Associations between self-reported anxiety and serum lipid, lipoprotein concentrations and platelets in healthy men

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Abstract

Objective: High blood cholesterol is one of the significant risk factors for cardiovascular diseases. Increased cholesterol levels contribute to atherosclerosis, which causes platelet aggregation and increases the risk of blood clots in the arteries. Previous research has investigated relationships of elevated serum cholesterol with anxiety disorders. The current study aims to assess levels of serum lipid, lipoprotein concentrations and platelets in individuals with high and low anxiety.

Methods: Of a total of 1,038 subjects, 142 healthy men were randomly selected. All participants were asked to complete the Spielberger’s self-reported state-trait anxiety inventory (STAI). Participants with scores higher than 46 and lower than 34 were included in the high anxiety group (n=28) and low anxiety group (n=69), respectively. Levels of fasting serum lipids, including total cholesterol, low-density lipoprotein (LDL), high-density lipoprotein (HDL), triglycerides and platelets were compared between the two groups. The data were analyzed using independent samples t-test and correlation coefficient test.

Results: The levels of total cholesterol and LDL cholesterol were significantly higher in the high anxiety group (P<0.001). There were no significant differences in the levels of triglycerides, HDL cholesterol, and platelets.

Conclusion: High anxiety increases total cholesterol and LDL which are risk factors for cardiovascular diseases.