Table.

	All	*II aneurysm (35%)*			*IIA stenosis (20%)*			*CIA < 16 mm (46%)*		
Technical success, %	(n = 138) 93	Yes 93	No 93	ns	Yes 82	No 96	$P = .015$	Yes 95	No 92	ns
Endoleak, %	3	7	1	ns	0	4	ns	0	5	ns
Patency, %, 30d 1yr 5yr	95 86 82	98 87 78	93 86 83	ns	89 81 81	96 88 82	ns	92 84 84	97 89 80	ns

and isolated to highly anatomically selected cohorts. Exclusion of patients with internal iliac artery (IIA) stenosis, narrow common iliac artery (CIA) diameters and IIA aneurysm has precluded hypogastric preservation in most cases.

Methods: Data was prospectively collected on patients with infrarenal or thoracoabdominal aortoiliac aneurysms treated with helical-IBDs (H-IBD). Preoperative aneurysmal characteristics, technical success, patency, reinterventions and endoleaks were noted in accordance with endovascular reporting standards. Survival and patency were evaluated with life-table analyses and differences among anatomic groups compared with log-rank tests. T-tests and Fisher's exact tests were used to compare simple variables.

Results: Between 2003 and 2012, 138 Helical-IBD devices were placed into 130 patients, beginning in 2008 with a novel device intended for short CIA aneurysms. Median follow up was 16.2 months (range, 1-72 months) with 30 day, 1 and 5 year survival rates of 99%, 90%, and 62% respectively. Overall technical success, endoleak and branch patency, and outcomes between anatomically select groups are summarised in the Table. No stent fractures or component separations were noted in the IBDs or mating devices. Based upon instructions for use for other devices, only 20% of the patients in this study were candidates for treatment with an IBD.

Conclusions: The H-IBD has high technical success, which is detrimentally affected by tight IIA stenosis. Patency was unaffected by challenging anatomy. The minority of patients in this trial had anatomy amenable for treatment with other devices.

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RR2.

Long-Term Durability of Endovascular Treatment With Iliac Branch Endograft for Aorto-Iliac Aneurysms

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Objectives: To analyze long-term durability of endovascular treatment (EVAR) for aorto-iliac aneurysm with the use of iliac branch device (IBD).

Methods: A prospective analysis of all patients underwent EVAR with IBD between September 2007 and December 2012 was carried out. Main clinical, anatomical and technical data concerning pre, intra and postoperative period were prospectively collected into a dedicated database. Follow-up consisted of clinical examination, duplex scan and computed tomography at 1, 6, 12 months and yearly thereafter. Data were reported according to the Kaplan-Meier method.

Results: Ninety-five EVAR procedures with IBD were electively carried out in 91 patients. Among the 35 (36.8%) bilateral iliac aneurysms, four patients (4.2%) received bilateral IBD. Technical success was obtained in 98.9% of cases. Median follow-up duration was 23.4 months (range 1-63 months). There was one IBD occlusion (1%). Estimated 60 months survival, freedom from reintervention and branch occlusion was 79.7%, 88.3% and 98.1%, respectively. Seven patients (7.3%), six of them treated for bilateral iliac aneurysms, developed persistent buttock claudication on the side of hypogastric exclusion whereas no pelvic ischemic symptoms were observed on the side of patent IBD.

Conclusions: EVAR for aortoiliac aneurysm using IBD is durable procedure with low complications and reinterventions rates at five years follow-up. Since no buttock claudication was observed in patients with patent IBD, it could be proposed as first line treatment whenever anatomically feasible.

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RR3.

Surveillance Computed Tomographic Arteriogram (CTA) Is Unnecessary Before Three Years in Patients Who Have a Normal Post-EVAR Study

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Objectives: Standard surveillance after endovascular aneurysm repair (EVAR) consists of contrast-enhanced CT scans, usually at 1 month, 6 months and annually for 5 years. These are expensive and expose patients to nephrotoxic contrast and ionizing radiation. We hypothesized that a normal CTA with no endoleak within 1 month after EVAR predicts a low rate of future complications, which would justify a reduction in subsequent CT scans.

Methods: We examined the medical records of 104 patients who underwent EVAR at a single hospital, reviewing all postoperative CTA's and noting any complications

including endoleak, aneurysm sac growth, and any surgical or endovascular intervention. Thirteen patients who had no postoperative contrast-enhanced CT scans were excluded. Our practice has been to obtain CTA's at postoperative months 1, 6, and 12 and then yearly for 5 years.

Results: The mean patient follow up was 3.4 ± 2 years. Of 91 patients, 71 (78%) had a normal CTA at 1 month after EVAR without endoleak or other abnormality. Four of these 71 (5.6%) developed late complications consisting of three type II endoleaks and one type I endoleak, which presented on postoperative days 240, 1135, 1383, and 1294, respectively. Only one of the type II endoleaks was accompanied by aneurysm sac growth requiring repair and the small type I endoleak was also repaired.

Conclusions: For patients who have a normal CTA with no endoleak one month after EVAR it is reasonable to consider less frequent CTA surveillance as no significant complications requiring intervention occurred before three years.

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RR4.

Stent Graft Placement for Aneurysmal Degeneration After Long-Term Medical Therapy for Type B Aortic Dissection Results in Volumetric Gain of the True Lumen and False Lumen Regression

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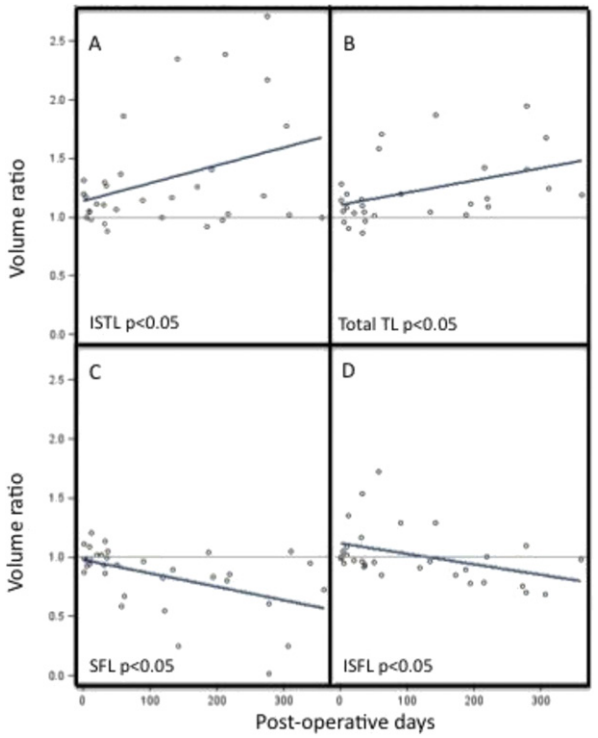

Fig.

Objectives: Despite optimal medical therapy of uncomplicated Type B aortic dissections (TBAD), true lumen narrowing and aneurysmal degeneration of the false lumen can occur over the long-term (>6 months). The efficacy of thoracic stent-grafts (TEVAR) for aortic remodeling when placed at late time points remains controversial. We studied post-TEVAR aortic volumetric changes in these patients.

Methods: Utilizing tomographic scans, volumes of multiple aortic compartments were calculated including the stented true lumen (STL), peri-stented false lumen (SFL), true lumen from distal stent to celiac axis (infra stent true lumen, ISTL), and the corresponding false lumen (ISFL). Cross-sectional areas were calculated at one centimeter intervals, collated, and volumetric ratios were derived from preoperative values.

Results: From 2004-2011, twenty-one patients met inclusion criteria. The time from index dissection to TEVAR was 197 days or greater. The left subclavian artery was covered in 71.4% of cases. Best-fit line statistical regression analysis of volumetric change demonstrated increases in ISTL and total TL volumes by 55% and 38%, respectively ($P < .05$) at one year (Fig, *A* and *B*). SFL and ISFL volumes decreased by 41% and 32%, respectively ($P < .05$) (Fig, *C* and *D*).

Conclusions: TEVAR for aneurysmal degeneration after long-term medical therapy of TBAD results in volumetric gain of the true lumen and false lumen regression.

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RR5.

Aneurysm Sac Enlargement Independently Predicts Late Mortality in Patients Treated With EVAR

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Objectives: Patients undergoing EVAR of AAA can exhibit variations in sac behavior from complete regression to expansion. We evaluated the impact of sac behavior at one year follow up on late survival.

Methods: We used the Vascular Study Group of New England (VSGNE) registry (2003-2011), to identify EVAR patients with one year CT follow up. Aneurysm sac enlargement >5 mm (SacEn) or decrease >5 mm (SacDe) was defined according to SVS guidelines and predictors of change in sac size and impact of sac behavior were assessed by multivariable methods.

Results: 1642 EVAR patients with one year follow up were included. At 1 yr, 8% had SacIn, 72% had SacDe, and 20% had stable sac size. Independent predictors of SacIn were urgent repair (OR, 2.9; 95% CI, 1.7-5.0; $P < .01$), intraoperative type I/III endoleak (OR, 2.7; 95% CI, 1.1-6.9; $P = .03$), hypogastric coverage (OR, 2.2; 95%