(93%) of patients. The 30-day/in hospital mortality was 21.8%. The 6 month, 1 year and 5 year survival was 75% (95% confidence interval [CI] 65 - 87), 71% (95% CI 61 - 84) and 56% (95% CI 43 - 74), respectively. The 6 month, 1 year and 5 year freedom from reintervention was 84% (95% confidence interval [CI] 75 - 95), 76% (95% CI 65 - 90) and 42% (95% CI 24 - 76), respectively. Territory of ischemia was not independently associated with mortality, but placement of stent graft proximal to the subclavian artery was associated with poor outcome (HR 2.91 (95% CI 1.09 - 8.11; P = .034).

Conclusions: Malperfusion in any territory at the time of presentation in patients with type B dissections can be treated with endovascular intervention with acceptable outcomes. The extent of aortic intervention, as opposed to branch intervention alone, may signify more serious disease, and as such is associated with worse outcome.

Author Disclosures: D. G. Clair: Endologix,Consulting fees or other remuneration (payment); M. J. Eagleton: Cook, Speaker’s bureau; R. Kelso: Nothing to disclose; S. Lyden: Medtronic,Consulting fees or other remuneration (payment); T. M. Mastracci: Cook, Speaker’s bureau; C. Ryan: Nothing to disclose; T. Sarac: AAA patents, Ownership or Partnership; S. Srivastava: Nothing to disclose.

VS4.

Video Presentation

Open Fenestration in a Patient with Acute Complicated Type B Aortic Dissection Involving the Aortic Arch

Ali Azizzadeh, Kristofer M. Charlton-ouw, Anthony L. Estrera, Hazim J. Safi. University of Texas Houston Medical School, Houston, TX

Background: Objective Acute Type B aortic dissection (TBAD) complicated by malperfusion is a challenging clinical entity. Thoracic endovascular repair (TEVAR) may be an alternative to open surgery in these patients. We present a patient with complicated TBAD and aortic arch involvement who was not a TEVAR candidate. Open fenestration was performed with resolution of the ischemic symptoms.

Methods: A 53 yo woman with hypertension presented with chest pain. Workup revealed evidence of TBAD with involvement of the aortic arch (innominate, left carotid, and left subclavian arteries). There was radiographic evidence of visceral and renal malperfusion. Medical anti-impulse therapy was initiated. The patient subsequently developed abdominal pain. Laboratory values showed elevated liver function tests, coagulopathy, and acute renal failure consistent with visceral and renal ischemia. An aortogram confirmed absence of flow to the celiac, superior mesenteric and left renal arteries. Intravascular ultrasound showed TBAD with complete true lumen collapse.

Results: Open fenestration was performed through a left thoracoabdominal approach. The aorta was clamped above the diaphragm and at the aortic bifurcation. Through a longitudinal aortotomy, the complex dissection flap (septum) was resected. The aorta was then closed primarily. The patient had an uneventful postoperative course. Her laboratory values returned to normal. She was discharged home on POD #12 in stable condition.

Conclusion: Open fenestration is a suitable option in selected patients with acute TBAD complicated by malperfusion. TEVAR was not an option in this patient due to aortic arch involvement. Vascular surgeons who treat patient with TBAD should be familiar with open fenestration techniques.

Author Disclosures: A. Azizzadeh: Gore,Consulting fees or other remuneration (payment); Medtronic,Consulting fees or other remuneration (payment); K. M. Charlton-Ouw: Nothing to disclose; A. L. Estrera: Nothing to disclose; H. J. Safi: Nothing to disclose.

S4: SVS Plenary Session IV

SS17.

Supravascular Decompression for Neurogenic Thoracic Outlet Syndrome (NTOS) in Pediatric and Adult Populations: Differential Patient Characteristics and Clinical Outcomes

Francis J. Caputo, Anna M. Wittenberg, Chandu Vemuri, Valerie B. Emery, Robert W. Thompson. Surgery, Washington University in St. Louis, St. Louis, MO

Objectives: To better understand factors determining responsiveness to treatment, patient characteristics and postoperative outcomes were examined in a series of pediatric and adult patients undergoing supravascular decompression for NTOS.

Methods: Data were obtained for patients undergoing primary supravascular decompression for NTOS from 2008-2010 (N=189), and clinical characteristics were compared between pediatric patients (age <21, N=35) and adults (age >21, N=154). Functional outcomes were assessed before and 6 months after surgery using a composite NTOS Index combining the Disabilities of the Arm, Shoulder and Hand (DASH), the Cervical-Brachial Symptom Questionnaire (CBSQ), and a 10-point Visual Analog pain scale.

Results: Pediatric and adult patients were similar with respect to gender (72.5% female), side affected (58.7% right), bony anomalies (23.3%), previous injury (55.6%), coexisting pain disorders (11.1%), and positive response to scalene muscle anesthetic blocks (95.6%). Compared to adults, pediatric patients had a significantly (P=.05) lower incidence of depression (11.4% vs 41.6%), motor vehicle injury (5.7% vs 20.1%), and preoperative use of opiate medications (17.1% vs 44.8%). Mean preoperative NTOS Index was significantly lower
in pediatric vs adult patients (152.0±11.8 vs 187.9±5.3) and postoperative length of hospital stay was 4.4±0.2 vs 4.9±0.1 days (P=.03). Although both groups exhibited significant improvement in functional outcome measures at 6-month follow-up, compared to adults the pediatric patients had significantly lower NTOS Index (33.4±10.1 vs 127.1±10.2, P<.0001) and use of opiate medications (11.4% vs 47.4%, P<.0001).

**Conclusions:** Pediatric patients undergoing supraclavicular decompression for NTOS had more favorable preoperative characteristics and enhanced 6-month functional outcomes as compared to adults. Further study is needed to delineate the age-dependent and -independent factors that promote optimal surgical outcomes for NTOS.

**Author Disclosures:** F. J. Caputo: Nothing to disclose; V. B. Emery: Nothing to disclose; R. W. Thompson: Nothing to disclose; C. Vemuri: Nothing to disclose; A. M. Wittenberg: Nothing to disclose.

**SS18.**

**Monitoring of Fetal Radiation Exposure during Pregnancy**

Venita Chandra¹, Chelsea A. Dorsey¹, Amy B. Reed², Palma Shaw³, Wei Zhou¹. ¹Vascular Surgery, Stanford Hospital and Clinics, Stanford, CA; ²Penn State Hershey Medical Center, Hershey, PA; ³Brigham and Women's Hospital, Boston, MA

**Objectives:** One unique concern of current and future women in vascular surgery remains the safety of childbearing in the setting of radiation exposure associated with increased endovascular practice. Little is known regarding actual fetal radiation exposure. This multi-institutional study aimed to evaluate the radiation dosages recorded on fetal dosimetry badges and compare them to external badges worn by the same cohort of women.

**Methods:** All women who declared pregnancy with any potential radiation exposure were required to wear two radiation monitors at each institution; one outside and the other inside the lead apron. Maternal radiation exposures prior to, during, and post-pregnancy were also assessed to determine any associated behavior modification.

**Results:** Eighty-one women declared pregnancy from 2008-2011 and 45 had regular radiation exposure. Complications of prolonged IVCF dwell times include an increased risk of deep venous thrombosis and caval thrombosis as well as filter migration and erosion through the caval wall. In 2010, the FDA issued a safety advisory addressing the growing trend of retrievable IVC filter placement, urging implanting physicians and clinicians responsible for the ongoing care of patients with retrievable IVC filters to consider removing the filter as soon as protection from PE is no longer needed.

**Technical Description:** Difficult retrieval of IVCFs due to tilting of the filter, inability to snare the hook or penetration of the filter struts through the caval wall, have been reported using a variety of techniques. This video will demonstrate several commonly-encountered challenges in IVCF retrieval, from navigating a wire from the right internal jugular vein into the IVC to the inability to snare the retrieval hook. The focus of the video is the demonstration of a snared-wire technique for challenging IVCF re-