The Salvage of a Translocated Basilic Vein Fistula with an Endovascular Graft and Wall Stent. A Case Report

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Key Words: Basilic vein fistula; Salvage AV fistula; Wall stent.

Introduction

The use of endovascular stents to treat arterial stenosis is widespread.1 Stented grafts are being used successfully to treat aneurysms of both central and peripheral arteries, offering attractive minimally invasive alternatives to major operative procedures.2,3 We present herein our experience with the endovascular treatment of a pseudoaneurysm developing in a translocated basilic vein arteriovenous fistula. To the best of our knowledge a similar case has not been previously reported.

Case Report

A 59-year-old female, a chronic renal failure patient with history of multiple venous access procedures, underwent the construction of a translocated basilic vein arterio-venous fistula.4 Following four months of use for hemodialysis the patient developed a pulsatile swelling at the mid-segment of the vein graft. A venogram revealed a multiloculated pseudoaneurysm measuring 7 cm × 6 cm × 5 cm, arising from middle third of the vein graft; it also showed areas of stenosis in the distal vein graft and the brachial vein (Fig. 1).

Salvage of the fistula was attempted by an endovascular technique under local anesthesia. The vein graft was punctured just above the right cubital fossa; a venogram was performed after placing a metallic marker on the medial aspect of the right upper arm to localize the site of stenoses in the brachial vein and graft, and the origin of the pseudoaneurysm. Following the passage of an 0.035-inch guide-wire the tract was dilated using an 8 French dilator, followed by placement of a 9 French sheath. Under fluoroscopic guidance a 10 mm × 20 mm Wall stent graft (Boston scientific Meditech) was deployed at the site of the brachial vein stenosis, an 8 mm × 20 mm stent was deployed at the stenotic site in the distal vein graft and an 8 mm × 30 mm Wall graft-stent was placed at...
the neck of the pseudoaneurysm. The completion venogram is shown in Figure 2. Four months after the procedure the fistula continues to function well.

**Discussion**

Salvage of stenosed polytetrafluoroethylene (PTFE) arteriovenous shunts with balloon angioplasty and endoluminal stents has become routine.5,6 Likewise, not a few cases describing successful treatment of pseudoaneurysms in PTFE arteriovenous shunts with endoluminal stents-grafts have been reported.7,8

The endovascular treatment of stenotic and aneurysmal arterio-venous grafts provides a less invasive alternative for the repair and salvage of these fistulas. Review of the literature through MEDLINE and PUBMED revealed no similar case of endovascular stent-grafting of pseudoaneurysms of a transposed basilic vein. This case demonstrates that the endovascular treatment of complicated vein grafts used for hemodialysis is an excellent alternative to surgical repair.

**References**