intensive care unit. Brain computed tomography 24 hours later showed diffuse ischemic lesions in both cerebral hemispheres. The neurologic state of the patient never improved and she died from multiorgan failure on day 20 after the second operation.

Discussion

The primary suspected diagnosis at readmission was infective endocarditis, so heparin and empirical antibiotherapy was instituted. The presence of air bubbles within the left atrium and the finding of diffuse ischemia in both cerebral hemispheres led us to think that the probable cause of cerebral ischemia was the air insufflated during the endoscopy, which embolized to the brain.

After such an experience, we now perform the transverse ablation line between the right and left pulmonary vein orifices as high as possible. In patients with a small left atrial cavity, care should be taken to prevent the overlapping of the 2 circles around the right and left pulmonary vein orifices to avoid extreme thermal injury at any single point on the posterior left atrial wall neighboring the esophagus (Figure 1). We think that temperature and the duration of application of the probe should either be reduced or RFA should be avoided in patients with large thin-walled left atria.

In case of suspicion of an atrioesophageal fistula, no endoscopic intervention should ever be attempted. Although highly lethal, we don't believe that this rare complication should lead to the abandonment of this technique.

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doi:10.1016/S0022-5223(03)01049-3

Reply to the Editor:

Sonmez and colleagues presented their experience with a patient who developed atrioesophageal fistula after unipolar radiofrequency ablation. Their patient is similar to a patient that we described in that she died of cerebral air embolism secondary to gas insufflation during gastroscopy. It is important to stress that patients with gastrointestinal bleeding post-radiofrequency ablation should *not* undergo endoscopy. The initial diagnostic test should be computed tomography (CT) of the chest to rule out esophageal perforation.

The case report of Sonmez's group raises 2 more interesting points. The first is that their case occurred after a full sternotomy, as opposed to the right lateral minithoracotomy approach that we used. The second is that the esophageal perforation occurred after using a radiofrequency lesion pattern that was different from our lesion pattern. It is important to note that esophageal perforation can occur with many different techniques and approaches and that surgeons have to be aware of this possibility when performing these procedures.

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Authors should list confounding factors and alternative explanations for adverse events seen with new technologies

To the Editor:

Two articles in your February 2003 issue raise concerns about the Symmetry connector (St Jude Medical, St Paul, Minn) for coronary artery bypass surgery. Hornik and colleagues¹ reported 4 of 70 uses and Reuthebuch and colleagues² reported 7 of 77 uses of Symmetry where severe proximal stenosis occurred. Implicit in both articles is a suggestion that the Symmetry device contributed to proximal graft failures. The observations of Hornik and Reuthebuch, however, cannot be regarded as evidence of

such an association for 2 main reasons (neither of which were highlighted in the articles).

1. The practice reported is not typical of that in most cardiac units. For example, in Hornik's group only 18 of 45 patients received internal thoracic artery (ITA) grafts. Also unusual was that none of the 4 patients whose history was detailed received an ITA even though 3 were below 60 years of age and 2 had severely calcified aortas, factors most surgeons would regard as indications for ITA grafting. Also, the 29% conversion rate for their off-pump coronary artery bypass patients is substantially higher than seen in most units. Both reports listed aortic calcification as a principal indication for use of the device. It would not be unreasonable to expect more proximal graft failures in patients with aortic calcification regardless of anastomotic technique. Differences in practice or technique therefore could be an alternative explanation for the proximal failures.
2. The authors have not made any comparisons to patients having surgery using conventional techniques. Proximal graft failure is by no means unique to Symmetry and is well documented using standard techniques.³ Without systematic angiography of all patients, particularly those with aortic calcification, reliable comparisons with standard techniques cannot be made.

As presented, neither report is sufficient to caution against use of the device. Also not considered is the benefit of the technique as it is plausible that morbidity due to aortic calcification or aortic clamping (and by extension the net morbidity and mortality) was reduced by use of the device. Adverse events must be weighed against such benefit, as in at least some cases the benefit of a new technology will outweigh any adverse events. What is required are comparisons between grafts done with Symmetry and those done with standard techniques (preferably with the proximal anastomosis constructed first). Only then can any incremental risk (or benefit) be identified and quantified.

I have never used the Symmetry device and have no special interest in the device or technique; indeed, there may truly be an

association between the Symmetry and proximal graft failure. My concern is in the wider area of dissemination and adoption of new technologies. Without statements on data limitations, publication of biased noncomparative data on any new technology is potentially alarmist (or overoptimistic), may prevent proper evaluation and development, and may unnecessarily hinder (or accelerate) uptake of new technologies, some of which could be potentially beneficial (or harmful). Authors of reports on new technologies should list limitations and highlight any confounding factors or alternative explanations for adverse events (or benefits); otherwise readers could be inadvertently misinformed.

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Reply to the Editor:

I thank Mr Anyanwu for his interesting remarks.

I agree with the statement of Mr Anyanwu concerning the use of the internal thoracic arteries in coronary artery bypass grafting. I used to follow the same strategy and prefer extended utilization of the left internal thoracic artery as a graft especially, for the left anterior descending (LAD) and/or diagonal branches. We accept it as graft source irrespective of patient age, so that in about 92% to 95% of the patients the left internal thoracic artery is placed in the LAD area, although the average patient age is around 72 years old. I decided intentionally to make an exception to this strategy as I wanted to gain intensive experience with the new technology in creating the proximal vein graft anastomosis within a short period of time, so that mostly no internal

thoracic arteries were used in the mentioned patient group unless the vein quality was inadequate.

Although in this series the first use of the anastomotic device took place on April 30, 2001, and the last one on October 22, 2001, of these 45 reported patients, 35 were operated on in the relatively short period of time from June 1 to July 5, 2001.

I agree that the calcified ascending aorta implies the utilization of the pedicled internal thoracic arteries. However, I often place many grafts in multimorbid octogenarians with more or less calcified ascending aortae, and I am forced to at least partial use of vein grafts. I try then to find the most suitable site for the proximal anastomosis, regardless whether the given anastomosis is hand-sewn in the conventional way or performed by use of any anastomotic device. I have never faced results like these until now. In very heavily calcified ascending aortae, both techniques are expected to fail; if at all possible the aorta should be replaced.

For the same reason of gaining experience with off-pump techniques within this period of time, accepted coronary patients were primarily declared for off-pump procedure without any preselection (ie, regardless of coronary morphology and other relevant factors).

I used to make the final decision to proceed or not with the off-pump technique at the very beginning of the surgery, making it dependent on the feasibility of this technique, so that many patients were switched to on-pump without making any effort to follow the off-pump strategy. I converted to on-pump quite liberally for 2 reasons. First, I am generally not convinced of the superiority of the off-pump techniques; second, I often face an extremely bad coronary morphology and/or bad ejection fraction. I mean the borderline cases in whom the feasibility of coronary artery bypass grafting is generally problematic. With those patients, we try to proceed with the conventional bypass surgery before we are forced to use any form of an end-stage therapy (ie, heart transplantation, implantation of an assist device for recovery, for bridging, or as definite surgery). Our heart center is a leader in utilizing mechanical circulatory support devices; we successfully follow this strategy in patients with end-stage coronary artery disease for a long time.

My article is a case report and not a randomized study; as such, you will find no comparison with any statistical significance. However, the causality between the utilized technology for creation of the proximals and the reported complication is in my opinion quite possible as these complications are an exceptional "on the row" phenomenon in my practice. I used to perform about 350 to 450 isolated coronary artery bypass grafting procedures each year; the operative capacity of the entire heart center is about 5000 cardiac procedures including approximately 3500 isolated coronary artery bypass grafting procedures yearly. My colleagues and I have never faced a similar experience. These were the first graft occlusions or stenoses that I had to deal with in many years.

I would like to use this opportunity to report an additional case of severe stenosis of the proximal vein graft anastomosis created with ACS. A 65-year-old man with 1 sequential vein graft to LAD and diagonal branch placed in off-pump technique using the ACS developed de novo angina pectoris 6 months after surgery. Angiography revealed a severe stenosis of the proximal anastomosis. Very impressive was the retrograde filling of the graft until the stenosed proximal anastomosis. The patient underwent successful redo surgery; I could not find any explanation for the event this time, either. However, I do not claim to deliver any evidence for or against the utilization of the device. I have highlighted in my article that the role of the device in the genesis of the reported complications has to be cleared.

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Pattern of lymphatic spread and prognosis in pN1 non-small cell lung cancer: What does it stand for?

To the Editor:

We read with great interest the report from Marra and colleagues¹ recently published in the *Journal*, and we warmly congratulate them on their excellent, accurate, and exhaustive analysis and report. They have confirmed that within the pathologic N1