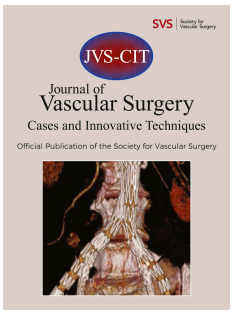

Open conversion following Nellix Endovascular Aneurysm Sealing (EVAS)

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Open conversion following Nellix Endovascular Aneurysm Sealing (EVAS)

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Abstract

The Nellix Endovascular Aneurysm Sealing (EVAS) System (Endologix, Irvine, California, USA) was presented as a novel concept in the treatment of abdominal aortic aneurysm (AAA). After numerous adverse events, the device has been voluntarily withdrawn from the market by the manufacturer. The purpose of this video is to describe the technical approach of a successful explantation of the Nellix endograft in a patient who underwent EVAS for AAA. Patient's consent for publication was obtained.

Narration text

We report the successful explantation of the Nellix endograft in a 77-year-old man who underwent EVAS in 2015 for an asymptomatic 58-mm abdominal aortic aneurysm (AAA).

The preoperative computed tomography angiography (CTA) showed a 25 mm length aortic neck just below a right polar renal artery. The EVAS procedure was performed using two 150x10-mm modules Nellix devices with 60 mL of polymer, with an intrasac pressure of 180 mmHg. A postoperative CTA confirmed the correct grafts deployment, the sac exclusion and the iliac arteries patency.

After 6 months from the EVAS procedure, the patient underwent a right-to-left femoral-femoral crossover bypass (FCB) in emergent setting, due to an early left iliac endograft occlusion.

The 3-year follow-up CTA, confirmed a both grafts distal migration, and a type Ia endoleak with the enlargement of the AAA to 64-mm. We planned an open conversion due the high risk of rupture.

The sac aneurysm, the left renal and the common iliac arteries were exposed by a retroperitoneal approach with a left flank incision from the tip of the 11^{th} rib to the lateral rectus border at the paraumbilical level.[1]

The aortic clamping was placed between renal and accessories arteries. The Nellix grafts were removed intact without any difficulties. The polymer bags appeared to have wall apposition. We confirmed the left module graft thrombosis.

A bifurcated 16x9-mm Dacron graft (Vascutek®Gelsoft™) was anastomosed to the abdominal aorta with 3/0 polypropylene and Teflon felt to support the suture. The distal anastomosis was performed only for the right common iliac artery, due to the good patency of the FCB and an optimal peripheral runoff. The left branch of the Dacron graft was sutured. The patient did not have any complications in his postoperative course and was discharged on 6th post-operative day with regular ultrasound follow-up.

Post-operative surveillance of Nellix stent grafts is crucial since late open conversions could be necessary.

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