Aortic dissection is a rare complication of cardiac operations that is associated with surgical maneuvers such as the placement of the proximal anastomosis and carries a high mortality rate. To maintain the quality of care for patients undergoing off-pump coronary artery bypass grafting (OPCAB), a no-touch technique of the ascending aorta is important. If that is not possible, it is important to perform the proximal anastomoses on the aorta with a no-clamp technique.

CLINICAL SUMMARY

A 79-year-old man with unstable angina (Canadian Cardiovascular Society class IV and New York Heart Association functional class IV) was referred to our center for coronary angiography. The patient’s vascular risk factors included nicotine use, dyslipidemia, arterial hypertension, and diabetes. He also had peripheral arterial vascular disease with a known aneurysm of the descending thoracic aorta. In addition, an aortobifemoral graft and a femoropopliteal bypass had been implanted 5 years previously to treat an infrarenal abdominal aneurysm and a persistent claudication (grade IIb). In the preoperative computed tomographic scan, the ascending aorta showed a maximal diameter of 3.9 cm and arteriosclerotic plaques over the aortic arch. Cardiac catheterization revealed three-vessel disease with severe coronary sclerosis. Preoperative transesophageal echocardiography showed reduced left ventricular function, with an ejection fraction of 25%.

The entry of the dissection originated from the proximal radial artery anastomosis on the anterior ascending aorta (Figure 1, A) and the neohole on the aorta showed an irregular shape. The ascending aorta was replaced with a 26-mm Dacron polyester fabric graft. The proximal radial artery graft was reimplanted into the graft. Unfortunately, the patient had massive ST elevations develop on the electrocardiogram. Even with maximal inotropic drug support (no intra-aortic balloon pump because of the descending aorta findings), it was not possible to wean the patient from extracorporeal cardiopulmonary circulation, and he died in the operating room.

DISCUSSION

In a recent study, acute ascending aortic dissection was found to have an incidence of 0.97% after OPCAB. This may be due, at least in part, to the fact that in OPCAB aortic side-clamping for construction of the proximal anastomoses is done under normal blood pressure and pulsatile conditions, which may add potential stress to the direct laceration, torsion, or mechanical compression of the ascending aorta.

The method of choice to minimize aortic manipulation is the use of arterial conduits for in situ or T-graft arterial configurations. Furthermore, to avoid this potential complication, efforts have been made to develop mechanical devices that allow construction of the proximal anastomoses without aortic side-clamping. Since the beginning of 2003, we have exclusively used the Heartstring device to construct all proximal anastomoses on the aorta. With this device, we...
have been able to reduce neurologic complications (Table 1). This device selectively addresses the question of clampless revascularization without adding new problems derived from the anastomosis technique, which seems to be the drawback of several automatic proximal anastomosis devices currently in development.5

In conclusion, this report underlines further the need for long-term follow-up of patients in whom new devices for proximal anastomoses are used, to check for the potential development of late aortic dissection. In addition, it emphasizes the importance of identifying predisposing factors that might help in selecting appropriate patients for the application of such devices.

References

Sclerosing hemangioma with an air halo

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Sclerosing hemangioma (SH), an unusual benign pulmonary neoplasm, was first described by Liebow and Hubbell1 in 1956. It occurs predominantly in middle-aged women.2 Most patients have no symptoms, with the tumors being detected incidentally during routine chest radiographic examination. Although SH is usually seen as a solitary peripheral nodule less than 3 cm in diameter, multiple lesions have been reported in as many as 4% of all cases.2 The characteristic radiologic feature of SH is a well-defined nodule with good enhancement. We present the case of a patient with SH with an unusual air halo.

CLINICAL SUMMARY
A symptom-free 23-year-old man came to our clinic because of an abnormal shadow found on a chest radiographic film during military physical check-up. He reported unremarkable family and medical histories. Physical examination revealed no abnormal physical findings. Laboratory data were normal, including normal carcinoembryonic antigen...