

Short-Term Outcome of Endovascular Repair of Aortic Aneurysms with Stent Grafts: Initial Results of the First Consecutive Series of Endovascular Aortic Repair in Iran

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Abstract

Background- Endovascular aortic repair (EVAR), as a new and less invasive method for treatment of aortic aneurysms, has shown lower short term complications than routine open surgical repairs. In this report we present our results with the first consecutive series of this technique in our patients.

Methods- From Dec. 2006, we began a prospective case series of EVAR patients for the first time in Iran, and so far, 15 consecutive patients (1 female, 14 male) with the mean age of 66 years (range 36 to 89 years old) underwent endovascular aortic aneurysm repair (3 thoracic, 11 abdominal, 1 combined thoracic and abdominal) with Medtronic "Talent" or "Valiant" stent grafts. In-hospital and one month follow up results are reported as short-term outcome.

Results- All 12 abdominal aorta aneurysms (AAA) were infrarenal with an acceptable proximal neck. In eight patients, associated iliac aneurysms were seen. For 11 AAA patients, routine modular stent grafts were used and in one case, unilateral stent graft was implanted because of difficulty of contralateral stent graft implantation. Four thoracic aorta aneurysms (TAA) were repaired with Valiant stent grafts. One of them was a Marfan patient with recent Bentall surgery and two were post-surgery saccular aneurysms. In all 15 cases, stent graft implantation was done successfully. In five cases, mild type II endoleak was seen at the end of the procedure, which was no longer present on one month follow up. One patient had post-procedure cerebral stroke with delayed mortality. No other major complications were seen in 1 month follow up in the other 14 cases. Minor complications like vascular access hematoma, anemia and increased creatinine were controlled on hospital stay period in some cases. Control CT angiography in some patients revealed no endoleak or aneurysm enlargement and 6 and 12-month follow up assessment will be done for mid-term results.

Conclusion- Endovascular repair of aortic aneurysm is feasible and safe for suitable cases based on both clinical and radiologic findings. Good case selection, good device selection and suitable follow up are the keys for success of EVAR (*Iranian Heart Journal 2008; 9 (1): 6-13*).

Key words: aortic aneurysm ■ endovascular repair ■ stent-graft ■ EVAR

From 1991 when Parodi et al. successfully treated an abdominal aortic aneurysm (AAA) with a stent graft for the first time,¹

endovascular repair of aneurysm (EVAR) has rapidly developed.

The incidence of AAA is 21 per 100,000 and

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