the time; two veins, 27.6%; three veins, 4.8%; four veins, 4%; five veins, 0.8%; and six veins, 0.4%. Calculation of potential ablations was performed, excluding superficial reflux in 2.6% of limbs with small diameter, 5.6% with segmental reflux, 4.4% with tributary reflux, and 6.0% with nonsaphenous reflux that would receive adjunct procedures including microphlebectomy or ultrasound-guided foam sclerotherapy. These adjunct procedures would account for 18.6% of therapy, whereas 64.0% would be ablative therapy. Past deep venous thrombosis was found in 7.2%; 2.8% had concurrent superficial and deep venous thrombosis.

Conclusions: From these data, we can assume that the average patient presenting with venous complaints would have symptomatic disease with great saphenous vein reflux and would require one or two ablations based on the prevalence of saphenous reflux in the population. Patients who had at least one saphenous vein with reflux would have an average of 1.6 ablations/patient.

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Continuous Aspiration Thrombectomy of Acute Inferior Vena Cava and Inferior Vena Cava Filter Occlusions—Does It Work and Is It Safe?

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Objective: Acute thrombosis of the inferior vena cava (IVC) and IVC filters has significant morbidity. Traditional endovascular management is pharmacomechanical with varying amounts of thrombolytics. Hemorrhagic complications from thrombolytics can be life-threatening. Rheolytic thrombectomy is effective, but complications include blood loss and renal insufficiency. Continuous aspiration thrombectomy (CAT) has recently emerged as a viable option for patients with deep venous thrombosis. Early results suggest that CAT may minimize blood loss, hemorrhagic complications, and renal insufficiency. This study evaluated the safety and efficacy of CAT in treating acute IVC thrombus and acutely occluded IVC filters.

Methods: This is a single-center, retrospective study conducted to analyze patients with acute IVC thrombus and acutely occluded IVC filters undergoing CAT. Patients were treated between December 2015 and September 2018. All patients underwent CAT. The primary end point was the periprocedural success, defined as an antegrade flow after CAT. Secondary end points were total lytic dose, hemorrhagic complications, and blood loss.

Results: A total of 156 vacuum-assisted thrombectomy procedures were performed. Of these, 21 procedures were performed on patients with acute DVT, 8 of whom presented with thrombus in the IVC or had an acute IVC filter occlusion. Antegrade flow was established after vacuum-assisted closure in seven of these patients. The mean preoperative and postoperative blood loss was 12.3/36.6 and 9.8/29.5, respectively. Access site hematomas were reported in two patients. No other complications, such as perforation, intracranial hemorrhage, or retroperitoneal bleeds, were reported. The range of lytic dose was 0 to 35 mg, with an average of 20.5 mg.

Conclusions: CAT is an emerging technology for arterial and venous thromboembolism. This is the first study analyzing CAT for acute IVC thrombus and occluded IVC filters. The study results suggest that CAT is safe and promising for the treatment of acute IVC thrombosis and acutely occluded IVC filters. Further investigation is necessary to establish a protocol for CAT in patients with IVC disease.

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Vein Surgery Practice Patterns Differ Between Vascular Surgeons and Other Physicians

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Objective: A dramatic increase in utilization of venous procedures has occurred during the past decade. Significant variation in practice pattern among physicians has become apparent. Given the destructive nature of these procedures, this variation has the potential to lead to large disparities in the quality of care delivered to patients with venous disease. The aim of this study was to determine the variation in vein surgery practice patterns between vascular surgeons and other physicians.

Methods: A retrospective review of a health insurance procedure claims database for the years 2014 to 2016 was conducted. All ablation, sclerotherapy, and phlebectomy procedures were included. Physicians were classified as vascular surgeon or other physician based on American Board of Surgery vascular surgery board eligibility. Indications for each procedure were classified as "neither symptoms nor complications," "symptoms only," "complications only," or "both symptoms and complications" based on the diagnosis codes associated with each procedure. Procedures performed on the same date were assumed to be part of the same case. The number of procedures and cases per patient was calculated. Distribution of indications for procedure and average procedures and cases per patient were compared between vascular surgeons and other physicians by χ^2 test and Welch *t*-test, respectively.

Results: A total of 368 procedures performed for 219 cases on 135 patients by 6 vascular surgeons and 11 other physicians were analyzed. The distribution of indication for procedures for vascular surgeons (neither symptoms nor complications, 0; symptoms only, 27; complications only, 97; both symptoms and complications, 71) was significantly different from that for other physicians (neither symptoms nor complications, 10; symptoms only, 81; complications only, 61; both symptoms and complications, 21; $P < .0001$; Fig 1). Vascular surgeons performed the

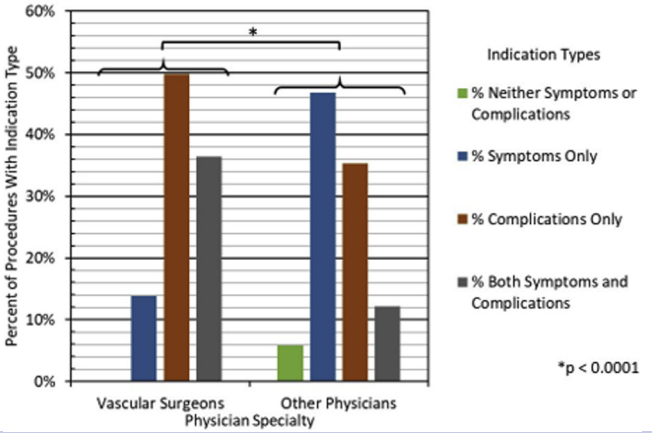

Fig 1. Indications for procedure by specialty.

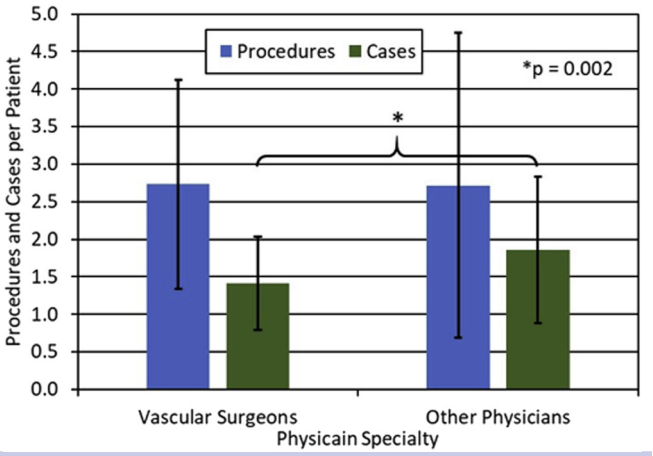

Fig 2. Procedures and cases per patient.