RF8  Stent Graft Repair of Para-anastomotic Aneurysms Following Open Descending Thoracic and Thoracoabdominal Aortic Aneurysm Repair

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OBJECTIVES: Following open thoracic and thoracoabdominal aortic aneurysm repair, anastomotic aneurysms can form at or near the suture lines of the graft. Endovascular repair is an alternative to complicated re-operative open surgery. We report on our experience with endovascular treatment of these lesions.

METHODS: A prospectively maintained database of endovascular thoracic aortic aneurysm repairs (TEVAR) performed at Mount Sinai Medical Center was reviewed and initial procedure, comorbidities, clinical presentation, aneurysm characteristics, type of endograft, adjunctive procedures, and follow-up were analyzed.

RESULTS: Of 135 TEVAR performed from June 2001 to December 2008, 9 patients had anastomotic aneurysms following a previous open repair. The mean age was 66.7 (range 41-89), 67% were men. Prior repairs included 5 descending thoracic, 3 type IV and 1 type II thoracoabdominal repairs. Aneurysm formation occurred at the following regions: proximal anastomosis (2), intercostal patch (1), distal anastomosis (3), visceral patch (2), and mid-graft (1). The initial technical success rate was 100%, 8 patients received a thoracic tube graft and 1 a modular bifurcated device. Two patients required an adjunctive carotid-subclavian bypass and two required a visceral debranching. Mean follow-up was 16.5 months. There was one perioperative death. Three patients developed an endoleak with one requiring an intervention. One patient required an open thoracoabdominal repair at 3 months for a penetrating ulcer at the visceral segment and another died from a ruptured thoracic aneurysm proximal to the stent graft at 72 months. Two more died during the follow up period of non-aneurysm related causes. Five patients had pseudoaneurysm shrinkage or no change, 1 increased in size, and 3 had no follow-up imaging.

CONCLUSIONS: Stent graft repair of para-anastomotic aneurysms following open descending thoracic and thoracoabdominal repair is a reasonable option in suitable anatomy. These patients, however, require close follow-up for the development of aneurysmal degeneration adjacent to the stent graft repair.