Endovascular aortic aneurysm repair in patients with narrow aortic bifurcation

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Objective: The aim of this study was to compare the early outcomes of endovascular aortic aneurysm repair (EVAR) in patients with narrow aortic bifurcation and standard bifurcation.

Method: We reviewed the clinical data of 109 patients who underwent EVAR between November 2012 and June 2016. There were 29 patients (26.6%) with narrow aortic bifurcation (<18mm; NA group) and 80 patients (73.4%) with standard aortic bifurcation (≥18mm; SA group). Early outcomes were evaluated in these patients in terms of postoperative mortality, morbidity and the rate of graft occlusion.

Results: Demographic data and comorbidities were similar between both groups. Mean aortic bifurcation diameter was 37.4 mm (range, 20-75 mm) in SA group and 16.4 mm (range, 12-18 mm) in NA group. The overall mortality rate was 7.34% (8.75% in SA group, 3.45% in NA group; p=0.11). Early morbidity and endoleak rates were similar between both groups (13.75%, 13.75% in SA group and 13.79%, 13.79% in NA group; p=0.99). The mean follow-up time was 11.6 months (range, 0-49 months). There was one graft limb occlusion in SA group (1.25%) and no graft limb occlusion in NA group (p=0.54). In NA group, 17 aortouniliac stent grafts and 12 bifurcated stent grafts were used with similar outcomes between both subgroups.

Conclusions: EVAR with a bifurcated stent graft can be performed in patients with narrow aortic bifurcation with acceptable short-term outcomes.