

A than group B (thrombotic, 3.6% vs 1.5%; $P = .02$; device related, 5% vs 0.5%; $P < .0001$).

Conclusions: Indwelling retrievable IVC filters were associated with significantly higher complication rates than permanent filters. Both thrombotic and device related complications were more common with retrievable filters. Long term use of retrievable filters should be avoided, especially considering the younger population in whom they are placed.

Author Disclosures: J. A. Caprini: Nothing to disclose; T. R. Desai: Nothing to disclose; N. Gupta: Nothing to disclose; D. Hahn: Nothing to disclose; B. B. Lind: Nothing to disclose; O. C. Morcos: Nothing to disclose; N. Schindler: Nothing to disclose; D. Warner: Nothing to disclose.

SS23.

Venous Ulceration and Perforator Sclerotherapy: Successful Injection Predicts Healing

Misaki Kiguchi, Eric Hager, Stanley A. Hirsch, Rabih Chaer, Larry Fish, Elizabeth Genovese, Ellen D. Dillavou. University of Pittsburgh Medical Center, Pittsburgh, Pa

Objectives: Describe and quantify the effects of perforator sclerotherapy on venous ulcers (CEAP 6) without axial reflux

Methods: Retrospective analysis of ultrasound (US)-guided perforator injections from 1/2010-11/2012 identified 73 venous ulcers in 62 patients. Patients had no axial reflux. Perforating vein identification and closure were assessed with US. Refluxing perforators near the ulcer were injected with polidocanol foam created in a 4:1 mixture with air. 98.4% of patients had US follow-up performed 2-6 weeks after injection. Ulcers were divided into two groups: group 1 healed ulcer(s); group 2 either healed and recurred/never healed. All patients were treated with compression therapy. Demographics, comorbidities, treatment details and outcomes were analyzed. $P \leq .05$ was significant.

Results: 32 patients had healed ulcers; 30 had at least 1 non-healed ulcer. Comparisons of patients with healed vs non-healed ulcers were: age 60.2 vs 61.3 years; male gender 50% vs 60%; history of deep vein thrombosis (DVT) 31.3% vs 33.3% ($P = NS$ for all). Of the 73 total ulcers, 43 ulcers were healed (group 1); 30 ulcers recurred/never healed (group 2) for a healing rate of 59.9%. Initial ulcer size was 3.44 cm^2 vs 15.1 cm^2 ($P = NS$).

189 injections were performed with a 53.8% successful closure rate per injection. Successful thrombosis occurred in 68.8% of group 1 vs 37.8% of group 2 ($P < .001$). Group 1 ulcers averaged 2.2 injections per ulcer vs 2.9 in group 2 ($P = .16$). 24.7% of ulcers healed with a single perforator injection. Post procedure DVTs were seen: 5.8% of injections (11/189); four in group 1; seven in group 2 ($P = NS$). No other injection complications were seen. 88.1% of group 1 ulcers had perforator closure at the end of follow-up vs 67.8% of group 2 ulcers ($P = .038$).

Conclusions: Successful thrombosis of pathologic perforators with compression therapy increases ulcer healing and was found to be the only predictor of ulcer closure.

Perforator closure may require multiple injections and is associated with low DVT rates.

Author Disclosures: R. Chaer: Nothing to disclose; E. D. Dillavou: Nothing to disclose; L. Fish: Nothing to disclose; E. Genovese: Nothing to disclose; E. Hager: Nothing to disclose; S. A. Hirsch: Provensis, Research Grants; M. Kiguchi: Nothing to disclose.

S6: SVS Plenary Session VI

SS24.

Is Current Recommended Management of Isolated Degenerative Femoral Artery Aneurysms (IFAA) Too Aggressive for Its Natural History?

Michael P. Harlander-Locke¹, Peter F. Lawrence¹, Gustavo S. Oderich², Bernardo Mendes², Michelle Mueller³, Misty D. Humphries³, Gregory J. Landry⁴, Jeffrey L. Ballard⁵, Preston Flanigan⁵, Christopher J. Abularrage⁶, William C. Pevec⁷, Nasim Hedayati⁷, Sam S. Ahn⁸. ¹Vascular Surgery, University of California Los Angeles, Los Angeles, Calif; ²Mayo Clinic, Rochester, Minn; ³University of Utah, Salt Lake City, Utah; ⁴Oregon Health and Science University, Portland, Ore; ⁵St. Joseph Hospital, Orange, Calif; ⁶Johns Hopkins Hospital, Baltimore, Md; ⁷University of California Davis, Sacramento, Calif; ⁸University Vascular Associates, Los Angeles, Calif

Objectives: Previous studies have combined anastomotic, catheter-induced, and IFAA to achieve adequate numbers for analysis, and have recommended repair of asymptomatic IFAA with diameters ≥ 2.5 cm and all symptomatic IFAA. This study evaluates the contemporary management of IFAA, using these criteria.

Methods: Patients with IFAA were evaluated using a standardized, prospectively maintained database by a research consortium.

Results: From 2002-2012 236 IFAA were identified in 182 patients (mean age, 72; M:F, 16:1) at eight institutions. Nonoperative mean diameter was $2.8 \pm .7$ cm; operative diameter was 3.3 ± 1.5 cm. IFAA location was: CFA (191), SFA (34), and PFA (11). Synchronous aneurysms (mean = 1.7/patient) occurred in the aorta (181), iliac (126), popliteal (96), hypogastric (63), mesenteric (17) arteries, and contralateral SFA (7) and PFA (2). 66% of repaired aneurysms were asymptomatic; other indications included: claudication (18%), local pain (8%), nerve compression (3%), rupture (3%), acute thrombosis (1%), embolus (1%), and rest pain (.5%). Acute complications (rupture, thrombosis, embolus) were associated ($P < .05$) with IFAA diameter > 4 cm and intraluminal thrombus, but not location. Mean diameter of symptomatic aneurysms was: rupture, 5.7 ± 1.3 cm; thrombosis, 4 ± 1.1 cm; and embolus, $3.6 \pm .1$ cm. 174 IFAA were repaired with interposition or bypass graft; three underwent endovascular repair. There were two perioperative deaths at 30 days (MI, MSOF); operative complications included wound infection (6%), seroma (3%), and bleeding (2%). No amputations occurred up to 5 years in either the nonoperative or operative groups. Survival was: 3 months = 99% (138), 1 year = 92% ($n = 104$), and 5 years = 81% (20) in operated patients.

Conclusions: This largest study of IFAA demonstrates that: 1. Acute complications did not occur in aneurysms smaller than 3.5cm; repair criteria for asymptomatic FAA should be changed to >3.5 cm 2. The presence of chronic FAA thrombus should reduce the threshold for elective repair. 3. Criteria for symptomatic FAA repair should remain unchanged.

Author Disclosures: C. J. Abularrage: Nothing to disclose; S. S. Ahn: Nothing to disclose; J. L. Ballard: Nothing to disclose; P. Flanigan: Nothing to disclose; M. P. Harlander-Locke: Nothing to disclose; N. Hedayati: Nothing to disclose; M. D. Humphries: Nothing to disclose; G. J. Landry: Nothing to disclose; P. F. Lawrence: Nothing to disclose; B. Mendes: Nothing to disclose; M. Mueller: Nothing to disclose; G. S. Oderich: Nothing to disclose; W. C. Pevec: Nothing to disclose

VS6.

Video Presentation

Trans-Catheter Aortic Valve Replacement Access, Complications, and Bailouts

Manish Mehta¹, Augustin J. Delago³, Edward V. Bennett², Lewis W. Britton², Mohammed C. El-Hajjar², R. Clement Darling¹, Philip S. Paty¹, Yaron Sternbach¹.
¹The Vascular Group, The Institute for Vascular Health and Disease, Albany Medical College, The Center for Vascular Awareness Inc, Albany, NY; ²Albany Medical Center Hospital, Albany Medical College, Albany, NY; ³Capital Cardiology Associates, Albany Medical Center Hospital, Albany Medical College, Albany, NY

Background: Transcatheter aortic valve replacement (TAVR) has revolutionized treatments for patients with severe symptomatic aortic valve stenosis. In 2011 FDA approved TAVR for surgically inoperable patients, and in 2012 for surgical high risk patients. Currently randomized trials are underway evaluating the efficacy of TAVR for surgical low risk patients. Similar to TEVAR, TAVR requires navigation of 22-25Fr sheaths and catheters across the aortoiliac segments and expose patients to the risks of arterial injury, bleeding, and stroke. As vascular surgeons we have participated in nearly 100 TAVR procedures, and can attest to the importance of vascular surgeons involvement in not only limiting patient risks, but also in expanding the indications for patients with critical aortic stenosis and no other treatment options, as well as in managing bailouts following complications of these procedures.

Technical Description: This video presentation will focus on the implications of appropriate access during TAVR. Tips and tricks to the bailout procedures needed during misplaced aortic valves that require retrieval, as well as diagnosis and treatments for arterial injury during trans-femoral and trans-apical TAVR.

Author Disclosures: E. V. Bennett: Nothing to disclose; L. W. Britton: Nothing to disclose; R. Darling: Nothing to disclose; A. J. Delago: Nothing to disclose; M. C. El-Hajjar: Nothing to disclose; M. Mehta: Abbott Vascular, Inc, Cordis Corporation, Terumo Cardiovascular Systems Corporation, Trivascular, Inc, W.L. Gore & Associates, Inc, Lomard Medical Technologies Inc, Bolton

Medical, Inc, Medtronic Inc, Aptus Endosystems Inc, ev3 Endovascular, Inc, Maquet Cardiovascular Harvest Technologies Corp, Research GrantsEV3 ENDOVASCULAR, INC, W.L. GORE & ASSOCIATES, INC, CORDIS CORPORATION, TRIVASCULAR, INC, Consulting fees or other remuneration (payment); P. S. Paty: Nothing to disclose; Y. Sternbach: Medtronic, Inc, Speaker's bureau.

SS25.

Management of Acute Limb Ischemia in the Pediatric Population

Ahmed Kayssi¹, Furqan Shaikh², Graham Roche-Nagle¹, Barry Rubin¹, Leonardo R. Brandao², Suzan A. Williams².
¹Division of Vascular Surgery, University Health Network, University of Toronto, Toronto, Ontario, Canada; ²Division of Haematology/Oncology, The Hospital for Sick Children, University of Toronto, Toronto, Ontario, Canada

Objectives: Acute limb ischemia (ALI) in pediatric patients is rare but may lead to limb loss and life-long complications. The aim of this study was to review the experience of a Canadian tertiary pediatric center with the medical and operative management of ALI.

Methods: The charts of in-patients diagnosed with acute upper or lower limb ischemia between 1999-2012 were reviewed. Patient demographics, arterial clot site and etiology, intervention, anticoagulation type and duration, and short and long-term complications were analyzed.

Results: 136 patients presented with signs of limb ischemia (46% female, 34% younger than 30 days, 51% between 1-12 months, and 15% between 1-18 years). 95% involved the lower limbs. 85% of arterial clots were totally occlusive. 92% were due to vessel catheterization, 5% were idiopathic, and 2% were due to hereditary hypercoagulable states. 96% were managed nonoperatively. Patients were treated with a combination of thrombolysis, unfractionated or low molecular-weight heparin, aspirin and/or warfarin (duration, 1 day-13 years). All patients were followed post-discharge at our institution or at their referring hospital (average, 3.5 years). 13% had complications related to ALI or anticoagulation (limb length or thigh circumference discrepancy, or intracranial hemorrhage). 25 patients died of unrelated causes (sepsis, multi-organ dysfunction, or cardiac failure).

Conclusions: In contrast with adults, ALI in children can generally be managed nonoperatively with anticoagulation, likely because of their greater ability to develop arterial collaterals. Long-term follow-up by a multidisciplinary team of pediatric and surgical specialists and allied health professionals is integral to achieving a successful outcome.

Author Disclosures: L. R. Brandao: Nothing to disclose; A. Kayssi: Nothing to disclose; G. Roche-Nagle: Nothing to disclose; B. Rubin: Nothing to disclose; F. Shaikh: Nothing to disclose; S. A. Williams: Nothing to disclose.

SS27.

The Positive Effect of Reentry Device With Intravascular Ultrasound on Technical Success, Safety and Patency of Subintimal Angioplasty of Chronic Total Occlusion in Iliac Arteries