

Journal of Vascular Surgery: Venous and Lymphatic Disorders – November 2019 Audiovisual Summary

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My name is Peter Lawrence, and as the Senior Editor of the *Journal of Vascular Surgery: Venous and Lymphatic Disorders*, I'd like to tell you about the papers that we are highlighting in the November issue of our *JVS-VL*.

The first paper, "Prevention and treatment of dilator injuries during central venous catheter placement," which is both our Editors' Choice and CME paper of this issue, is by Collier from Sewickley, Pa.¹ He reviewed 20 settled malpractice cases in which there was a central venous injury after placement of a central line. The mortality was extremely high at 85%, probably because these patients had untoward outcomes that lead to a malpractice case. Injuries are most common in the left innominate vein, as seen in the diagram. Also, they often occurred when the sheath was advanced to the hub. There were significant recommendations by the author to avoid a catastrophic complication. First, always use ultrasound guidance. Second, when advancing the sheath, wire, or catheter, resistance is often the first sign of a potential major vascular injury, so the wire, sheath, or catheter should not be forced. Next, if there is hypotension or cardiovascular instability, consider a major vascular injury. The catheter should not be immediately removed, since this may lead to uncontrollable hemorrhage into the chest. Lastly, have a covered stent available and use thoracoscopy to try to visualize the catheter in the chest cavity. If there is evidence of a venous injury, perform any procedure in an operating room environment where the chest can be rapidly opened.

The second paper, "Impact of inferior vena cava ligation on mortality in trauma patients," by Byerly and coauthors,² retrospectively reviewed 443 patients with isolated venacaval injuries that were entered into the National Trauma Databank. They compared venacaval ligation with repair and found that those with ligation had a much higher need for fasciotomy and an increased frequency of deep vein thrombosis and acute kidney injury. Those with venacaval repair had a similar amputation compared with ligation, an insignificantly higher mortality, and a comparable risk of compartment syndrome. Since the extent of venacaval injury and indications for repair varied by institution, the conclusion from this paper should be that venacaval repair is preferable, but ligation can be performed if repair is not technically feasible or in the unstable patient for damage control.

The next paper in this issue, "A comparison between intravascular ultrasound and venography in identifying key parameters essential for iliac vein stenting," by Montminy and colleagues,³ is a single-center retrospective study of 152 patients who had both imaging techniques and compared the anatomic accuracy of each. The authors found that venography showed a significantly higher and inaccurate venacaval confluence than IVUS and venography also missed disease at the distal landing site. IVUS was more accurate in identifying the disease location; in 51% of patients, venography either failed to identify the stenosis or location of the stenosis. The authors, based on their extensive experience with iliac vein stenting, recommend using IVUS routinely when stenting iliac veins, since it is the more accurate imaging device in guiding accurate stent placement.

The last paper for this month, "Significant physician practice variability in the utilization of endovenous thermal ablation in the 2017 Medicare population" is from Mann and colleagues.⁴ They reviewed the Medicare database for endovenous thermal ablations and identified 102,145 patients who underwent the procedure in that year. There was great variation in the number of ablations performed by a physician in a single setting, with a mean of 1.9 for 2462 physicians, but there were 106 outliers (4.3%) who did a mean of >3.4 ablations per patient. Those who were outliers had fewer years in practice and had not trained in a vascular residency. This paper adds to the growing body of literature on inappropriate venous care, which is also being addressed by the American Venous Forum ethics committee, who are in the process of developing appropriateness guidelines.

We hope you enjoy these papers and the rest in the November issue of the *Journal*.

The video accompanying this article may be found online at www.jvsvenous.org.

REFERENCES

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