in the general population. There are conflicting reports in the extent of its association with IHD among subjects with Type 2 diabetes mellitus (T2DM). The aim was to determine the concentration of Lp(a) and its relationship with other lipids parameters among Omani T2DM subjects with and without IHD.

METHODS: An over-night fasting blood sample from 221 T2DM subjects (86 females and 135 males) and 156 non-diabetics (69 females and 87 males) aged 30-70 years (as control) was taken for lipid profile studies.

RESULTS: Lp(a) was significantly lower ($p=0.012$) among T2DM subjects $0.123(1.12)$ g/L compared to non-diabetics $0.246(1.18)$ g/L, irrespective of gender. A significant correlation (Spearman correlation, $P=0.047$) was revealed between Lp(a) and IHD among Omani T2DM subjects. The proportions of T2DM subjects with IHD and an Lp(a) >0.3 g/L was higher compared to T2DM without IHD irrespective of gender, for women 42% vs. 27% and for men 17.5 vs. 8%, respectively. A significant negative correlation existed between Lp(a) and triglycerides ($r=0.41$, $P=0.002$) among T2DM subjects. In contrast, a significant positive correlation existed between Lp(a) and LDL-chol among the non-diabetic subjects. Women had significantly higher Lp(a) concentration compared to men (0.30 Vs. 0.16 g/L, $P<0.0001$) irrespective of the diabetic status.

CONCLUSION: Lp(a) is an independent risk factor for IHD among Omani T2DM subjects. Lp(a) concentration was significantly lower and negatively correlated with triglycerides among Omani diabetic compared to non-diabetic subjects.

PMID: 17908332