Late outcome after thoracic endovascular aortic repair: Justifying, or preventing, a more liberal use? Tuesday, 8 October 2013

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HOW SHOULD AORTIC ARCH ANEURYSM BE TREATED IN THE ENDOVASCULAR AORTIC REPAIR ERA? A RISK-ADJUSTED ANALYSIS USING PROPENSITY SCORE MATCHING BETWEEN OPEN AND HYBRID ARCH REPAIR
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Objectives: The recent advance of thoracic endovascular aortic repair (TEVAR) brings a change in the treatment of aortic arch aneurysm. The purpose of this study was to examine the early and mid-term results of open and hybrid arch repairs for arch aneurysm.

Methods: Since 2008, 143 patients have undergone open aortic repair and 50 patients hybrid TEVAR for non-dissected arch aneurysm. EuroSCORE II was 4.37 ± 3.64 in the open group and 7.78 ± 5.49 in the hybrid TEVAR group (P = 0.001). We also analysed 36 patients from each group matched by a propensity score to adjust for the differences in patient characteristics.

Results: There was no significant difference in early mortality between the open and hybrid groups (2.8% vs 2.0%, P = 0.849). Early morbidities were equivalent in both groups, but Intensive Care Unit (ICU) stay was shorter in the hybrid group (4.7 days vs 1.6 days, P = 0.018). During follow-up, the survival rate was similar (85.6% vs 77.2% at 3 years, P = 0.091), but reinterventions for aortic arch occurred in one patient (pseudoaneurysm) in the open group and five patients (endoleak in four, brachiocephalic artery stenosis in one) in the hybrid group. Freedom from reintervention at 3 years was 99.2% in the open group and 75.7% in the hybrid group (P = 0.001). Propensity score-matched analysis revealed similar results: shorter ICU stay and more frequent reinterventions were found in the hybrid group.

Conclusions: Surgical outcomes in both groups were satisfactory. Hybrid TEVAR is superior in terms of early recovery from surgery; however, open arch repair brings more reliable outcomes during follow-up. These two strategies, properly selected on the basis of each patient’s risk, improve the surgical results for patients with aortic arch aneurysm.