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Review and commentary of key non-JVS-VL articles

Ultrasound with a mask and snorkel

Underwater Sonography of Leg Veins

Caggiati A, Lattimer C, Kalodiki E, Oberto S, Bergamo G, Kontothanassis D. Underwater Compression Group EJVES Short Rep 2018;41:13-5.

Conclusions: Duplex ultrasound is technically feasible and can be performed underwater, demonstrating the effects of hydrostatic compression of vein size and venous flow.

Summary: This proof of concept study of six persons (12 legs) was performed both at poolside and with legs submerged. Vein diameter and reflux times were assessed. Water immersion resulted in smaller vein diameters, decreased reflux in limbs that showed poolside reflux, and increased spontaneous vein flow. Hydrostatic pressure was calculated as the depth of the water submersion.

Comments: Although I do not think that we are going to convince our sonographers to don wetsuits or clinics to purchase waterproof equipment, this study does confirm the compression results due to water and even a small degree of hydrostatic pressure. This information can inform exercise and rehabilitation recommendations and choices in patients with venous disease.

Thrombolysis for deep venous thrombosis: 2019 and missed opportunities

Underutilization of Thrombolytic Therapy for Patients Diagnosed with Acute Deep Venous Thrombosis in the Outpatient Setting

Archie M, Archie M, O'Connell J, DeRubertis BG. Ann Vasc Surg 2018;49:255-60.

Conclusions: Acute deep venous thrombosis (DVT) is not uncommonly diagnosed in the outpatient vascular laboratory as patients are often sent to an outpatient vascular laboratory for evaluation of limb swelling or pain to rule out a DVT. Many patients who might have been candidates for thrombolytic therapy were never referred to a specialist for evaluation.

Summary: A retrospective review was conducted of 689 patients referred to an outpatient vascular laboratory for evaluation of suspected DVT. An acute DVT was found in 6.8% and chronic DVT in 9%. Extensive DVT involved the iliofemoral veins in 41 patients, of whom 15 might have been thrombolysis candidates. Of these, only five were evaluated by a vascular interventional specialist. Two patients (2/15 [33.3%]) underwent successful catheter-directed thrombolysis.

Comments: This study highlights the low percentage of acute DVT patients who might have been candidates for thrombolysis who are referred to interventional therapy. So what happened to the other patients and their DVTs? It is to be hoped that there was follow-up on the test results and that patients were counseled about the possibility of post-thrombotic syndrome. Although there are conflicting data on the use of thrombolytic therapy for DVT and its impact on post-thrombotic syndrome, early thrombus removal continues to be recommended in appropriate patients with a high burden of thrombus. Patient-centered care encourages discussion of all treatment possibilities and active engagement of the patient in the decision-making process. These authors and their study underscore the continued gap in acute DVT management discussions.

Do we need to restock the stocking shelves?

Advantages and Disadvantages of Graduated and Inverse Graduated Compression Hosiery in Patients with Chronic Venous Insufficiency and Healthy Volunteers: A Prospective, Mono-centric, Blinded, Open Randomised, Controlled and Cross-over Trial

Riebe H, Konschake W, Haase H, Jünger M. Phlebology 2018;33:14-26.

Conclusions: Graduated compression hose, although relieving clinical symptoms, are not as comfortable to wear or as easy to don as progressive, so-called inverse, graduated stockings. Compression stockings are effective in significantly reducing the volume of the lower leg, with graduated hose achieving slightly better reduction below the knee compared with inverse type, especially in chronic venous insufficiency patients.