

#15 SALVAGING COMPLICATIONS OF ENDOVASCULAR AAA REPAIR

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Purpose: The efficiency of endovascular aneurysm repair (EVAR) is limited by emerging recognition of stentgraft failures, which can lead to persistent abdominal aortic aneurysm (AAA) sac perfusion and pressurization. We report our experience of treating complications of EVAR with stents, coils, and stentgraft extensions.

Methods: From January 2002 to December 2003, 320 patients underwent EVAR with a variety of industry made stentgrafts (AneuRx, Medtronic; Excluder, WL Gore & Associates; Ancure, Guidant; Lifepath, Edwards) for AAA >5 cm. Patients were routinely followed by physical examination, duplex ultrasonography, and CT arteriography initially at 1-month, and subsequently at 6-month intervals. Stentgraft failures were defined as presence of Type I endoleak, Type III endoleak, persistent Type II endoleak at > 6 months, > 1cm stentgraft migration, limb thrombosis, or aneurysm rupture. Data was prospectively collected in vascular registry, and analyzed.

Results: Over a 2 year period, 32 (10%) patients presented with stentgraft failures due to type I endoleaks (n=6), type II endoleaks (n=17), limb thrombosis (n=4), >1cm proximal stentgraft migration (n=5), and AAA rupture (n=2), and underwent successful placement of 'aortic cuffs' (n=7), Palmaz stents (n=5), translumbar coil embolization (n=13), transfemoral coil embolization (n=2), and thrombectomy with stentgraft extensions (n=4). All patients were managed by endovascular means, and none required conversion to open surgical repair. None of the patients developed renal failure requiring dialysis, pulmonary failure, multisystem organ failure, or died.

Conclusion: EVAR is safe and effective for treatment of infrarenal AAA. However, close follow-up and aggressive treatment of endoleaks, stentgraft migration, and limb thrombosis is important in obtaining optimal results. Use of adjunctive procedures such as placement of proximal aortic cuffs and bare-stents, distal stentgraft extensions, coil embolization of endoleak channels, and thrombectomy of thrombosed stentgraft limbs might help minimize the rate of open conversions.