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Endovascular treatment of acute thromboembolic occlusion of distal aorta

Distal aort akut tromboembolik oklüzyonunun endovasküler tedavisi

Mustafa Topuz¹, Nihat Kalay², Fehmi Bireciklioğlu², Uğur Karabıyık²

Institution where the research was done: Medicine Faculty of Erciyes University, Kayseri, Turkey

Author Affiliations:

¹Department of Cardiology, Adana Numune Training and Research Hospital, Adana, Turkey ²Department of Cardiology, Medicine Faculty of Erciyes University, Kayseri, Turkey

A 78-year-old female was admitted to our clinic with shortness of breath and fatigue. Her physical examination revealed the signs of decompensated heart failure. She underwent primary percutaneous coronary intervention (PCI) to the left anterior descending artery due to a history of acute anterior myocardial infarction (MI) three weeks ago. Transthoracic echocardiography (TTE) showed a dilated left ventricle (LV) with severely reduced systolic function with an apical thrombus diameter with 1.6×2.1 cm (Figure 1a). Based on the clinical signs and TTE findings, the diagnosis of decompensated systolic heart failure was made and standard heart failure therapy was started. Approximately eight hours later, the patient became symptomatic about bilateral lower limb pain, paralysis, and low back pain and she developed severe acute respiratory distress with oxygen desaturation to mid-70s on room air. Her femoral pulses were both non-palpable, the bilateral lower extremities were cold, and the left foot was cyanotic. Doppler ultrasound was unable to detect any pulse at the bilateral common femoral arteries, and the abdominal contrasted computed tomography (CT) which was subsequently conducted revealed a huge thrombus at the distal abdominal aorta (Figure 1b). Her respiratory status declined requiring intensive care unit admission, despite 15 L non-rebreather mask, and the patient had intubation and mechanical ventilation. After discussion with our cardiac surgeons, we decided to treat the

patient with endovascular approach to restore the antegrade flow to the distal vessels quickly. A 7-F introducer was inserted into the left brachial artery. Diagnostic angiography showed a large thrombus in the distal abdominal aorta without renal and mesenteric

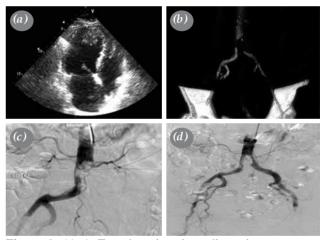


Figure 1. (a) A Transthoracic echocardiography appearance of the left ventricle apical thrombus. (b) Contrast-enhanced computed tomography of the distal aorta showing luminal filling defect within the aortoiliac bifurcation. (c) An angiographic image in an anteroposterior view showing the totally occluded and left common iliac artery and subtotally occluded right common iliac artery with the thrombus. (d) Final angiogram with satisfactory outcomes.

Correspondence: Mustafa Topuz, MD. Adana Numune Eğitim ve Araştırma Hastanesi Kardiyoloji Kliniği, 01260 Yüreğir, Adana, Turkey. Tel: +90 322 - 455 90 00 e-mail: topuzm46@gmail.com

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arterial involvement (Figure 1c). After administration of local tissue plasminogen activator (t-PA) to the thrombus site, we decided to maintain the procedure with stenting due to insufficient distal flow. After wiring the right and left common iliac artery (CIA) with 0.035-inch angled Glidewires (Terumo Medical Corp.,, Somerset, NJ, USA), two peripheral selfexpandable stents (7×80 mm and 8×80 mm Polaris-pp, Qualimed innovative Germany) were placed to the aortic bifurcation simultaneously. We were unable to perform the final kissing balloon inflation due to the possibility of distal embolization of the thrombus which was compressed between the two stents. Repeated angiography showed normal flow patency of both right and left CIA (Figure 1d). The patient was extubated on the first day after the endovascular procedure and discharged with warfarin 5 mg on the fifth day of hospitalization without any complications.

Acute aortic occlusion is a catastrophic condition with high morbidity and mortality rates and often the most challenging vascular pathology to treat which requires an urgent therapeutic intervention.^[1] Endovascular treatment strategy can be used to restore the antegrade flow to the distal vessels quickly, relieve symptoms, and further prevent loss of territory limb.^[2,3] Although open surgery, embolectomy, and thrombolytic infusion are other alternatives, these group patients usually have a lot of comorbidities and high risk for general anesthesia and surgery as well as bleeding complications. Percutaneous intervention can be used in the treatment of such patients as a bail-out procedure.

Declaration of conflicting interests

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