eGFR and three patients required hemodialysis. Five patients had full recovery of renal function by discharge. In hospital, 30-day morbidity/mortality were 25%/3% respectively. At a mean follow-up of 3 years, six patients had an eGFR significantly less than the preoperative value. Late interventions related to the AAA repair were required in eight patients. Indications included: wound complication (3), anastomotic aneurysm (2), incisional hernia (1), anastomotic graft stenosis (1), and proximal aortic dilatation (1). Overall 5-year intervention free survival was 61% and overall survival 79%. Intervention free survival was decreased by perioperative pneumonia ($P = .01$) and enhanced by antiplatelet ($P = .05$) use whereas overall survival was decreased by COPD ($P = .03$) and perioperative pneumonia ($P = .001$).

Conclusions: A quarter of patients requiring a suprarenal cross-clamp during open AAA repair experience renal dysfunction. Late graft related complications are few with preoperative and perioperative pulmonary function negatively impacting intervention-free and overall patient survival.

EVAR Continues to Cost More than Open AAA Repair

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Objectives: Endovascular aortic aneurysm repair (EVAR) is now established as first line treatment for infra-renal aortic aneurysms in the United States. Recent data from randomized trials suggest elective EVAR is cost effective compared to open AAA repair (oAAA). Cost analysis for urgent aneurysm repair has not been reported. We evaluated the cost of EVAR and oAAA in both elective and urgent settings in our center.

Methods: All infrarenal AAA repairs performed from 2004-2010 were retrospectively reviewed (n = 172). Clinical characteristics of patients receiving EVAR and oAAA repair were compared. Direct costs, payments, and direct cost margin for the index inpatient episode were obtained from the hospital for all patients. Subsequent financial information including clinical, radiologic, and procedural cost was also available for 52 patients who had received all follow-up care in our institution for one year (EVAR = 34; oAAA = 18).

Results: Overall, elective EVAR patients were older than oAAA patients but EVAR patients had significantly shorter lengths of stay, regardless of urgency (Table). Urgent AAA repair occurred more often by oAAA than EVAR ($P < .001$, χ^2). There were no other significant clinical differences between EVAR and oAAA patients. For elective patients, EVAR costs were greater than for oAAA. There was a trend toward lower costs in EVAR vs oAAA patients being treated urgently. The hospital experienced a negative cost margin more often after elective EVAR vs oAAA. Negative cost margins were less frequent following urgent repair but still occurred twice as often in EVAR vs oAAA patients. Cost margins remained negative in all EVAR patients followed for one year in our institution.

Conclusions: At a tertiary academic institution, costs for elective EVAR are significantly higher than oAAA. EVAR may be relatively more cost effective in urgent situations. Negative cost margins were more common in EVAR patients and one year follow-up with imaging in the same institution did not result in a positive margin.

Percutaneous Aortic Dissection Flap Fenestration for the Treatment of Functional Severe Claudication

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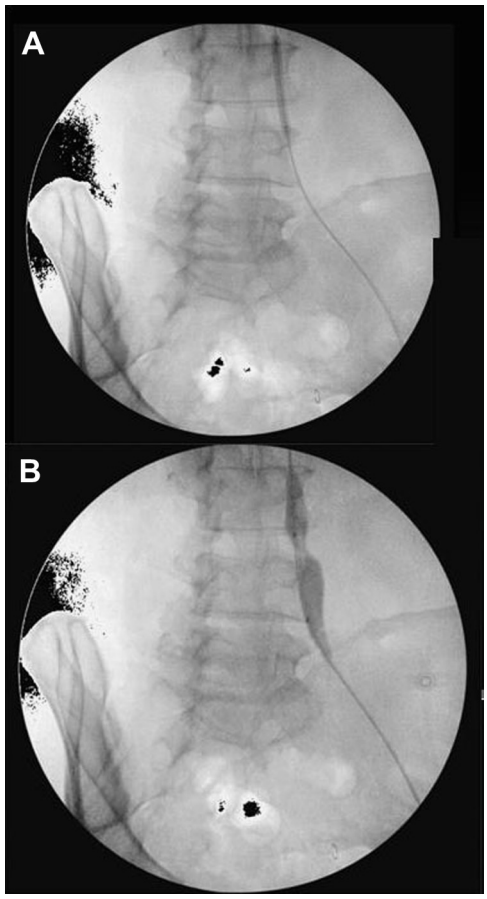

Fig 1. Fenestration technique. ***A,*** Initial predilation of the flap perforation. ***B,*** Size optimization with large diameter balloon.

A 49-year-old man with past medical history of spontaneous type A Aortic dissection 3 months prior, was referred to Vascular Surgery outpatient clinic for severe lifestyle-limiting claudication on the left.

His past medical history includes ascending aortic valve sparing repair and essential hypertension. His father died at a young age from a presumed aortic syndrome.

Physical examination revealed a well-healed median sternotomy and normal cardiopulmonary auscultation. There were no bruits in the abdomen. His left femoral pulse was diminished in contrast to the right. A discrete bruit was discovered above the left groin. Noninvasive vascular testing revealed a baseline ankle-brachial index of 0.92, which dropped to 0.40 within 3 minutes of excercise testing.

Table.

	Elective vs urgent aneurysm repair					
	Elective			*Urgent*		
Indication	*EVAR*	*oAAA*	P *value*	*EVAR*	*oAAA*	P *value*
No.	66	37	–	21	48	–
Mean age, years	75	67	<.001	72	72	.94
Median LOS, days (IQR)	4 (1-4)	9 (7-17)	<.001	6 (2-8)	16 (9-30)	<.001
Median direct cost-index hospitalization, $ (IQR)	21054 (19758, 24749)	15939 (12205, 29910)	.01	27178 (22675, 38954)	48236 (17476, 73242)	.22
Patients with negative cost margin (%)	17 (26)	2 (5)	<.01	3 (14)	3 (6)	.36