ACUTE ABDOMINAL AORTIC OCCLUSION IN A SEEMINGLY NORMAL AORTA

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Introduction :

Acute abdominal aortic occlusion is an uncommon occurrence that has significant morbidity and mortality. Over 80% of all peripheral and visceral emboli come from cardiogenic sources such as atrial fibrillation, myocardial infarction, endocarditis and prosthetic heart valves. Non-cardiac causes can include aortic pathologies such as aneurysms, dissections, severe atherosclerosis, or traumatic lesions. Etiologies such as atherosclerosis have a chronic course that takes years to develop and allow the body to form collateral circulations. We present a rare case of a patient with acute complete occlusion of the infrarenal abdominal aorta with no preexisting heart conditions, aortic pathologies, or presence of collateral circulations.

Case Description:

A 47-year-old female with past history of type 1 diabetes mellitus, active smoking, heavy alcohol abuse presented to the ER with 7 days of uncontrolled blood sugar. Upon initial evaluation, the patient was found to be hyperglycemic with glucose of 442 mg/dL and in diabetic ketoacidosis.

Vital signs were as follows: blood pressure of 101/68 mmHg, pulse of 102 bpm, temperature of 97.4 °F, with respiratory rate of 23/min, and oxygen saturation of 96% on room air.

Throughout the hospital course, the patient was found to have gradual worsening dyspnea. CT pulmonary angiogram (Figure 1) ruled out pulmonary embolism, however, incidentally a mural thrombus in the descending thoracic aorta was found and heparin was started.

Figures:

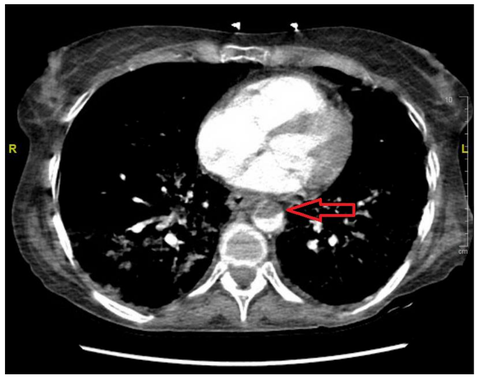

Figure 1: Computed tomography pulmonary angiography showing a partially obstructing mural thrombus in the descending thoracic aorta.

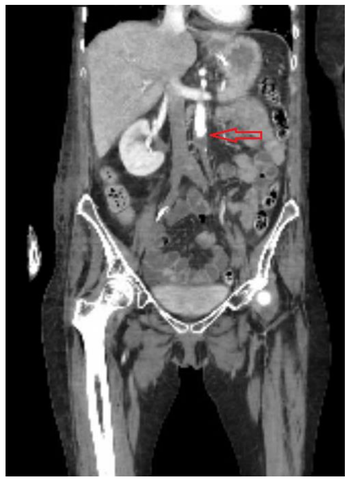

Figure 2: Computed tomography angiography of the abdomen showing complete occlusion of the distal abdominal aorta just proximal to the bifurcation.

Two days later, the patient was found to have cool and mottled extremities with absent bilateral dorsalis pedis pulses. CT angiogram of the abdomen (Figure 2) showed bilateral lower limb ischemia secondary to complete occlusion of the distal abdominal aorta just proximal to the bifurcation. The previous thoracic aortic thrombus was no longer present, suggesting possibility of embolization to the abdominal aorta. The patient had an emergent thrombectomy of bilateral femoral arteries, femoral iliac arteries, and aorta with bilateral lower extremity compartment fasciotomies.

One week later, the patient had a complicated course of continued lower limb ischemia despite adequate anticoagulation which necessitated bilateral lower limb amputation. She developed recurrent septic shock and rhabdomyolysis which caused acute kidney injury, requiring hemodialysis. 44 days post-op, the patient was found to be hypotensive and pulseless, and unfortunately expired.

Discussion:

Acute abdominal aortic occlusion in a seemingly normal aorta is a rare clinical finding associated with a high incidence of complications and has substantial mortality. Due to the rarity of this disease, there is currently little available evidence to guide treatment of this condition. We hope by reporting our case, we can contribute to the available literature and shed some light into the pathogenesis of this disease.

References:

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