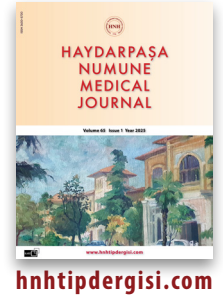


CASE REPORT



Free Floating Aortic Thrombus

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Abstract

Parietal thrombus of the aorta can occur in any part of it and can be one of the main causes of distal embolism. Usually, their genesis is due to the presence of an undermined atherosclerotic plaque, on the basis of which adhesion of thrombotic masses occurs. Intimate dissection can also be a prognostic factor for aortic thrombosis. A 48-year-old female patient with a history of cancer was admitted to the general surgery clinic on 03.01.2022 for surgery because metastatic cancer was detected in the large intestine. The patient had abdominal pain for one month. Abdominal CT angio revealed FFT in the descending aorta. The general condition of the patient, who was in the postoperative period of hemi-colectomy, was good, and she was oriented. Many authors prefer anticoagulant therapy in combination with distal embolectomy or thrombectomy of the affected part of the aorta. Others find it appropriate to use only anticoagulant therapy, excluding any surgical intervention. The best strategy was defined in a meta-analysis by Z. Fayad, who argued that anticoagulant therapy should be started at the time of diagnosis, and he stated that surgical treatment is acceptable in patients with a low risk of postoperative complications and one or more presences.

Keywords: Computed tomography; descending aorta; free-floating thrombosis; medical treatment.

Idiopathic free-floating thrombus (FFT) of the aorta is a rare condition but can lead to very poor outcomes. Parietal thrombus of the aorta can occur anywhere and is one of the main causes of distal embolism^[1]. Most often, their formation is caused by the presence of a weakened atherosclerotic plaque, to which adhesion of thrombotic masses occurs^[2]. Intimal dissection may also be a prognostic factor for thrombus formation in the aorta. A review of foreign medical literature showed only isolated cases of the description of floating thrombi in the distal part of the descending aorta^[3]. This is because the blood flow rate in the descending aorta increases.

Free-floating thrombus formation, especially in the distal ascending aorta, increases the risk of stroke as well as distal peripheral embolization^[4]. In this case report, we wanted to describe a patient with free-floating thrombosis in the descending aorta who was followed by us.

Case Report

A 48-year-old female patient with a history of cancer (colon sarcoma) applied to the general surgery clinic for surgery on 03.01.2022 because metastatic cancer was detected in the large intestine. The patient had had abdominal

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Figure 1. Abdominal CT angiography. Free floating thrombus in the descending aorta with black and white arrow.

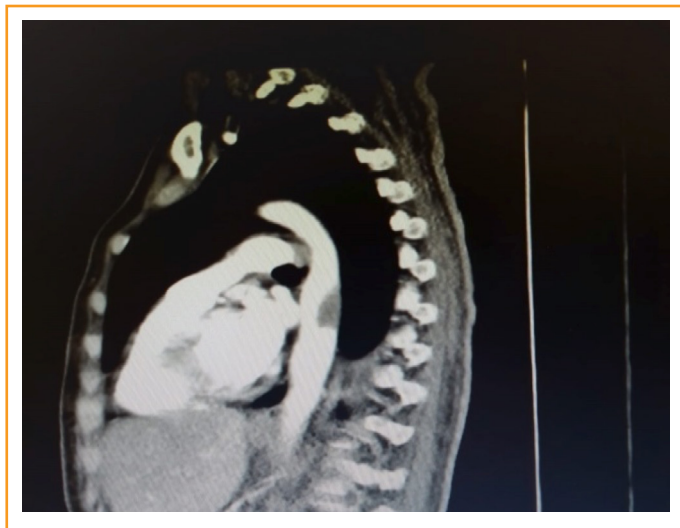


Figure 2. Abdominal CT angiography. Free-floating thrombus in the descending aorta on lateral projection image.

pain for a month. The patient, who had a known history of hypertension, diabetes mellitus, and smoking, was consulted to the Cardiovascular Surgery Clinic due to the discoloration of the first toe of the left foot in the postoperative period. Abdominal CT angiography revealed FFT in the descending aorta (Figs. 1-3)^[1]. The general condition of the patient who underwent postoperative hemicolectomy was good. She had mild pain at the umbilical level where the stomy was placed. On physical examination, distal pulses in the lower extremities were palpable, and there were no ischemic findings, motor or sensory deficits. It was decided to follow the patient with

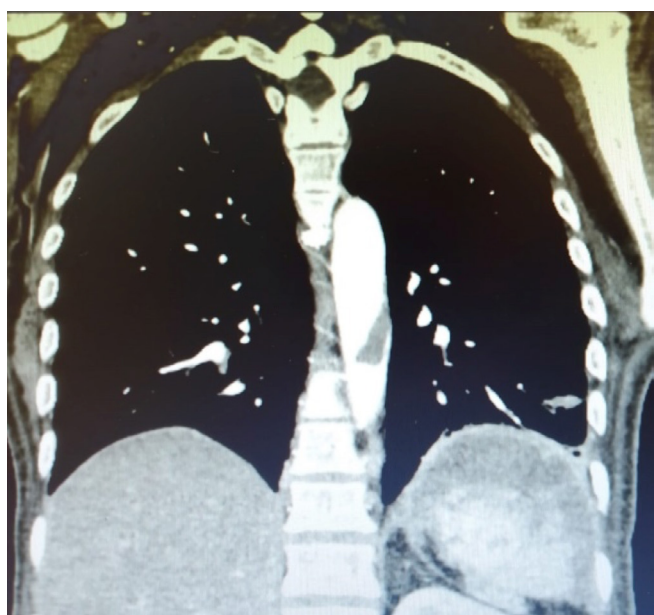


Figure 3. Abdominal CT angiography. Free-floating thrombus in the descending aorta in anterior-posterior projection.

6 months of treatment with low molecular weight heparin (enoxaparin 0.6 2x1 sc)^[2]. Since distal thrombosis was not detected on CT angiography, thrombectomy was not considered for the patient^[3].

Discussion

This clinical observation is characteristic of an extremely rare entity in cardiovascular surgery: free-floating thrombus in the descending aorta. A floating aortic thrombus is often an incidental finding, despite the multitude of modern investigative methods (MSCT, MRI, angiography, etc.) that make it easier to confirm this diagnosis^[4]. Free-floating or mural aortic thrombi are rare pathologies. Small thrombi may be clinically asymptomatic. Sometimes, the thrombus may detach from its location and result in visceral organ and peripheral extremity malperfusion complications^[5]. As seen in our case, it should be kept in mind that mural or free-floating thrombus may be present anywhere in the aorta despite the absence of malperfusion complications.

Despite being a very serious cause of mortality and morbidity, there is no consensus on the treatment of aortic thrombi. It depends on the location of the thrombus, comorbid risk factors present in the patient, and physician preference. In other literature, there are studies reporting successful results with anticoagulant therapy alone without surgical treatment in patients without peripheral embolism^[6,7]. Anticoagulant and thrombolytic therapy alone may be

considered in patients with unstable hemodynamic status. Thrombolytic therapy is not recommended in patients with a high risk of bleeding. Also, the thrombus in the aorta may not be completely cleared.

Surgery or invasive intervention may need to be considered in patients with morphologically mobile, large thrombi and a history of recurrent embolism. Due to the small number of observations in the world literature, there are no clear tactics for the treatment of patients with thrombi in the unchanged or slightly modified aortic wall. Many authors prefer anticoagulant therapy in combination with distal embolectomy or thrombectomy of the affected part of the aorta. Others find it appropriate to use only anticoagulant therapy, excluding any surgical intervention.

The best strategy was identified in a meta-analysis by Z. Fayad, who advocated that anticoagulant therapy should be started at the time of diagnosis and that surgical treatment is acceptable in patients with a low risk of postoperative complications and those with one or more complications.

In conclusion, the presence of aortic mural, free-floating thrombus is an important cause of mortality and morbidity, especially in young, heavy smokers with recurrent embolic episodes. Before treatment options (anticoagulant or thrombolytic therapy, surgery, and endovascular stent implantation) are applied, comorbidity and general condition of the patient should be evaluated.

Informed Consent: The patient gives consent to the use of information about him in relation to the above topic for the purpose of display in a journal article or mature presentation or for the presentation of a thesis.

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