

## PVSS15 Aortic Neck Attachment Failure And The Aneurx Graft

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**OBJECTIVE:** The Aneurx graft is the most commonly used device for endovascular AAA repair (EVAR) in the country. Some investigators have reported that proximal attachment failure is a frequent long-term complication of this device. Endovascular techniques can be used to salvage these reconstructions. We evaluated the need for an intervention in patients with suboptimal proximal fixation as well as the feasibility and early success of a variety of treatment strategies.

**METHODS:** From October 1999 to October 2003, we performed 365 EVARs using the Aneurx graft. These patients have been followed for  $20.2 \pm 12.3$  months using spiral CT scans, MRAs, or duplex scanning at minimal intervals of 1, 6 & 12 months, and yearly thereafter. At a mean follow-up of  $23.7 \pm 14.8$  months, 20 patients (5.5%) with suboptimal outcomes (14 with a type I endoleak, 1 with a type III endoleak, and 5 with an inadequate seal zone  $< 1$ cm) were considered for treatment that included aortic cuffs, stents, and surgical conversion. Fifteen patients (4.1%) had graft migration while 5 patients had poor placement due to difficult anatomy. The mean diameter & length of the treated aortic necks were  $21.8 \pm 2.2$  and  $20.1 \pm 8.5$  (range 8-36mm) respectively. Sixteen patients (80%) had at least one characteristic of unfavorable neck anatomy including maximal neck angulation  $> 45$  degrees (14 patients), neck thrombus/plaque (3 patients), reverse neck taper (8 patients), and short necks  $\leq 15$ mm in length (10 patients).

**RESULTS:** Eighteen patients underwent successful treatment (8 Aneurx cuffs, 6 Talent cuffs, 2 aortic stents, and 2 surgical conversions) without major perioperative complications, 1 patient had a persistent Type I endoleak despite endovascular treatment, and 1 patient refused treatment ultimately leading to aneurysm rupture. Endovascular techniques were successful in 94% (16/17) of these patients. Mean follow-up time from original surgery was  $37.7 \pm 12.1$  months. There has been no further endoleaks or graft migration noted since the secondary intervention at a mean follow-up of  $13.9 \pm 11.8$  months.

**CONCLUSION:** In our experience, proximal attachment failure associated with the Aneurx graft is relatively uncommon and usually associated with unfavorable neck anatomy. Despite this, most cases are treatable by endovascular means such as Talent cuffs, Aneurx cuffs, or aortic stents. Long-term follow-up is needed to assess the ultimate frequency of proximal attachment failure, secondary interventions, and the stability of these combined device reconstructions.