Simultaneous Spontaneous Superior Mesenteric Artery, Pulmonary Artery, and Left Ventricle Thrombosis: Multisite Thrombosis Presented in One

Prach Kosarussawadee¹, Pitiphong Kijrattanakul²
Sarawut Siwamogsatham¹

¹Division of Hospital and Ambulatory Medicine, Department of Medicine, Chulalongkorn University and King Chulalongkorn Memorial Hospital, Bangkok 10330, Thailand

Superior mesenteric artery (SMA) is considered as a usual site of vessel for arterial thrombosis to occur. Moreover, SMA thrombosis emerged simultaneously with other affected sites are deemed uncommon. Further comprehensive evaluation for hypercoagulable state is recommended.

We presented our case of experienced acute MVA thrombosis combined with acute pulmonary artery (PA) thrombosis presented with dyspnea and abdominal pain. Left ventricle (LV) thrombus was incidentally detected by CT pulmonary angiogram. Further investigation and management of this interesting case could be discussed in details.

A 40 year-old male with no known underlying disease but history of brief amphetamine use as creational agent, firstly presented outside hospital with acute dyspnea and hypoxemia with stable hemodynamic. He denied chest pain, orthopnea, paroxysmal nocturnal dyspnea or cough. He underwent CT pulmonary angiogram thereafter. Thrombi at left lower segmental branches of pulmonary artery were revealed without other evidences of chronic pulmonary hypertension. In addition, single thrombus in left ventricle was also incidentally visualized. No clinical manifestation of venous thrombosis of lower extremities was appreciated. Intravenous unfractionated heparin (UHF) was administered as soon as confirmed diagnosis of PA thrombosis.

While waiting for therapeutic level of UHF attain, he developed sudden onset of epigastrium pain and was transferred to our institution for proper management. As soon as reassessment of his condition, he underwent abdominal CT scan with contrast enhancing technique. Thrombus in SMA was revealed. Anticoagulant was rapidly optimized to therapeutic target. Despite adequate anticoagulation, clinical of mesenteric ischemia was ongoing and deteriorated. Therefore, he underwent small intestinal resection of involved segment and end to end anastomosis.

Heparin was resumed postoperatively as soon as contraindication was ceased. Transthoracic echocardiogram proved 1 centimeter in diameter of non-mobile thrombus in LV with mild degree of impaired LV systolic function. The gross pathology of resected bowl was carefully reviewed and in situ thrombosis of mesenteric artery was confirmed. According to multiple sites of thrombosis, hypercoagulable state was suspected and extensive evaluations were done. The results were all negative for myelo/lymphoproliferative disorder, occult malignancy, paroxysmal nocturnal hemoglobinuris, antiphospholipid syndrome, and others (Antithrombin III, protein C and protein S deficiency, Factor V Leiden mutation). He finally discharged with stable condition with anticoagulant for at least 6 months or until resolved LV thrombus.

Multisite arterial thrombosis is an uncommon condition. Extensive evaluation for hypercoagulable state is warranted. The proper duration of anticoagulation treatment depends on the specific etiology and the most influential site of thrombosis.

Keywords: Superior mesenteric artery thrombosis, Pulmonary artery thrombosis, Left ventricular thrombus, Multisite arterial thrombosis