

Use of the STABILISE technique in the management of subacute type B aortic dissection

Alice Lopes, MD,^{a,b,c} Ryan Gouveia e Melo, MD,^{a,b,c} Ruy Fernandes e Fernandes, MD,^{a,b,c} and Luís Mendes Pedro, PhD,^{a,b,c} Lisbon, Portugal

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The STABILISE (stent-assisted balloon-induced intimal disruption and relamination in aortic dissection repair) concept aims to restore the aortic uniluminal anatomy and effectively treat malperfusion syndromes. Despite its novelty, multiple single-center series have demonstrated encouraging early outcomes and positive mid-term aortic remodeling.¹⁻⁵

We present the case of a 49-year-old man with a medical history significant for severe arterial hypertension who was admitted for type B aortic dissection extending to the right common and left external iliac arteries (Video 1). His systolic blood pressure at admission was 210 mm Hg. Computed tomography angiography demonstrated a patent true lumen (TL) and false lumen (FL). The splenic artery and left renal artery (LRA) originated from the FL, the right renal artery emerged from both lumens, and the remaining visceral arteries originated from the TL. The patient was treated medically initially; however, at 13 days after his presentation, he developed acute kidney injury associated with refractory hypertension and was then considered to have complicated type B aortic dissection.

A staged hybrid intervention with zone 2 debranching, followed by a STABILISE procedure, was performed (Video 1). A hydrophilic guidewire was introduced through the right common femoral artery to the ascending aorta. Catheterization of the TL was confirmed by small contrast injections at different levels. After exchange for a stiff guidewire, the FL and LRA were catheterized from the left common femoral artery, and a catheter was left in place to assist with subsequent catheterization through the TL.

A Zenith TX2 stent-graft (Cook Medical, Bloomington, Ind), with planned 10% oversizing, was deployed in the thoracic aorta, followed by two Zenith Dissection stents (Cook Medical) landing 5 cm below the renal arteries.

The LRA was then catheterized from the TL through the stent struts, and a Flexor sheath was left in place to secure the patency of the LRA during aortic stent-graft and bare stent dilatation, performed with compliant and noncompliant balloons, respectively. After dilation, a 7 × 32-mm and 6 × 32-mm Advanta V12 (Getinge, Gothenburg, Sweden) were deployed in both renal arteries, with good angiographic control. Completion angiography and postoperative computed tomography angiography confirmed obliteration of the FL and patency of all the branches. The patient had an uneventful recovery. At 12 months of follow-up, the patient was asymptomatic, with adequate blood pressure and a normal creatinine level.

The patient provided written informed consent for the report of his case.

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From the Division of Heart and Vessels, Department of Vascular Surgery, Hospital de Santa Maria^a; the Lisbon Academic Medical Center^b; and the Lisbon School of Medicine, University of Lisbon.^c

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Correspondence: Alice Lopes, MD, Serviço de Cirurgia Vascular, Hospital de Santa Maria, Avenida Professor Egas Moniz, Lisboa 1649-035, Portugal (e-mail: alicerclopes@gmail.com).

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