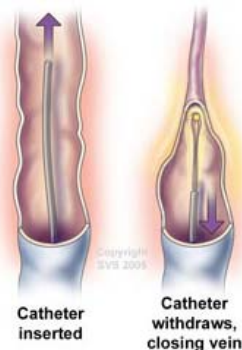


Minimally Invasive Vascular Procedures and Vascular Surgery

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When most referring doctors think of vascular surgery, they think of competent, hard-working practitioners who have perfected the invasive, open procedures that represent the foundations of the field of vascular surgery. The early years of vascular surgery were clearly dominated by open aortic and carotid surgery which was challenging and often complicated, with long hospital stays the norm. While the modern vascular surgeon maintains this expertise, only a minority of the procedures today require an incision, and many of the procedures can be done as an out-patient. In vascular surgery today, minimally invasive individualized treatment is the focus.

As an example, look at varicose vein surgery. Most physicians are familiar with the traditional vein stripping requiring at least a few small incisions and blunt avulsion of the veins involved. With such surgical trauma, a delayed recovery was inevitable and expected.



Now, using percutaneous techniques, the vein is punctured and ablated from the inside out using a laser or radiofrequency probe to close the vein and prevent flow. While there is still trauma, it is limited to the offending vein and not applied to the surrounding tissues, minimizing the recovery while still addressing the problem. With only a needle puncture, the entire treatment is often done as an out-patient in our office.

In the early 1990s it became apparent to vascular surgeons that many of the open aortic surgeries traditionally performed could be replaced by endovascular grafts. This single change in practice led to a virtually complete retraining of the vascular surgery workforce in endovascular techniques, so that now the majority of vascular surgery interventions are percutaneous. In fact, the change has been so complete that some vascular surgeons are referring to themselves as vascular specialists to emphasize the minimally invasive component of their practices. While dedicated to the comprehensive care of the vascular patient,

vascular surgeons maintain a comprehensive expertise in the management of the challenging vascular patient.

What about other specialties who perform peripheral vascular interventions? Vascular surgeons are the only specialty that requires basic education and training specific to peripheral vascular disease in order to be certified in the specialty. Vascular surgeons have a focus on peripheral vascular disease alone, with broad knowledge of the disease processes, their natural history, and the treatment options needed to restore function.

Vascular surgeons provide comprehensive, individualized care for vascular patients, using the best treatment for the patient – not just the treatments we traditionally provided. They have the entire treatment spectrum for peripheral vascular disease at their fingertips. Endovascular treatment is only one of the tools used by vascular surgeons, but clearly an important one for patients.

Lower extremity arterial vascular disease can be asymptomatic, can cause exertional symptoms referred to as claudication, or can cause pain at rest leading to the potential for ulcers of the toes or even gangrene. While asymptomatic, lower extremity patients may have an increased risk of heart attack or stroke, no treatment is needed in the legs if symptoms are absent. Generally, vascular surgeons recommend risk factor modification, including smoking cessation and an exercise program of daily walking in these patients.

In the event that a patient's walking is limited by exertional pain, referred to as claudication, closer assessment may be needed. If claudication interferes with daily activities, treatment is probably appropriate. Generally, there are two alternatives for treatment of claudication, open surgical bypass or endovascular treatment. While both produce good results, open surgery is generally reserved for the healthiest patients. For the remainder, percutaneous endovascular treatment using balloon angioplasty or stents is recommended as a lower risk alternative, albeit with a lower long-term success rate as well. Fortunately, endovascular treatment can often be repeated multiple times to provide long-term relief of symptoms. Vascular surgeons can advise the best treatment for each case. They are the only specialty that can offer all forms of treatment appropriate for lower extremity arterial disease, including open surgery or endovascular treatment if necessary.

Pain in feet at night may be a more severe form of ischemia referred to as rest pain. Rest pain typically occurs after lying in bed for several minutes. Often it awakens the patient from sleep, requiring sitting or standing to alleviate the pain or numbness. In advanced cases the patient may resort to sleeping in a chair to avoid the discomfort associated with lying down. Eventually, if this is ignored, ulcers or gangrene of

the toes will develop. It is important that this level of circulatory impairment be brought to the attention of your vascular surgeon to avoid major amputation.

The vascular surgeon is the only specialist who can treat lower extremity arterial disease in all phases. If conservative management is appropriate, medical risk factor modification and pharmacologic treatment can be provided. If limiting claudication is present minimally invasive endovascular intervention can be offered. If bypass surgery is the best option, a vascular surgeon can provide that treatment as well.

Vascular surgeons have the patient's vascular health and well being at the center of treatment focus. Their goal is to avoid amputation and preserve mobility based on individualized care for each and every patient.

To learn more about your vascular health and find a vascular surgeon visit VascularWeb.org.