Severe Coronary Vasospasm During an Acute Myocardial Infarction with Cardiogenic Shock

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Abstract

Coronary artery vasospasm can cause a transient, abrupt, marked decrease in the diameter of an epicardial coronary artery. Various mechanisms have been reported, including vasoconstrictor substances, pharmacologic stimuli, and neurohumoral effects. Spasm usually develops at the site of subcritical or critical stenosis, but it may also occur in angiographically normal arteries, particularly in Asian patients. There appears to be a higher prevalence of coronary spasm in patients with acute coronary syndrome (20% to 38%) than in those with stable angina (<6%). We report a case of coronary artery spasm of the non-infarct-related arteries during an acute myocardial infarction with cardiogenic shock. This possibility should be kept in mind so that it can be properly managed if present. (J Intern Med Taiwan 2005; 16: 129-133)

Key Words: Acute myocardial infarction, Cardiogenic shock, Coronary artery vasospasm

Introduction

Coronary artery vasospasm is defined as total or near-total occlusion of a vessel that is reversible, or more specifically, it is a significant (>50%) transient narrowing in either normal or diseased arterial segment reversible with isosorbide dinitrate. Coronary vasospasm of infarct-related arteries during an acute myocardial infarction (AMI) has been postulated to occur at the site of intraplaque or mural thrombosis because of local vascular hyperreactivity to stimuli of constriction such as thromboxane A2, serotonin, and thrombin. Severe spasm of a non-infarct-related coronary artery, however, has rarely been reported.

Case Report

An 85-year-old male who had history of hypertension, cerebrovascular accident, and coronary...