Saphenous Vein Graft Hemorrhage

To the Editor:

I read the recent case report by Alam et al. (December 1999). During 14 years of experience in cardiothoracic surgery, I have seen mediastinal hemorrhage from saphenous vein graft in three patients: two after coronary revascularization and one after emergent repair of a type I aortic dissection.

The first patient, who was diabetic and suffered from chronic renal failure, presented 2 weeks after discharge with sternum dehiscence. Bleeding was noted when the patient was returned to the operating room for repair of the sternum. The second patient presented with mediastinitis 3 weeks after coronary revascularization. She had debridement and open dressings while awaiting muscle flap placement when hemorrhage from an anteriorly routed right coronary vein graft was noted. The third patient had undergone repair of a type I aortic dissection, with resuspension of the aortic valve and ascending tube graft, who required a saphenous vein graft to the right coronary artery because of a significant hematoma in the outflow tract around the aortic root. The patient presented with hemorrhage through the vein graft 4 days postoperatively. The sternal edges had been left open in this patient, and a Gore-Tex patch (W.L. Gore; Flagstaff, AZ) was placed across the skin edges because of myocardial edema.

In all three instances, the saphenous vein leak was repaired with 7-0 Prolene suture (Ethicon; Somerville, NJ). The patient with renal failure and sternum dehiscence had no obvious wound infection but did have a poor quality vein. The second patient with mediastinitis had an infected mediastinum, through which the saphenous vein graft to the right coronary had been routed over the anterior surface of the right ventricle. The other grafts, placed to the left anterior descending, diagonal, and obtuse marginal, included left internal mammary and radial arteries and were placed laterally. The third patient was doing well hemodynamically, and the saphenous vein laceration was thought to be secondary to trauma from the sternal edge.

The etiology of the bleeding vein graft was believed to be poor vein quality in the patient with renal failure, infection in the second patient, and trauma in the third patient. All three vein injuries were initially repaired. In all three cases, the patients presented a second time with hemorrhage from these vein grafts and were ligated. Only the first patient, with renal failure, survived.

My current policy is to ligate the saphenous graft with hemorrhage, as the likely cause is a necrotizing infection. It should be ligated as proximal and distal as possible, in vein tissue that is as normal as possible. If hemodynamic change occurs with temporary occlusion of the graft, another graft should be placed.

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REFERENCES


In-line Suction Catheters May Impede Aerosol Delivery to Patients Receiving Mechanical Ventilation

To the Editor:

A recent article suggests that closed in-line suction catheters are used frequently in patients receiving intubation and/or mechanical ventilation. We have been concerned that some of these devices trap aerosolized medications, preventing them from reaching the airways of our patients. Some in-line suction catheters include a potentially turbulence-creating 90° adapter that becomes moist with constant inspiratory flow rates of 60 L/min, before and 20 min following treatments. The suction catheter was in-line during measurements, but the catheter was withdrawn into its plastic sheath (outside the three-way connector). No endotracheal suctioning occurred between sets of treatments/measurements. Airway resistance was computed as the difference between peak and