stabilize and secure sheath position in the common iliac artery (Fig. B). Successful cannulation and embolization of the hypogastric artery at its bifurcation (Fig. C and D) was achieved in all patients with nitinol plug (n = 1) or embolization coils (n = 3). Mean time to achieve hypogastric artery embolization in those patients was 12 mins.

Conclusions: As experience evolves with endovascular approaches to vascular disease, advanced techniques may be employed to address complex anatomic problems. This novel sheath stabilization technique facilitates embolization of internal iliac artery expeditiously and may spare the patient a separately staged procedure.

Aortofemoral Bypass Limb Revision: The Importance of Antegrade Completion Angiography
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Background: Aortobifemoral bypass graft limb (ABF-GL) thrombosis due to progression of outflow disease is treated using retrograde surgical thrombectomy (RT), revision of the distal anastomosis, and completion inflow arteriography (CA). Endovascular stenting allows for minimally-invasive management of proximal, flow-limiting graft lesions, provided that adequate imaging is feasible. We present a case illustrating the importance antegrade (a), versus retrograde (r), CA in proving technical success.

Case report: The patient presented with right lower extremity claudication 10 years after ABF. Exam revealed absent right lower extremity pulses and an ankle-brachial index of 0.4. CT angiography confirmed occlusion of the right ABF-GL at the bifurcation with normal distal vasculature. Intimal hyperplasia at the common femoral anastomosis required revision with graft interposition hooded onto the proximal deep femoral artery. rCA showed a stenosis at the ABF-GL origin (Fig 1, a). Angioplasty with a 9 × 40 mm balloon alleviated the lesion (Fig 1, b) and restored excellent inflow. The graft thrombosed within 24 hours and was re-explored. After RT, rCA through a catheter in the graft body demonstrated a diagonal defect at the limb origin (Fig 1, c). This was initially treated with an iliac stent-graft. Repeat rCA showed persistence of the flap with origin in the body of the graft. Raising the graft bifurcation with kissing stents in the proximal right and left graft limbs (Fig 1, d) eliminated the intimal flap and preserved flow in the left limb. The patient was discharged on the second post-operative day.

Conclusion: RT raises neointimal flaps originating in the graft body and adherent in the ABF-GL. rCA reduces these flaps against the graft, creating a normal angiographic appearance. Subsequent restoration of antegrade flow can re-elevate these dissections and cause ABF-GL failure. aCA provides the precise imaging needed to guide accurate endovascular therapy under conditions of normal antegrade procedures.

Long Segment Thoracoabdominal Aortic Occlusions in Childhood: A Case Series
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Objectives: Coarctation of the abdominal aorta is a rare disease encompassing many differing etiologies and diverse methods of treatment. Long segment thoracoabdominal aortic occlusion in children has not previously been reported. There are anecdotal case reports in the literature describing the management of this disease in adults. Two pediatric patients who underwent extensive aortic reconstructions for long segment thoracoabdominal aortic occlusion are the impetus for this report.

Methods: A 13-year-old girl with uncontrolled hypertension on three antihypertensive agents, exhibited an occlusion of the aorta from...
just above the diaphragmatic hiatus with reconstitution of the distal common iliac vessels. There was no demonstrable intervening aorta and faint reconstitution of her renal arteries (Fig 1). Through an extended thoracoabdominal exposure, a distal thoracic aorto-bilateral common iliac arterial ePTFE bypass was performed with implantation of the left renal artery to one graft limb and a right renal artery bypass originating from the other limb (Fig 2).

A 5-year-old girl with uncontrolled hypertension and left ventricular hypertrophy while on three antihypertensive agents had an aortic occlusion involving a long segment of the thoracic and upper abdominal aorta (Fig 3). Through a median sternotomy extended onto the abdominal midline, she underwent an ascending thoracic aorta to infra-renal aortic ePTFE bypass (Fig 4).

Results: Both patients were discharged with easily controlled blood pressures requiring fewer antihypertensives. There were no major postoperative complications.

Conclusions: Several surgical options in the treatment of long segment thoracoabdominal aortic occlusions have been reported. We report two successfully treated pediatric cases having extensive non-anatomic aortic reconstructions.

Stent Graft Repair of Para-Anastomotic Aneurysms Following Open Descending Thoracic and Thoracoabdominal Aortic Aneurysm Repair

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Objectives: Following open thoracic and thoracoabdominal aortic aneurysm repair, anastomotic aneurysms can form at or near the suture lines of the graft. Endovascular repair is an alternative to complicated re-operative open surgery. We report on our experience with endovascular treatment of these lesions.

Methods: A prospectively maintained database of endovascular thoracic aortic aneurysm repairs (TEVAR) performed at Mount Sinai Medical Center was reviewed and initial procedure, comorbidities, clinical presentation, aneurysm characteristics, type of endograft, adjunctive procedures, and follow-up were analyzed.

Results: Of 135 TEVAR performed from June 2001 to December 2008, 9 patients had anastomotic aneurysms following a previous open repair. The mean age was 66.7 (range 41-89), 67% were men. Prior repairs included 5 descending thoracic, 3 type IV and 1 type II thoracoabdominal repairs. Aneurysm formation occurred at the following regions: proximal anastomosis (2), intercostal patch (1), distal anastomosis (3), visceral patch (2), and mid-graft (1). The initial technical success rate was 100%, 8 patients received a thoracic tube graft and 1 a modular bifurcated device. Two patients required an adjunctive carotid-subclavian bypass and two required a visceral debranching. Mean follow-up was 16.5 months. There was one perioperative death. Three patients developed an endoleak with one requiring an intervention. One patient required an open thoracoabdominal repair at 3 months for a penetrating ulcer at the visceral segment and another died from a ruptured thoracic aneurysm proximal to the stent graft at 72 months. Two more died during the follow up period of non-aneurysm related causes. Five patients had pseudoaneurysm shrinkage or no change, 1 increased in size, and 3 had no follow-up imaging.

Conclusions: Stent graft repair of para-anastomotic aneurysms following open descending thoracic and thoracoabdominal repair is a reasonable option in suitable anatomy. These patients, however, require close follow-up for the development of aneurysmal degeneration adjacent to the stent graft repair.

Angiosarcoma Involving Native Abdominal Aortic Aneurysm Sac Following Endograft Repair

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Objectives: Angiosarcoma (AS) is a rapidly proliferating epithelioid tumor with high propensity for local recurrence and widespread metastases.