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HYBRID ENDOVASCULAR REPAIR FOR THORACIC AORTIC DISEASE INVOLVING AORTIC ARCH

Poster Contributions

Poster Hall B1

Saturday, March 14, 2015, 10:00 a.m.-10:45 a.m.

Session Title: Coronary I

Abstract Category: 31. TCT@ACC-i2: Carotid and Endovascular Intervention

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Background: To evaluate the outcomes of hybrid endovascular repair for thoracic aortic disease involving aortic arch

Methods: This study was a retrospective analysis involving patients who underwent hybrid endovascular repair for thoracic aortic disease involving aortic arch.

Results: Forty-five patients (35 men; mean age, 66.3±15.4 years) with thoracic aortic disease involving aortic arch were treated by hybrid endovascular repair. The indications for treatment included increased aneurysm size in 28 cases (52.2%), rupture or impending aneurysmal rupture in 10 cases (22.2%), rapid growth of aortic aneurysm (≥ 10 mm/y) in 5 cases (11.1%), pseudoaneurysm in 2 case (4.4%). Supra-aortic vessel transposition and stent-graft implantation were achieved in all cases. Three types of stent-graft were used, as follows: the Seal thoracic stent-graft in 15 patients (33.3%); the Valiant stent graft in 20 patients (44.4%); and the Zenith TX2 thoracic stent graft in 10 patients (22.2%). Perioperative complications affected 13 patients (28.8%), as follows: stroke (n=3, 6.7%); bleeding (n=1, 2.2%); renal failure (n=4, 8.9%); vascular injury (n=2, 4.4%); retrograde dissection (n=2, 4.4%); and respiratory failure (n=1, 2.2%). Two patients underwent reintervention in hospitalization due to increased size (n=1) and retrograde dissection (n=1). Four patients died within 30 days (8.9%) due to stroke (n=2); bleeding (n=1); and intracranial hemorrhage (n=1). Technical success was achieved in 21 patients (71.1%). Two patients died after discharge during follow-up (mean, 20.1±19.1 months) due to subdural hemorrhage (n=1); and end-stage renal disease (n=1). In 4 patients, reintervention was necessary due to persistent endoleaks (n=2); aortic rupture (n=1); and newly developed retrograde aortic dissection (n=1). The death-free survival and reintervention-free survival rates during follow-up were 82.4% and 76.3%, respectively.

Conclusion: For thoracic aortic disease involving aortic arch, hybrid treatment with supra-aortic vessel transposition and endovascular repair may be an option in frail patients in who open procedures is too risky.