

First Results of Abdominal Aneurysm Repair With the E-vita Abdominal Stent-Graft: A Single-Center Study

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Purpose: To evaluate the feasibility and 30-day postoperative results of a new stent-graft for infrarenal endovascular aneurysm repair (EVAR) in a non-selected population.

Methods: E-vita Abdominal is a flexible polyester/nitinol stent-graft with bare springs for suprarenal fixation. The delivery catheter works with a unique squeeze-to-release mechanism. In a 6-month period, 18 consecutive patients (all men; mean age 70 years, range 58–87) with abdominal aortic aneurysms (AAA) suitable for standard EVAR without fenestrations or side branches were treated with the new E-vita device. Two thirds were classified ASA (American Society of Anesthesiologists) grade 3 or higher. Sixteen procedures were primary implantations and 2 secondary repairs of previously implanted endografts. Seventeen procedures were elective, and 1 was performed for a contained rupture. AAA morphology was characterized as follows: mean maximum diameter 57 mm (40–75); proximal neck length 34 mm (19–60), diameter 26 mm (18–30), and angulation 40° (0°–110°); common iliac artery landing zone diameter 16 mm (10–26) and angulation 59° (10°–120°). Technical success was determined from intraoperative completion angiography plus predischarge computed tomography (CT) or magnetic resonance imaging in all patients.

Results: Fourteen bifurcated and 4 straight stent-grafts were implanted; in 77%, a percutaneous vascular access was used. All stent-grafts were implanted precisely at the intended position. One hypogastric artery was covered. No conversion to open surgery became necessary. Primary technical success was 100%. In 14 cases, type II or IV leaks were noted on the completion angiogram; 9 of these had resolved on the predischarge CT scan, leaving 5 (28%) patients discharged with a residual type II endoleak. No device-related secondary interventions were necessary.

Conclusion: The E-vita abdominal stent-graft appears safe and effective in the first short-term clinical experience. It is effective especially in challenging aneurysm anatomy, such as severely angulated necks or in tortuous and dilated iliac arteries.

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THURSDAY - SESSION XII