Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Ruth L. Bush, MD, JD, MPH, SECTION EDITOR

Review and commentary of key non-JVS-VL articles

Prevention and Treatment of Venous Thromboembolism Associated with Coronavirus Disease 2019 Infection: A Consensus Statement Before Guidelines

Zhai Z, Li C, Chen Y, Gerotziafas G, Zhang Z, Wan J, Liu P, Elalamy I, Wang C. Thromb Haemost 2020;120:937-948.

Key Finding: The novel coronavirus (severe adverse respiratory syndrome coronavirus 2) has been associated with an increased risk of vascular thromboembolic disease. Given the lack of clear guidelines and constantly emerging data, a framework for the prevention and management of venous thromboembolic events is proposed.

Study Summary: The authors have summarized succinctly the biologic basis for an increased risk of venous thromboembolism in patients with coronavirus disease 2019. Rather than a thrombotic process, multiple studies have shown the virus to initiate a profound primary inflammatory state accompanied by hypoxia and acute lung injury. Multiple serum marker levels become elevated, associated coagulopathies develop, and complement activation occurs in some patients. The authors reviewed the screening protocols and prophylactic and therapeutic anticoagulation regimens. The authors proposed the use of dedicated ultrasound equipment and a higher threshold for imaging studies given the current isolation recommendations hindering the logistical performance of such studies.

Commentary: The authors present in Fig 1 a very concise and flexible algorithm that can be adjusted as new information is forthcoming about the novel coronavirus. Four main domains (inflammatory risk, clinical suspicion for venous thromboembolism, feasibility of imaging, and management) can be assessed and also modified for an individual facility while maintaining the safety of patients and staff. We are all learning and adapting to this new normal.

Frequency and Severity of Hypersensitivity Reactions in Patients After VenaSeal Cyanoacrylate Treatment of Superficial Venous Insufficiency

Gibson K, Minjarez R, Rinehardt E, Ferris B. Phlebology 2020;35:337-344.

Key Finding: A low percentage of patients will have hypersensitivity reactions after VenaSeal cyanoacrylate therapy for chronic venous insufficiency, with most cases being mild.

Study Summary: This was a retrospective, single-center observational study of 286 patients and 379 limbs treated with VenaSeal cyanoacrylate for truncal reflux and venous insufficiency. The patients were divided into early, middle, and later periods that reflected the authors' experience and treatment modifications over time using VenaSeal, including screening patients for adhesive allergies and reactions. In these patients, 6% had hypersensitivity reactions consisting of pain, tenderness, swelling, with or without itching, and erythema. Patients with mild to moderate reactions were treated with a steroid taper. One severe reaction occurred that necessitated more than one course of steroids. The patient was later found to have a topical allergy to adhesives, including cyanoacrylate.

Commentary: The use of cyanoacrylate adhesive treatment for venous reflux avoids the need for tumescence and multiple needle sticks, as well as the need for any activity restrictions and the use of compression stockings. Unique to this treatment modality, however, are hypersensitivity reactions, albeit rare, self-limited, and, perhaps, predicted by prescreening. This treatment is a good addition to the venous surgeons' armamentarium, and, as with all treatments, patient selection is critical.

Quality of Anticoagulant Therapy and the Incidence of In-Stent Thrombosis After Venous Stenting

Notten P, van Laanen JHH, Eijgenraam P, de Wolf MAF, Kurstjens RLM, Cate HT, Cate-Hoek AJT. Res Pract Thromb Haemost 2020;4:594-603.

Key Finding: The therapeutic levels of oral anticoagulation (vitamin K antagonist; warfarin) after iliac vein stenting are important in lowering the risk of in-stent thrombosis.

Study Summary: Patients (n = 79) with venous stents placed for iliofemoral or iliocaval obstruction received oral treatment with a vitamin K antagonist. Treatment quality was determined as the time within therapeutic range (TTR), expressed as the INR (international normalized ratio). A TTR <49.9% was associated with an increased risk of in-stent thrombosis, and every 1% decrease in the TTR was associated with a 4.2% increase in the development of in-stent thrombosis. A higher INR was not associated with a reduced risk of in-stent thrombosis.

Commentary: It is unclear how long a person requires anticoagulation after iliac or caval venous stent placement. Clearly, this study shows that it is important when performed for obstruction or deep vein thrombosis. Achieving a higher INR might not be necessary and was associated with an increased bleeding risk. Because direct oral anticoagulant drugs are becoming more commonly used in the United States, similar studies are necessary.

Association Between Heel-Rise Test Performance and Clinical Severity of Chronic Venous Insufficiency

Pereira DAG, Furtado SRC, Amâncio GPO, Zuba PP, Coelho CC, de Lima AP, Carvalho MLV, Monteiro DP. Phlebology 2020;35:631-636.

Key Finding: Calf muscle pump dysfunction is associated with increasing age, decreased physical activity, and worse clinical severity of chronic venous insufficiency (CVI).

Study Summary: Volunteers (n = 172) with known CVI were evaluated by counting the number of plantar flexions until the onset of fatigue. The number of repetitions and repetition rate were assessed, as were several clinical and demographic variables. The repetition rate and physical activity level contributed more to the heel-rise test and were inversely associated with CEAP (clinical, etiologic, anatomic, pathophysiologic) severity.

Commentary: The results of this study seem obvious; however, calf muscle pump dysfunction is not a part of the classification system for venous insufficiency. Perhaps it should be. Regardless, we can teach our patients this simple activity, for muscle building and endurance, decrease venous hypertension, maintain ankle mobility, and, perhaps, prevent or slow worsening of CVI.