High Lipoprotein (a) In A Patient With Coronary Artery Disease And Venous Thromboembolism
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Introduction

Lipoprotein (a) consists of a cholesterol-laden LDL-like moiety covalently linked to apo (a) which contains variable numbers of plasminogen-like kringle IV repeats. This structural homology may lead to increased risk of atherosclerosis (due to the LDL component) as well as a predisposition towards a hypercoagulable state (due to the apo(a)). We report an unusual case of a female with severe coronary artery disease (CAD), pulmonary embolism (PE) with very high Lp(a) level.

Case Description

A 54-year-old African American female with a history of systemic hypertension, dyslipidemia, asthma, and TIA at age 27 presented to the ER with intermittent chest pain for 2 days described by her as a "mack truck on my chest". ECG showed T-wave inversions in anterolateral leads and her troponin-I level was 0.14 ng/ml. Her total cholesterol was 248 mg/dL, LDL 179.1 mg/dL, HDL 55.3 mg/dL and triglyceride 85 mg/dL. Lp(a) level was 239.7 nmol/L, obtained using the immunoturbidimetric method with no apoB crossreactivity up to 200 mg/dl apoB. Coronary angiography showed 99% occlusion in left main, 90% in proximal circumflex and 90% in proximal left anterior descending artery (LAD). She underwent triple vessel CABG and was discharged home (on statin therapy). Interestingly, patient's mother also had multivessel CAD requiring CABG at age 54.

Discussion

Lp(a) value greater than 75 nmol/L is considered a risk factor for cardiovascular disease in Caucasians based on Framingham data. There are some studies indicating an association between high Lp(a) and venous thromboembolism. Despite significant reduction in LDL, she continued to have worsening CAD and, in addition, developed unprovoked PE which suggests significant residual risk with high Lp(a). In conclusion, diagnosing and treating high Lp(a) could be valuable in certain patients.

Disclosures

All authors report no financial disclosures.