William Hiatt, MD

A leading TASC author discusses the value and challenges in establishing guidelines, goals for TASC III, exercise therapy, and the FDA's advisory committee processes.

How would you describe the progress in the efforts to update the TASC guidelines and challenges faced in this initiative?

TASC III writing groups are currently in progress. The biggest issue is the overall roles of endovascular versus surgical bypass approaches. This has generated a lively debate regarding what evidence supports which strategy. I would not want to comment further until the writing group process is complete.

What do you believe is the most important goal of TASC III?

We have several new goals for TASC III, including a broader global reach to include developing countries and more inclusive as to the breadth of the vascular societies involved. We would hope TASC III is a truly global document.

How do you compare the benefits of supervised exercise given that each patient has such unique individual health factors?

The CLEVER trial was published in *Circulation* earlier this year.[1] This is a landmark study in aortoiliac occlusive disease comparing an endovascular approach with a stent to exercise training. The results showed that exercise training was superior to endovascular revascularization on the primary endpoint of treadmill performance, but the revascularization group did better in terms of patient-reported outcomes. Thus, exercise is a proven effective therapy for claudication that works despite unique individual health factors.

Lifestyle modification can often be more challenging than vascular interventional cases themselves. What methods toward smoking cessation and increased exercise are working in your practice?

Yes, but lifestyle modification efforts may be lower risk than attempting interventions. In my practice, we have a formal exercise rehabilitation program for claudication that we established years ago based on federal funding. That has been a big benefit for my patients who have unfavorable anatomy or other factors prohibiting revascularization.

We have a supervised exercise program for patients with PAD limited mainly by claudication. This is based on cardiac rehab principles, which include an hour session three times per week. Patients exercise mainly on a treadmill set to a speed and grade that induces claudication in about 3 to 5 minutes of walking. Once claudication progresses to a moderate intensity, they stop and rest and then get back on and walk again. They chart the time of exercise and time of rest throughout the hour. After 1 to 2 weeks at a particular intensity, a patient will typically walk longer at that workload. The clinical staff will then increase the rate and grade incrementally to increase the work and further stimulate a training response. Thus, if a patient enters walking at 1.5 mph, 1% grade, after 12 weeks he may be walking at 3.0 mph, 6% grade. This translates into at least a 100% increase in community walking distance. The program also has smoking cessation classes.

How has your use of medical therapy—both alone and in conjunction with device-based intervention—changed in the past several years, and why?

The device technology is ever-changing for the better, meaning patients have more revascularization options. That said, most come back to me after intervention needing additional medical treatment. That can include optimizing risk factor management to improving exercise behaviors.

I still prescribe cilostazol on occasion to patients without heart failure but have no other approved and effective drugs at this time. However, our clinical trials research center (CPC Clinical Research, an affiliate of the University of Colorado) is running several active claudication trials. One option for many patients is participation in a trial.

How do you see the use of antiplatelet therapy in vascular intervention changing in the near future and years to come?

Current guidelines are still operative. For the stable patient with PAD, the evidence supports monotherapy. Based on our *JAMA* meta-analysis a couple of years ago,[2] we see less benefit for aspirin than for clopidogrel

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(which is now generic). New, larger trials with antiplatelet drugs are now planned in the PAD population.

What are some of the specific challenges in evaluating renal artery revascularization and blood-pressure lowering therapies?

We have a renal denervation trial ongoing here at the University of Colorado. This is an example of new interventional approaches to renal-mediated hypertension. The trials on renal artery stenosis have been a bit disappointing to date, but they were perhaps based on older techniques.

What have you learned as a member of the FDA's Cardiovascular and Renal Drugs Advisory Committee that serves you in your daily practice?

I continue to serve on FDA advisory committees. Having retired from CardioRenal, I am now a member of the Endocrine and Metabolism advisory committee. These are marvelous opportunities to critically review data from drug development programs that informs you of trial design and interpretation issues. In my practice, I often give patients examples of decisions rendered from these advisory meetings that directly apply to a particular individual.

Would you like to see the FDA make any changes in terms of its regulatory or committee discussion process?

I have tremendous respect for the FDA and the advisory committee process. It is rigorous, free of conflicts, and I believe serves the American public. I have no criticism of the process and only admiration for those who serve in the FDA and my colleagues who participate in the process. ■

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1. Murphy TP, Cutlip DE, Regensteiner JG, et al. Supervised exercise versus primary stenting for claudication resulting from aortoiliac peripheral artery disease: six-month outcomes from the claudication: exercise versus endoluminal revascularization (CLEVER) study. Circulation. 2012;125:130-139.
2. Berger JS, Krantz MJ, Kittelson JM, et al. Aspirin for the prevention of cardiovascular events in patients with peripheral artery disease: a meta-analysis of randomized trials. JAMA. 2009;301:1909–1919.