Thoracic aortic mobile thrombus (TAMT) is a rare yet significant potential source of peripheral arterial embolism. Detection of these lesions has increased due to the routine usage of pre- and intraoperative TEE. Etiology of TAMT remains unclear, however a multifactorial model including coagulation disorders, exogenous steroid/hormone usage, and previous aortic atherosclerotic disease has been proposed. We present a case of TAMT causing peripheral embolization and critical limb ischemia diagnosed with TEE and successfully treated with systemic anticoagulation.

Patient CW is a 58 year old female with a past medical history of hypertension, paroxysmal atrial fibrillation, asthma and obesity who presented to an outside hospital with complaints of shortness of breath and palpitations. The patient had previously been rate controlled with metoprolol and anticoagulated with dabigatran. EKG in the ED showed atrial fibrillation with rapid ventricular response. Intravenous beta blockade was initiated and the patient responded appropriately. Approximately 4 hours after arrival to the ED the patient began complaining of right lower extremity pain. Dorsalis pedis and posterior tibial pulses were absent in the affected limb, and the patient was transferred to our institution. Upon arrival the patient was diagnosed with compartment syndrome and taken to the OR for emergent fasciotomy with open embolectomy. Intraoperatively clot was removed from the superficial femoral artery, restoring perfusion to the distal right lower extremity. TEE examination was performed to rule out a cardiac source of thrombus. Cardiac examination was unremarkable except for left ventricular apical hypokinesis; no clot was found in the cardiac chambers. Upon examination of the descending aorta, a 3.7 x 1.2 x 1.1cm mobile, pedunculated thrombus was discovered in the thoracic aorta at the aortic isthmus. Intraoperative cardiothoracic surgical consult was obtained; the decision was made to avoid surgical excision and proceed with systemic anticoagulation with an intravenous heparin infusion.

Subsequent hospital course was uncomplicated. A TTE was obtained 3 days after surgery which showed resolution of the patient’s wall motion abnormalities and evidence of persistent TAMT. The patient was transitioned to warfarin and discharged 10 days after surgery. Follow up CT angiogram 6 weeks after surgery showed no evidence of aortic thrombus.

In this case systemic anticoagulation resulted in resolution of TAMT, however a consensus on treatment of these lesions remains undetermined. Treatment options range from conservative therapies as detailed above to more aggressive surgical techniques such as open aortic thrombectomy. Endovascular stent grafting of the aorta to exclude the thrombus has also been explored with promising results.