

Patients have described the appearance of new telangiectasias after saphenous vein treatment, RFA, or stripping. We have connected the appearance of such new telangiectasias to the small vessels surrounding thrombosed, treated segments of the saphenous vein, mostly large vein valve sinuses. Small vessel networks can also be noted around thrombus inside the canal previously occupied by a stripped saphenous vein. Rather than dismiss the findings of small vessel networks noted after treatment of the saphenous vein, we should investigate whether and when the presence of these channels has a clinical effect. The first step was to recognize the presence of such small vessel networks.

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### Regarding: Carotid endarterectomy in patients with chronic renal insufficiency: A recent series of 184 cases

We read with interest the article by Ascher et al (*J Vasc Surg* 2005;41:24-9) about early outcome of 184 internal carotid artery endarterectomy procedures in 166 patients with chronic renal insufficiency (CRI). These patients with CRI (serum creatinine level >1.5 mg/dL) accounted for 27% of all patients undergoing endarterectomy, a proportion much higher than in our own experience of 4.6% based on the same criterion (146/3157 patients during 1990 to 2002). We believe that the higher risk of postoperative death associated with severe CRI, as shown by Ascher et al, should limit the indication for surgery, especially in asymptomatic patients on dialysis. Many vascular surgeons have intuitively applied that restriction. However, as shown by Reil et al,<sup>1</sup> the neurologic risks associated with endarterectomy are similar in patients with CRI and normal renal function. Rather, it is cardiac complications that are the most serious threat for death in these patients.

Regretfully, Ascher et al failed to give details about the five deaths that occurred in their series. However, in the meeting discussion accompanying the article, the authors stated that two deaths were due to myocardial infarction, one due to multiple organ failure triggered by an unknown cause, one due to bronchopulmonary aspiration (neurologic status not specified), and one due to postoperative stroke. This stroke-related death shows that it would have been useful to do a thorough analysis of mortality rather than to speculate about the potential role of protamine or hemodynamic disturbances observed after dialysis sessions.

The article and meeting discussion also revealed an ambiguity towards cardiac work-up. In the article, the authors suggest that rigorous cardiac assessment is necessary even in asymptomatic patients. In the discussion, they argue against such work-up by stressing the morbidity of "open heart" surgery. It is unclear why they would rule out the possibility of treating coronary artery lesions screened by percutaneous angioplasty.

Patients with CRI must be considered a high-risk group for carotid endarterectomy because of mortality rather than stroke risk. In this regard, they may be better candidates for carotid stenting, like those patients with advanced heart disease included in the SAPHIRE study.<sup>2</sup> Further study would be necessary to demonstrate the safety and long-term efficacy of such an approach. Until then, our approach is to be very conservative in recommending carotid endarterectomy for patients with CRI, especially the asymptomatic cohort.

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### Reply

Thank you for your comments regarding our paper concerning carotid endarterectomy in patients with chronic renal insufficiency (CRI). We agree with you that a more thorough assessment of the cause of death postcarotid endarterectomy in these patients would have been of value. However, upon reviewing the medical records of the patients who died postoperatively, we were unable to uncover a common denominator. We did speculate about the role of protamine and also the hemodynamic disturbances that may occur during hemodialysis, because these are known facts associated with increased mortality.

It is our opinion that coronary bypass surgery in patients with severe CRI should be limited because of the associated increased mortality and morbidity. Whether percutaneous coronary artery balloon angioplasty is of value to these patients remains to be proven.

Also, we agree with your comments that carotid endarterectomy should not be liberally used in asymptomatic patients with severe CRI. It will be interesting to see whether carotid artery balloon angioplasty and stenting would be of benefit for this cohort of patients in the long-term.

We appreciate your taking the time to read our paper and ask reasonable questions.

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