

## AN INTERVIEW WITH...

# Cynthia K. Shortell, MD

Dr. Shortell shares insight into her response to the COVID-19 outbreak as both a vascular surgeon and a journal editor, advice for preventing physician burnout during the pandemic, a look at the 2020 update of the CEAP classification, and more.

*Editor's note: This interview was conducted in April 2020.*



### **How is your institution planning for resumption of vascular services once restrictions on elective procedures are lessened or removed?**

We've been fortunate at Duke so far in that our resources have not been overwhelmed by COVID-19, so we have been able to continue to provide care for patients with very large or symptomatic aneurysms, chronic limb-threatening ischemia with rest pain or tissue loss, symptomatic carotid disease, and all acute vascular issues. We are using a priority scale to determine which patients to reschedule and in what order. Our tentative plan is to return to our outpatient clinic, with appropriate precautions, in mid-May.

### **As Associate Editor of the *Journal of Vascular Surgery: Venous and Lymphatic Disorders (JVS-VL)*, what do you see as the roles and responsibilities of the publication in addressing the unique medical and surgical problems faced in patients with COVID-19?**

As stewards of the information disseminated by our journals, we are always focused on publishing the highest possible quality of information and science for our readers. That is still true during this crisis, and at the same time, we must prioritize advancing this information as quickly as possible. Fortunately, we have great leadership and a terrific team, which allows us to identify relevant submissions and streamline the process so that we can get important findings to those providing care to affected patients. Interestingly, one of the things that we are discovering that is uniquely of interest to vascular and endovascular specialists is the effect of the virus on bleeding and clotting. Hypercoagulability and bleeding disorders are seen in infected individuals, and

we need much more data to help us understand how best to manage and treat these conditions.

### **Do you have any advice for physicians experiencing burnout, particularly in the midst of the pandemic? How can hospitals protect the mental well-being of physicians during this time?**

For vascular specialists who are not on the front lines of the COVID-19 response, the hardest part of this crisis is yet to come. Working to organize and treat patients whose care has been postponed, facing financial challenges, and supporting those who depend on us in the weeks and months to come will be stressful. I certainly don't have any novel solutions, but our hospital has done a few things that I think have been very helpful. The hospital set up a childcare network for health care workers, ensured that we have adequate personal protective equipment, put appropriate policies in place for high-risk situations (for instance, we were one of the first hospitals in North Carolina to test all patients for COVID-19 before surgery), helped make support resources available, and actively express support and appreciation every day. Duke has also committed to maintain employment for all workers through midsummer. To me, the most important resource we have to prevent burnout is each other.

### **Switching gears, as leader of the Duke Vascular Malformation team, which areas of the group's research are you most excited about?**

Over the years, our team has contributed a number of important things to the diagnosis and management of patients with congenital vascular malformations. We were the first to report the use of foam sclerotherapy—which had long been used in the treatment of venous disease—to treat venous malformations.

*(Continued on page 81)*

(Continued from page 82)

Our team of radiologists helped us adopt a technique called dynamic contrast-enhanced MRI to detect flow characteristics of malformations, and we demonstrated the importance of having a multidisciplinary team to care for this complex group. Most recently, we reported the largest-ever series of pediatric patients with low-flow malformations treated safely and effectively with foam sclerotherapy.<sup>1</sup>

**You were involved with the 2020 update of the CEAP (clinical, etiology, anatomy, pathophysiology) classification for patients with chronic venous disorders, which was published in the May 2020 issue of *JVS-VL*.<sup>2</sup> Can you tell us about some of the most important changes and why this update was necessary?**

Bo Eklöf, MD, one of the originators of the CEAP concept and developers of the original classification scheme 25 years ago, wrote an excellent piece describing the importance of the new CEAP classification, and I strongly encourage anyone who is interested in this topic to read his editorial in *JVS-VL*.<sup>3</sup> The major revisions that clinicians will recognize are updates to the “C” section of the system, which include an “r” designation for recurrent disease, and the addition of a C4c designation for patients with corona phlebectatica. Philosophically, it was important to ensure that the new system was evidence-based, internally consistent, compatible with the previous iteration from 2010, and, to quote Dr. Eklöf, that “CEAP remained the discriminative instrument, while the VCSS [Venous Clinical Severity Score] was the evaluative instrument.”

**How would you describe your treatment algorithm for nutcracker syndrome?**

There are a few challenges in diagnosing and treating patients with potential nutcracker syndrome. First, the symptoms, such as pelvic or flank pain, may be quite nonspecific. Second, not everyone with radiologic findings of left renal vein compression has a pathologic condition. Unfortunately, there is no definitive diagnostic test for nutcracker syndrome, so it is very important to pay careful attention to all of the clinical and diagnostic information available when making a

decision. Patient selection is really crucial to successful outcomes. First and foremost, we start with history and physical examination. A venous reflux study and urinalysis are performed, followed by axial imaging (we prefer MRI). If the findings of these investigations point toward nutcracker syndrome, our final diagnostic test is a catheter-based study in which we cannulate the left renal artery and look for reflux in the delayed images. Most of the time, the left gonadal vein is carrying the reflux, is enlarged, and can be used for a gonadal vein transposition when clinically appropriate. It’s very important to look for concomitant May-Thurner syndrome, which should be treated first if present.

**What role do you think artificial intelligence (AI) will play in the future direction of venous disease treatment?**

I’m not an expert in AI, but it is certainly clear that it will play a very important role in the delivery of health care in the future. Specifically, AI will help us get away from the “one-size-fits-all” approach and move toward more personalized solutions to treating venous disease. I hope that using AI will help us make decisions on things such as who will benefit from iliac stenting, who needs both their great and small saphenous veins ablated, who we should treat with thermal versus non-thermal ablation, and so on. It may help us avoid insurance denials and, on the flip side, avoid unnecessary procedures. ■

1. Markovic JN, Nag U, Shortell CK. Safety and efficacy of foam sclerotherapy for treatment of low-flow vascular malformations in children [published online April 10, 2020]. *J Vasc Surg Venous Lymphat Disord*.
2. Lurie F, Passman M, Meisner M, et al. The 2020 update of the CEAP classification system and reporting standards. *J Vasc Surg Venous Lymphat Disord*. 2020;8:342-352.
3. Eklöf B. New revision of the 25-year-old CEAP classification is timely and warranted. *J Vasc Surg Venous Lymphat Disord*. 2020;8:341.

**Cynthia K. Shortell, MD**

Director, Surgery COVID Response Team  
Professor and Chief of Vascular and Endovascular Surgery

Executive Vice Chair, Department of Surgery  
Duke University Medical Center

Durham, North Carolina  
cynthia.shortell@duke.edu

*Disclosures: None.*