

A Framework for Developing a Comprehensive Venous Practice

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Abstract

Chronic venous disease (CVD) of the lower extremities is a complex process encompassing abnormalities related to venous drainage secondary to thrombotic and non-thrombotic pathologies. CVD can have an untold economic impact due to lost productivity and the costs of treating its sequela and underlying aetiologies. Building a comprehensive venous service for the treatment of CVD requires a multifaceted approach with longitudinal care, similar to those that have been developed for peripheral arterial disease and oncology.

Keywords

Chronic venous disease, deep vein thrombosis, lower limbs, multidisciplinary care, pelvic venous disease

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Chronic venous disease (CVD) of the lower extremities is a complex process encompassing abnormalities related to venous drainage secondary to thrombotic and non-thrombotic pathologies. It has been reported that about 50% of people have CVD. Even more staggering is the untold economic impact due to lost productivity and healthcare costs of treating its sequelae and underlying aetiologies.

The 2022 European Society of Vascular Surgery Clinical Practice Guidelines on the Management of Chronic Venous Disease of the Lower Limbs states that the first step towards improving the diagnosis, management and treatment of CVD involves developing a comprehensive multidisciplinary venous care team.¹ This requires identifying patient referral pathways and healthcare professionals involved in each aspect of their care, from external channels to internal sources at one's own institution. These patients require multidisciplinary and chronic follow-up owing to the complexity of CVD and its treatment. Those who treat CVD are the best advocates for their patients and they need to continue to foster awareness of the impact of this disease.

Reaching Your Audience

Patients have become more able to research and educate themselves about conditions and diseases and are more proactive regarding their health. Direct patient outreach using educational posts on social media and other web-based platforms (such as an institutional departmental information page or advertisement) are easily searchable. These provide publicity and an initial point of contact with patients. In addition, free or discounted vein screening clinics with point-of-care ultrasound provide a great opportunity for growth. If point-of-care vascular ultrasound is not available, ensure that there is a streamlined process to refer patients for a dedicated venous ultrasound. Meticulous selection of patients with clinical history, signs and/or symptoms of CVD is crucial, as ultrasound is

able to identify clinically insignificant venous abnormalities. Advertising these clinics in one's institution via newsletters, posters or bulletins can help increase exposure to other healthcare employees, whether they be future patients or potential referrers.

Outreach to other healthcare professionals, such as primary care physicians, hospital doctors, obstetricians and gynaecologists (OB/GYN), haematologists, physical medicine and rehabilitation specialists and wound care specialists, via lectures, talks and ground rounds will start a dialogue and open new avenues for patient care. CVD is often absent from medical education – or it is only covered superficially. Directly contacting institutional and local healthcare leaders – such as residency programme directors, heads of department, specialty and medical society education chairs and private practice partners – and offering to present a lecture will continue to expand your audience and referral base.

Partnering with front-line specialties such as emergency medicine, family medicine, internal medicine and hospital medicine will continue to improve patient care. Often, the first presentation of CVD symptoms is in these settings – especially in patients with acute deep vein thrombosis (DVT). For example, creating a DVT algorithm for treatment and follow-up can streamline acute and longitudinal care. A minority of patients with acute DVT may develop moderate-to-severe post-thrombotic syndrome, which requires chronic follow-up. A treatment algorithm with close longitudinal follow-up will identify those patients early, offering them better outcomes with interventions when needed. Following these patients may also help diagnose additional underlying venous issues such as peripheral venous insufficiency.

Many practices that treat CVD also treat patients with peripheral arterial disease. Screening patients in one's own practice for signs and symptoms

of CVD is good clinical practice for providing comprehensive vascular care.

Outpatient Clinic, Imaging Support and Procedural Infrastructure

Establishing an outpatient clinic is integral to developing a thriving practice. The reasons for this are several and include:

- Developing a close doctor-patient relationship.
- Educating patients on diagnosis, management and treatment options.
- Providing confidence to referring providers that you are responsible and provide long-term follow-up to patients.
- To track your complications and short- and long-term outcomes, especially in the current era of value-based care, which ensures that healthcare provides value for money.
- To develop your reputation as a physician.
- To receive reimbursement for evaluation and management coding in the US healthcare system.

While dedicated clinics can be time-consuming and less financially rewarding than doing procedures, providing this longitudinal comprehensive care is what separates the proceduralist from the true clinician.

Complete evaluation includes partnering with radiology and vascular labs. Evaluation of CVD patients includes cross-sectional imaging to map underlying pathology before intervention. Dedicated vascular imagers who are familiar with venous disease and the multiple modalities that evaluate it, such as MR and CT venography, and ultrasound, are critical to classifying the underlying diagnosis. One of the lynchpins for vascular imaging are ultrasonographers trained in performing thorough reflux ultrasound of the lower extremity. Well-trained ultrasonographers and experienced imagers will not only streamline and standardise diagnosis and treatment pathways but will also be able to identify those patients who do not fit standardised criteria. While knowledge of the acquisition and interpretation of diagnostic imaging is crucial to ensure a proper treatment plan, the main driver of treatment should rely on the patient's clinical history and physical examination.

Once the diagnosis has been established, dedicated treatment spaces should be used. Superficial venous disease can often be treated in an outpatient or office-based setting. These patients tend to be ambulatory and complications tend to be limited and infrequent. While these cases can be performed in the hospital, it is often less efficient and more costly to the patient. More complex venous disease will necessitate high-level

investigation with techniques and image interpretation of catheter-directed venography and intravascular ultrasound (IVUS) requiring resource-intensive dedicated angiography suites with support staff and access to inpatient facilities, as complex CVD cases may require a hospital stay. Hospitals that care for complex vascular patients will have nurses and support staff familiar with post-procedural care and possible complications. Early identification of signs or symptoms associated with highly morbid complications, such as haemorrhage and re-thrombosis, can help mitigate potentially poor outcomes. Embarking on complex venous procedures should not be taken lightly. Appropriate levels of training and expertise, as well as an established infrastructure for the care of high-acuity patients, is necessary for positive outcomes and to avoid disastrous complications.

Continuity of Care

After patients have been identified as having CVD and appropriate treatment has been initiated, a multifaceted and multidisciplinary follow-up approach is crucial if you are to achieve positive patient outcomes. Outpatient clinic follow-up is as important, if not more important, than the initial clinic evaluation. Many of these patients have multiple comorbidities that contribute to their venous health and will inhibit their return to full functionality. Management of the complications associated with CVD, its risk factors, as well as the associated sequela of those risk factors requires collaboration with different specialties. Direct contact with haematology (specifically those with an interest in thrombosis), OB/GYN, diagnostic radiology, vascular surgery, cardiology, physical medicine and rehabilitation, physiotherapy/occupational therapy, wound care, lymphoedema specialists and social work can be beneficial. Much like cancer care, interdisciplinary relationships should form the cornerstone of care for patients with CVD.

Advocacy beyond the direct clinical space via involvement with institutional and national committees and international societies will drive change and build a better future for patients with CVD. As new therapies and techniques develop, dissemination of information is the most robust tool for patient advocacy.

Conclusion

Building a comprehensive CVD practice begins with education and the development of internal and external collaboration for holistic patient care. Longitudinal multidisciplinary outpatient management of these patients with appropriate imaging, procedural and peri-procedural infrastructure in place is critical for positive outcomes. CVD advocacy is a great starting point and is an ongoing mission with the goal of developing a comprehensive venous practice. □

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