Stent-graft repair of splenic artery aneurysms


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Background: Visceral artery aneurysms (VAAs) are rare but potentially life threatening if they rupture. Traditional therapy has been surgical resection or ligation or endovascular embolization. We present 3 cases of splenic aneurysms treated with self-expanding stent-grafts.

Methods: Two elderly women and a 63 year-old man, with asymptomatic splenic aneurysms, were operated consecutively in our centre. All were true aneurysms, of idiopathic etiology and with a diameter over 2 cm. CT scans, with multiplanar reconstructions, were used to plan the cases, providing information about the sizes of the aneurysms (diameter, length of the neck, distance from the aorta, diameter of the afferent and efferent arteries) as well as the relationship with surrounding tissues, anatomy, and possible additional pathologies of the celiac trunk or its branches. A right transfemoral approach was chosen in all cases. After the catheterization of the celiac trunk and the positioning of the guidewire across the aneurysms, it was exchanged for a stiff wire to give stability to the system. The chosen stent-grafts were self-expanding covered stents of 6 mm in the women and 7 mm in the man. The aneurysms were excluded and the perfusion to the spleen was preserved in the completion angiograms.

Results: All three cases had uneventful post procedural courses and were discharged between 1-3 days after the surgery. The follow-up was with clinical examination and CT scans, observing patency of the stent-grafts and thrombosis of the aneurysms.

Conclusions: Endovascular treatment using covered stent-grafts is a valid therapeutic option for VAAs, avoiding the high risk of open surgery and the potential complications of embolization, such as end-organ ischemia, painful splenic infarction, and late-term vessel recanalization.