LETTERS TO THE EDITOR

Regarding "Is there an increased risk for DVT with the VNUS closure procedure?"

The authors of a recent letter (Komenaka IK, Nguyen ET, J Vasc Surg 2002;36:1311) reported two observations of deep venous thrombosis (DVT), which occurred 1 and 6 weeks, respectively, after ipsilateral limb treatment with the VNUS Closure system (VNUS Medical Technologies) radiofrequency catheter to obliterate reflux in the greater saphenous vein. We previously reported the results of the first 286 limbs treated with the VNUS Closure system without high ligation, and found an incidence of DVT of 1.0%.[1] Incidence of DVT after traditional stripping and ligation ranges from 0.15% to 1.8%.[2,3] At the Reno Vein Clinic, more than 325 limbs have been successfully treated with the VNUS Closure system, and DVT developed in only 1 limb, ie, a partially occlusive common femoral vein thrombus, successfully treated with operative thrombectomy. Experience at the Straub Clinic in Honolulu reveals 3 instances of common femoral vein partial thrombosis in 400 limbs treated with the VNUS Closure system. These thromboses were identified on 24-hour postoperative duplex ultrasound (US) scans, and were managed with operative thrombectomy. Experience at the Vein Institute of New Jersey reveals thrombus extension into the common femoral vein in only 1 of 425 limbs operated on. This thrombus was treated with low molecular weight heparin, administered on an outpatient basis, resulting in complete clearing of the common femoral vein. Combining this experience at three centers yields a thrombus extension rate of 5 per 1150 treated limbs (0.4%) and no DVT involving other deep veins. In all five instances, DVT was asymptomatic and found within 72 hours of initial treatment only at planned surveillance duplex US scanning, which is part of the VNUS Closure protocol.

We ask Drs. Komenaka and Nguyen if duplex US scanning was performed after treatment in their two patients? Also, we are curious about their choice of an open groin incision versus the more typical distal percutaneous approach, and we wonder if this could contribute to thrombotic potential?

The authors are commended for raising an important query about the problem of lower extremity DVT after treatment of varicose veins. DVT is a recognized risk with most any surgical procedure, and VNUS Closure is no exception to this phenomenon. Their questions would be answered by a well-designed prospective study of radiofrequency catheters and vein stripping. Judging from our experience with more than 1150 procedures, however, the 0.4% rate of DVT after VNUS Closure of the greater saphenous vein appears similar to that with conventional vein stripping.

Robert F. Merchant Jr, MD

The Reno Vein Clinic
Reno, Nev

Robert L. Kistner, MD

Straub Clinic and Hospital
Honolulu, Hawaii

Lowell S. Kabnick, MD

The Vein Institute of New Jersey
Morristown, NJ

Competition of interest: Each author is a paid consultant for VNUS Medical Technologies; R.L.K. owns stock in the company; and R.F.M. is in their speakers bureau.

REFERENCES

1. Merchant RF, DePalma RG, Kabnick LS. Endovenous obliteration of saphenous reflux: a multicenter study. J Vasc Surg 2002;35:1190-6.
2. Hagmuller GW. Complications in surgery of varicose veins. Lagenbecks Arch Chir Suppl Kongressbd 1992;377:470-4.
3. Miller GV, Lewis WG, Sainsbury JR, MacDonald RC. Morbidity of varicose vein surgery: auditing the benefit of changing clinical practice. Ann R Coll Surg Engl 1996;78:345-9.

doi:10.1016/S0741-5214(03)00322-7

Regarding "Intrasac flow velocities predict sealing of type II endoleaks after endovascular abdominal aortic aneurysm repair"

I read with interest the article by Arko et al (J Vasc Surg 2003;37:8-15) concerning spectral Doppler flow velocities used to predict type II endoleak seal.

I agree that the flow velocities should be measured using an angle of less than 60 degrees. The problem here is how to align the cursor angle on the image parallel to the direction of blood flow. Adjacent to aneurysm wall, the jet retains the cross-sectional shape of the orifice and is probably the best place to make the measurement. However, in this case the cursor angle should align with the direction of jet flow, not the angle between the aortic aneurysm sac and the branch vessel, which appears to be the technique used by the authors. For example, in their Figure 2, it appears that the angle adjustment is incorrect, or simply there is no angle adjustment. In these circumstances the measurements are difficult to reproduce and possibly are the reason for the wide range of flow velocities found in each group.

Like Parent et al,[1] I believe that other flow spectrum parameters such as resistive index are better predictors of future seal of type II endoleak. Specifically, endoleaks with a higher resistive index are usually associated with a smaller sac, and in these cases the possibility of spontaneous seal should be higher. Another indication of the significance of the flow through an orifice is the length of the jet.

Has the Stanford group looked at resistive index and length of the jet as predictors of endoleak seal, and could they comment on the specific technique that they use for angle correction of velocity measurements?

Jose Maria Escribano, MD

Angiology, Vascular and Endovascular Surgery Department
University Hospital Vall d'Hebron
Barcelona, Spain

REFERENCE

1. Parent FN, Meier GH, Godziachvili V, LeSar CJ, Parker FM, Carter KA, et al. The incidence and natural history of type I and II endoleak: a 5-year follow-up assessment with color duplex ultrasound scan. J Vasc Surg 2002;35:474-81.

doi:10.1016/S0741-5214(03)00317-3

Reply

I would like to thank Dr Escribano for his insightful comments and questions regarding our recent manuscript. The purpose of our study was twofold, first, to determine whether intrasac spectral Doppler velocities can predict whether or not a type II endoleak