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The Expression of Autoantibody Against Oxidized LDL in Patients with Acute Myocardial Infarction

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ABTRACT

Oxidized low density lipoprotein (ox-LDL) is believed to play a key role in the progression of atherosclerosis. It has been proposed that oxidative modification of LDL is essential for rapid accumulation of LDL in macrophages and the formation of foam cells. LDL extracted from atherosclerotic lesions showed similar biochemical and immunoreactive properties to those of in vitro oxidized LDL. The oxidatively modified LDL induces immunogenic epitopes in LDL molecules, and the presence of antibodies against ox-LDL has been reported in human sera. The aim of this study was to examine the expression of autoantibody against 2 different sources of oxidized LDL, in patients with early stage acute myocardial infarction (AMI) and in normal subjects, and the other purpose was to study the correlation of this autoantibody expression in AMI patients and in normal subjects. The results showed that the titers of anti-oxidized LDL antibody against oxidized LDL purified from high-LDL serum in 30 patients with AMI were 135% higher than those in normal subjects. But the titers of antibody in the same AMI patients were only 52% higher than those in normal subjects when normal LDL serum was used. The oxidized-LDL antibody titers in a total of 41 AMI patients were 195% higher, and those in 25 high triglyceride subjects and 27 high-LDL subjects were 50% and 50% higher, respectively, than those in normal subjects. We conclude that anti-oxidized LDL antibody may play an important role in the pathogenesis of acute myocardial infarction, and also that it may be important to choose the source of oxidized-LDL in the assay of autoantibody against oxidized LDL. (N. Taipei J. Med. 2000; 2:239-244)

INTRODUCTION

The oxidation of low density lipoprotein (LDL) may play an important role in atherogenesis.[1] Oxidized LDL (ox-LDL) and certain chemically modified LDL have the ability to bind to scavenger receptors, which

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