will spontaneously seal, and secondly, to see if these intrasac flow velocities corresponded to the preoperative branch vessel anatomy seen on the CT angiogram. The results indicated that patients with occluded or small inferior mesenteric arteries and fewer visualized lumbar arteries had lower intrasac flow velocities (<100 cm/sec) and these endoleaks resolved within 6 months.1 Thus, the study used both anatomic data from the CT and physiologic data from the Duplex US to characterize these endoleaks.

In reference to angle correction: a <60 degree angle to flow was used with color Doppler serving as a guide to determine the flow channel—the aortic wall was not used as a guide for this measurement. Assessment of flow velocities and direction was performed in the aneurysm sac near the aneurysm wall. Where there is no angle to flow, as when sampling at or near the lumbar orifice, no angle correction is needed as flow is perpendicular to the Doppler beam in this situation.

We did not measure resistive index (RI) in this study. It is unclear to us how an appropriate RI measurement could be obtained from a “to and fro” signal often associated with type II endoleaks. We look forward to further research efforts by the endovascular community to validate and apply these to the clinical management of the patient with type II endoleaks.

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REFERENCE

Regards to the Editor


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Regarding “Veterans Affairs (VA) Cooperative Study #362”

The Veterans Affairs (VA) Cooperative Study #362, reported by Willard C. Johnson and colleagues (J Vasc Surg 2002;35:413-21), did not demonstrate any difference in patency rate for warfarin sodium (target range, 1.4-2.8 international normalized ratio [INR]) plus aspirin (WASA) versus aspirin (ASA) in 458 patients after peripheral venous bypass grafting. In 373 patients with above-knee prosthetic bypass grafts, patency was significantly better in the WASA group (risk ratio, 0.62). These results conflict with our findings in the Dutch Bypass Oral Anticoagulants or Aspirin (BOA) Study,2 favoring oral anticoagulant treatment after venous bypass grafting and ASA in patients with prosthetic grafts. Therefore we would like to highlight the two most important differences in the design of the two trials and to discuss some differences in results and the implications for daily practice.

First, the degree of anticoagulation was much higher in the Dutch BOA study: target range, 3.0 to 4.5 INR. To achieve optimal anticoagulation the target should be within this higher range.3 The dosage of warfarin in the VA study was monitored once a month, compared with twice a month, on average, in the BOA study, which may have resulted in a higher proportion of time when degree of coagulation was within the target range. There was also a striking difference in percentage of patients who discontinued anticoagulant treatment: 40% in the VA trial versus only 14% in the Dutch BOA study. These differences in dosage and compliance contribute considerably to the difference in antithrombotic efficacy. The difference in ASA dose (325 mg/d in VA, 80 mg/d in BOA) probably does not explain any difference in results.4

Second, the trials differed greatly in number of patients and duration of follow-up. The sample size in the BOA study (n = 2690) was based on expected occlusion rate after average follow-up of 2 years. The large number of patient-years (4560) in the BOA study allowed for the predefined subgroup analyses according to type of bypass procedure and graft material.4 The VA study comprised fewer patients (831), with 2638 patient-years of follow-up. Sample size was based on expected 6-year patency rate. Inasmuch as most occlusions occur in the first postoperative year, the number of patients with 1-year follow-up in the VA Study was probably too low to demonstrate a difference between the two treatment groups.

It was surprising that the only statistically significant difference between the two treatment groups occurred in patients with prosthetic above-knee bypass grafts, and favored WASA. This difference is mainly due to a higher number of occlusions in the ASA group in the last 3 years of the study. Given the low compliance with warfarin therapy, especially over the long term, and the small number of patients (207) in this subgroup, this effect was probably not caused by allocated treatment but by chance or other unknown factors.

What are the implications of the VA and BOA trials for daily practice? The common feature of both trials is the pragmatic design, which allows generalization of the findings to daily practice. Because of a well-organized system of Dutch Anticoagulation Clinics, anticoagulation therapy might be more effective in The Netherlands than in the United States. This could imply that addition of low-dose warfarin therapy to ASA treatment in The Netherlands has little or no effect, whereas in the Dutch health care setting oral anticoagulant agents are more effective than ASA for prevention of venous graft occlusion. For patients with prosthetic bypass grafts, ASA remains the best antithrombotic treatment, worldwide.

The authors of the VA Study have improved knowledge of antithrombotic therapy and discussed their findings clearly. We hope to have added further clarification with our expertise and this contribution to the discussion.

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REFERENCES

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Regarding “Rib-cross thoracotomy for replacement of the thoracoabdominal or total descending aorta”

In a recent issue of this journal, Dr Okita and colleagues reported their experience with four patients in whom rib-cross thoracotomy was performed for repair of thoracoabdominal or entire descending aortic aneurysm (J Vasc Surg 2003;37:219-21).