Thrombophilia in patients with hypercholesterolemia

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摘要

Abstract

To investigate a possible interrelationship between hypercholesterolemia and the coagulation and fibrinolytic system, the Cardiovascular Disease Risk Factor Two-Township Study in Taiwan was undertaken as a longitudinal prospective study focusing on the evolution of cardiovascular disease risk factors, with an emphasis on hemostatic factors. Hemostatic parameters measured in this study included prothrombin time (PT), activated partial thromboplastin time (APTT), fibrinogen, factor VIIc, factor VIIIc, antithrombin III, and plasminogen. Subjects of both sexes with hypercholesterolemia (> 6.2 mmol/L) also had significant elevations of diastolic blood pressure, plasma glucose, triglycerides, fibrinogen, and factor VIIc and reduced PT and APTT compared with subjects with lower cholesterol. The hypercholesterolemic women additionally had significant elevations of systolic blood pressure and factor VIIIc. Levels of the anticoagulant factors, antithrombin III and plasminogen, were also higher in both hypercholesterolemic men and women. In men, only factor VIIIc had no statistically significant elevation. In women, only PT showed no statistical difference. Established coronary risk factors such as fibrinogen and factor VIIc showed remarkable elevations in patients of both sexes. Using Pearson correlation and multiple regression, the most significant parameter related to cholesterol level was factor VIIc. The present results show that hemostatic abnormalities do exist in patients with hypercholesterolemia, and this thrombophilic phenomenon sheds further light on the study of higher cardiovascular mortality in these subjects.

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