

Results: 88% of all 163 possible access sites were closed by FS as first choice, traditional cut-down was primarily performed in 11.4% and percutaneous closure device was used in 0.6%. 9% of the FS closed access sites were converted to open cut-down closure intraoperatively because of bleeding (7%) or stenosis (2%). Data from the one year follow-up show no signs of increased stenosis, thrombosis or formation of plaque. 4 pseudoaneurysms (3%) were detected and 2 of these warranted surgical repair.

Conclusions: FS is technically feasible, economically sound and appears to be a safe and effective method of closure of femoral access sites after EVAR. Most short-term complications are easily detected and managed intraoperatively. Few long-term complications were detected.

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PS38.

One-Year Results of a New Endograft for AAA Treatment: Real-life Experience with the Endurant Stent-graft System

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Objectives: The Endurant (Medtronic) is a new stent-graft designed to reduce complications while widening the applicability of EVAR. This study presents the 1-year results of the Endurant in “real-life practise.”

Methods: All clinical pre-, per- and postoperative data of Endurant patients of our 3 centers is prospectively collected. Patients undergo CTAs preoperatively, and 1 month and yearly post-EVAR. All patients with completed 1-year follow-up were included. Clinical data, AAA characteristics, presence of endoleaks (EL), graft migration (>5 mm), and other EVAR related complications were noted. All values are stated as mean (range).

Results: 66 AAA patients were included {61 male, AAA size 63 mm (45-89), AAA volume 202 mL (68-548), neck length 32 mm (9-70), angulation 39° (0-109)}. Primary technical success was achieved in 98.5% (1 stent placed in renal artery) with no primary type I/III ELs or conversions. Thirty-day mortality was 0%. On the first postoperative CTA, 10 ELs were seen (15%, all type II). One-year follow-up showed four iliac limb occlusions (6%, all due to poor outflow), and 1 infected stentgraft (causing a type I EL). Five endovascular reinterventions were performed (8%; 4 to treat iliac limb occlusions, 1 proximal extension cuff). 1-year mortality was 13.7% (9 patients). AAA-related mortality was 1.5% (the 1 with stentgraft infection). The mean AAA size had decreased significantly after 1 year {diameter: 53 mm (32-80), volume: 162 mL

(60-400)}, 7 ELs were noted {6 II, 1 type I (neck dilatation), no graft migration}.

Conclusions: This is the first report on 1-year FU data using the Endurant for AAA treatment. The technical success rate was very high. Stentgraft migration did not occur and only 1 type Ia EL was seen. The AAA-related mortality was 1.5%, but the total 1-year mortality was relatively high. Iliac limb occlusions were seen relatively frequently, possibly demanding more frequent prophylactic PTA of outflow vessels.

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PS40.

Abdominal Aortic Aneurysms: Challenging Neck and Difficult Access (How to Solve a Real Problem With A New Hydrophilic and Low-profile Device)

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Objectives: To evaluate the results of a new aortic endograft for the treatment of abdominal aortic aneurysms (AAAs) with challenging neck and/or difficult access.

Methods: The definition of a challenging proximal neck was based on diameter (≥ 28 mm), length (≤ 15 mm), angulations ($\geq 60^\circ$), shape (reverse tapered or bulging), thrombus lining ($> 50\%$) and tortuosity. The definition of difficult access was based on the presence of two or more 90° angulations within an iliac artery and concomitant occlusive disease with external or common iliac artery diameter less than 7mm. Between September 2008 and November 2009, 46 patients (39 male, mean age 75.82 years) were treated with the Endurant stent-graft (Medtronic, Santa Rosa, CA, USA) in our unit. Nine of the 46 patients (19.56%) had a challenging neck, 13 (28.26%) had hostile iliac artery anatomy, and 24 (52.18%) had both. The results were analyzed in terms of technical success, 1-month mortality and morbidity and aorto-iliac complications (endoleaks and iliac injuries).

Results: Technical success was achieved in all cases. Two (4.34%) type-1 endoleaks were detected on completion angiography (CA) and solved by means of proximal ballooning. Three (6.52%) type-2 endoleaks detected on CA were seen to have resolved spontaneously on 1-month

CT scan. Five (10.86%) tight iliac stenoses were found before progression of the delivery system and were treated after CA by PTA and/or stenting. The 1-month mortality rate was 0% and the major morbidity rate was 2.1% (1/46). No conversion to open surgery, graft limb thrombosis or iliac artery injuries were observed.

Conclusions: Our experience shows that the Endurant stent-graft is safe and effective in the endovascular repair of AAAs in patients with challenging anatomy. While this graft enables extreme anatomical difficulties to be overcome, only skilled operators after a long learning curve should treat these complex situations. However, further studies are needed to evaluate the long-term results.

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C5: Poster Presentation I -Aortic Disease (3)

PS42.

Infected Abdominal Aortic and Iliac Artery Aneurysm: A Single Center 25-Year Experience

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Objectives: Infected aneurysms remain a therapeutic challenge. This study evaluated the outcome of surgical treatment for infected aneurysms.

Methods: This was a retrospective study of patients treated surgically for infected abdominal aortic or iliac artery aneurysm at the University of Tokyo Hospital during the past 25 years. Patients' demographic data, past history, symptoms at presentation, aneurysm location, bacteriological findings, surgical approach and outcome were evaluated.

Results: During the study period, 740 patients were treated for abdominal aortic and/or iliac artery aneurysm. Of them, 19 (2.6 %) were diagnosed with infected aneurysm. There were 16 men. Mean age was 66 years (range 40-83). Eight (42%) had a history of various septic diseases. Preoperative signs of infection, such as leukocytosis and elevated C-reactive protein, were found in 68%, and fever was present in 42%. The aneurysms were localized in the suprarenal abdominal aorta in 3 patients, infrarenal abdominal aorta in 13, and iliac artery in 3. At the time of surgery, one (5%) aneurysm was already ruptured, and 13 (68%) had penetrated into periaortic tissue, forming a contained rupture. Eleven (58%) had positive blood or aortic wall culture results; *Staphylococcus aureus* was the most common organism. In-situ graft replacement was performed in 16 (84%) patients; of these, 13 (81%) grafts were covered with an omental flap, and 10 (63%) grafts were soaked with rifampicin or amikacin. Subsequent in-situ graft infection occurred in 3 patients. In hospital mortality was 11% and

perioperative morbidity was high, 42%. Mean follow-up was 51 months (range 1-224 months). Cumulative survival rate at 5 years was 84%. All of the 3 patients who died during the follow-up period presented with rupture within 5 months postoperatively.

Conclusions: Our experience indicates that an aggressive surgical approach for infected aneurysm is the only way to improve the outcome of an otherwise disastrous condition.

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PS44.

The Incidence of Pulmonary Neoplasms Discovered by Serial CT Scanning Following Endovascular AAA Repair

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Objectives: Serial Computed Tomography (CT) scanning is routinely employed to follow-up endovascular exclusion of abdominal aortic aneurysms. Nonvascular diseases can be identified, and these exams include images of the lung bases which can provide information that leads to the diagnosis of pulmonary neoplasms. The purpose of this report is to determine the rate and type of pulmonary-based oncologic diseases identified by serial CT scanning of patients with endovascular repair of AAA.

Methods: A retrospective review of 138 consecutive patients receiving endovascular AAA exclusion over an eight year period was performed. Length of follow-up and number of CT scans performed was recorded. CT characteristics of the lesion (size, character, and suspicion of malignancy), type of biopsy procedure performed and final pathologic diagnosis were collected. Oncologic treatments and survival length were also evaluated.

Results: Eight patients (6%) with pulmonary lesions were referred for evaluation by thoracic surgeons. Six patients (4%) underwent biopsy of the lesion, and were diagnosed with a primary malignancy. One patient refused biopsy and is being followed with CT surveillance, and one patient continues with recommended CT surveillance of the lesion. The tumor types included four primary lung cancers (1 small cell and 3 non-small cell), one primary pulmonary carcinoid tumor, and one B-cell lymphoma. The patients receiving CT surveillance have had no changes noted in their lesions. More than half of the cancers were diagnosed in stage I.

Conclusions: Serial CT scans reveal a high rate of pulmonary malignancies in a population with AAA. These results indicate that aggressive management of these lesions (early thoracic surgery consultation and biopsy) is appropriate in this high risk population.

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