

Vein Program Treats Full Range of Venous Conditions

From Spider Veins to Life-threatening Illnesses

More than 80 million Americans suffer from venous diseases, which produce significant morbidity and economic costs. Venous thrombosis, for example, affects 1 in 20 people over a lifetime, with an annual incidence of 2 million cases and 60,000 cases of pulmonary embolism (PE) — the third leading cause of in-hospital deaths in the United States.

“Venous disease can be far more serious than just an unsightly embarrassment,” says UAB vascular surgeon Marc A. Passman, MD. “Symptoms can include burning, pain, swelling, and chronic skin changes in lower extremities. Venous insufficiency can affect mobility, independence, and quality of life, and venous thrombosis can cause fatal pulmonary embolism.”

In Alabama and surrounding states venous diseases affect more than 1 million individuals, and regional centers providing health care for the full spectrum of venous disease are few. To address these gaps, the UAB Vein Program offers outpatient care and hospital inpatient services to provide coordinated and comprehensive treatment for venous diseases.

Passman and fellow vascular surgeons William D. Jordan Jr, MD, chief of the Section of Vascular Surgery and Endovascular Therapy; Mark A. Patterson, MD; and Steven M. Taylor, MD; provide care for severe venous thrombotic problems; offer advanced surgical options for chronic venous insufficiency (CVI); and perform catheter-based endovenous procedures and complex venous reconstruction. Vascular medicine specialist Bart R. Combs, MD, focuses on evaluation and management of venous thrombotic disease, including venous thrombosis

risk assessment and prevention, evaluation of hypercoagulable states, and medical management of anticoagulation and venous insufficiency.

“In a single setting, the UAB Vein Program identifies, evaluates, and treats the broad range of venous disease, from improving the appearance of varicose veins to surgical interventions for serious deep venous thrombosis [DVT] complications,” says UAB Vein Program Director Passman.

UAB Vein Program physicians’ extensive history treating arterial vascular problems such as aortic aneurysm, peripheral arterial disease, and carotid occlusive disease has culminated in a uniquely experienced approach for the most serious forms of venous disease with the most appropriate techniques, ranging from conventional medical therapies and minimally invasive outpatient procedures to cutting-edge surgical interventions.

VARICOSE VEINS AND TELANGIECTASIAS

More than 24 million Americans have varicose veins or spider veins, which can be a cosmetic issue for some and a medically symptomatic condition for others. These venous conditions can lead to more serious problems including spontaneous rupture, thrombophlebitis, and ulceration. Studies have found spider veins, varicose veins, superficial venous reflux, and superficial thrombophlebitis affect more women than men, but men experience higher rates of deep venous reflux and trophic skin changes (*Am J Epidemiol.* 2003;158:448-456).

UAB Vein Program physicians diagnose and individualize treatment for venous problems after a thorough evaluation of medical symptoms, history, comorbidities,



A. Ultrasound-guided needle access of the saphenous vein for endovenous ablation

B. Transillumination of varicose veins for powered phlebectomy (Trivex)

C. Before and after combined endovenous ablation and Trivex

and patient concerns; clinical examination; and noninvasive testing with venous duplex ultrasound. “We offer outpatient sclerotherapy, endovenous laser treatment, ambulatory phlebectomy, and endoscopic transillumination powered phlebectomy [Trivex] to help eliminate the unsightly appearance of veins and improve symptoms,” Taylor says. “Most are relatively simple hour-long outpatient procedures with minimal risk of scarring and postoperative infection. Recovery is rapid after such procedures, which produce excellent clinical and aesthetic outcomes.”

CVI, VENOUS ULCERS

“Compression techniques for venous stasis ulcers are cost-effective and clinically proven for the majority of venous ulcers. However, large surface area ulcers or conditions coupled with arterial insufficiency may require adjuvant techniques, including surgery,” Patterson says.

Endovenous techniques to treat superficial reflux and endoscopic techniques including Trivex, subfascial endoscopic perforator surgery (SEPS), perforator ablation, and complex venous reconstruction may benefit patients with CVI-related ulcers by locating and ligating dysfunctional veins. “Eliminating areas of treatable venous reflux with appropriate techniques can promote rapid healing of venous ulcers,” Patterson says. Studies indicate SEPS reduces morbidity, has a low recurrence rate of 3%, and facilitates healing that is up to four times faster than conventional treatment (*Seminars Vasc Surg.* 2005;18:41-48).

EVALUATING DVT

“Preventing DVT and pulmonary embolism in high-risk patients saves lives,” Combs says. US health care costs for DVT exceed \$1.5 billion per year. Death occurs within 1 month of diagnosis in 6% of people who present with DVT, and in about 12% of patients diagnosed with DVT and PE (*Circulation.* 2003;107[Suppl 23]:14-18). “We diagnose DVT with ultrasound and individualize treatment options, which include medical therapy with anticoagulants or thrombolytics and thrombectomy,” he says.

Prophylaxis in patients with a significant risk for PE is critical, especially in

high-risk situations. “Prolonged sitting, bedrest, or traveling; hypertension; smoking; complex surgery; lower body trauma; obesity; MI; stroke; congestive heart failure; hormonal changes [including hormone therapy]; family history of DVT or pulmonary embolism; advanced age; and rare coagulation disorders all contribute to increased DVT risk,” Combs says. He advises that patients with these risk factors receive appropriate preventive therapies when in high-risk situations. Formal DVT risk assessment is available through the UAB Vein Program.

Suspected DVT requires rapid evaluation for proper diagnosis and treatment to prevent life-threatening complications of PE. Up to half of those diagnosed with DVT have no painful symptoms. “Anticoagulation is traditional therapy for DVT, and newer anticoagulants are available,” Jordan says. “Thrombolytics are an established component of clot management, and we are exploring a potentially expanded role for these drugs. Traditionally reserved for patients with highly symptomatic or severe extremity venous disease, thrombolytics and catheter thrombectomy are emerging as important tools in preserving venous valve function and will hopefully prevent some severe problems of postphlebotic venous insufficiency.”

IVC FILTERS

Patients at risk for PE or with the diagnosis of DVT who cannot tolerate anticoagulants or antithrombotic therapy may be candidates for inferior vena cava (IVC) filters. Using a variety of imaging options and minimally invasive techniques, IVC filters are placed to prevent clot migration to the lungs.

“Prophylactic use of permanent or retrievable filters may be appropriate in certain illnesses or injuries that result in prolonged immobility, when risks of thromboembolism are increased and anticoagulation is contraindicated,” Passman says. When critically ill patients who are at significant risk for venous thromboembolism cannot tolerate transport, he performs bedside vena cava filter placement using transabdominal duplex ultrasound or intravascular ultrasound. Passman has extensive

experience placing bedside filters for prophylaxis in high-risk DVT patients. A Vanderbilt University study showed the bedside approach with ultrasound placement performed by trained vascular surgeons is a safe, cost-effective, and convenient alternative, with success rates comparable to standard techniques with contrast venography (*Ann Vasc Surg.* 2005;19[2]:229-234).

“Retrievable filters are not a replacement for permanent filters but should be considered in carefully selected patients who require temporary venous thromboembolism prophylaxis,” he says. “Ongoing studies will better define the most appropriate design, materials, and surgical procedures for implanting and retrieving vena cava filters.”

PATIENT AWARENESS

Passman promotes patient education through the UAB Vein Program and is cochair of the American Venous Forum’s (AVF) National Venous Screening Program that annually provides free screening and risk assessment for participants. Results of the AVF’s first national screening found a high rate of positive findings for venous disease. Investigators identified 77% of participants (most were 60 years or older and overweight) as high risk or very high risk for developing DVT if placed in high-risk situations. Signs of CVI were frequent; one in three people had varicose veins and one in five had a CVI clinical classification score ≥ 3 , indicating skin changes due to venous disease and healed or active ulcerations (*J Vasc Surg.* 2007;45:142-148).

“We encourage the public and health care providers to seek information regarding venous disease for this often misunderstood, underappreciated, and potentially life-threatening medical problem,” Passman says.

FOR MORE INFORMATION

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