ADVANCED LIPID TESTING: MARKERS FOR ATHEROSCLEROTIC DISEASE
Nidhi Saini DO, and Kenneth Bescak MD, FACC
Ochsner Clinic Foundation, New Orleans, LA
Heart and Vascular Center of Northern Arizona, Cottonwood AZ

Introduction
Advance lipid testing can be beneficial in the setting of atherosclerotic disease. It can guide therapeutic options and reduce recurrence.

Clinical Case
A 38-year-old male presents to emergency department with severe left LE pain. Pain was located mid-thigh and radiating down to his foot. Denies history of travel, surgery or trauma. Past medical history is significant for DVT seven years ago; that was attributed to traveling. He was treated with warfarin for six months. On physical exam left LE is pulseless and cool to touch. Capillary refill was four seconds on the left and two seconds on the right. Posterior tibial and dorsalis pedis pulses not audible via doppler. EKG showed no atrial fibrillation. Echocardiogram was negative. STAT CTA run off showed, thromboembolism occlusion of the left common femoral artery to mid left superficial femoral artery.

Patient was taken emergently for angiography of the left superficial femoral artery with infusion of tissue plasminogen activator and thromboembolism. Post procedure, capillary refill in the left foot improved. However, patient had sudden onset of pain and numbness in the toes. He was taken to the OR emergently for open thrombectomy and left common femoral artery to left superficial femoral artery bypass.

Hypercoagulable workup including Homocysteine, Protein C, Protein S, Antithrombin III, Factor V Leiden, Lupus anticoagulant, Cardiolipin antibody were negative. He was placed on warfarin and sent to hematology for further evaluation post discharge. Blood sample was obtained at hematology follow up was noted to have lipemic appearance. A lipid profile was obtained and patient was sent for lipidology evaluation.

During lipidology evaluation his diet was noted to be high in saturated fats, sugar, and excess calorie intake. His only medication was Coumadin. BMI 38.6, no xanthelasma on physical exam. Cholesterol 447 mg/dl, Triglycerides 2821 mg/dl and LDL not calculated. Dietary modification and calorie restriction along with increasing physical activity were discussed with the patient. Omega-3-acid Ethyl Esters 400mg, Fenofibric acid 135 mg and rosuvastatin 20 mg daily were initiated.

Follow up laboratory data showed:
Advance Lipid testing was significant for, Lp (a) 70 (0-30) and Apo E genotype 2/3

At his four-month follow up, lipid panel showed triglycerides improved to 123 mg/dl from 2821mg/dl, HDL increased to 42mg/dl from 26mg/dl and LDL was 90mg/dl. He had no new vascular symptoms.

Conclusion
Lipoprotein (a) is a lipoprotein similar to LDL, but contains an addition apolipoprotein apo(a). LDL particle promote atherosclerosis. Apolipoprotein(a) particle interfere with fibrinolysis and increase risk of thrombosis. Overall, has a 1.5-3.0- fold increase for CAD

Financial disclosure: None