tochemical investigations allowed to disclose the malignant features of leiomyosarcoma. As in the case reported by Evans and Haw,³ the tumor was attached to the endocardial surface without infiltration of the atrial wall, thus making its complete removal feasible. Although we believed that the tumor was removed completely and, in the early postoperative period, no metastases could be demonstrated, we decided to treat the patient with anthracycline-based chemotherapy to destroy or prevent repetitions. As reported by Pessotto and associates,⁴ our case supports the hypothesis that multimodal treatment of cardiac leiomyosarcomas may prolong survival with a good quality of life.¹

From this experience, we have learned that it may be difficult to distinguish a noninfiltrating intracavitary malignancy from a left atrial myxoma by using echocardiography. Skilled histopathologic examination is mandatory in any apparently benign cardiac mass to exclude malignancy⁵ and, if so, to allow

early chemotherapeutic therapy, which can be successful, as in this case.

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Ventricular lateral wall rupture after myocardial infarction detected by means of multislice computed tomography

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Ventricular septum ruptures are known and severe complications after myocardial infarction with a corresponding high mortality. Ventricular free wall ruptures are less common because these patients often die before sufficient diagnostics can be performed.¹ If an examination is possible, diagnosis is most often performed by means of Doppler echocardiography.² However, detection of a ventricular free wall rupture by means of multislice computed tomography (MSCT) has not yet been published and is presented here.

Clinical Summary

A 51-year-old patient with hemodynamic deterioration after acute myocardial infarction was referred to our department in June 2005. The case history revealed aortic valve replacement with a Lillehei Custer valve in 1972, as well as aortocoronary bypass graftings in

1992 and 2001. The patient was admitted first to a cardiology unit with the diagnosis of acute myocardial infarction. A coronarangiography showed a stenosis of the right coronary artery (RCA), as well as occlusions of the left anterior descending coronary artery (LAD) and the circumflex artery. Also occluded were all bypass grafts. Stent implantation was then performed successfully in the LAD and RCA. However, hemodynamics deteriorated a day after the intervention, and the patient was referred to our department. Transthoracic echocardiography showed severely reduced cardiac function and an approximately 1.5-cm pericardial effusion. Repeated coronarangiography and ventriculography revealed open stents in the LAD and RCA and the suspicion of a ventricular wall perforation. Thus MSCT was performed. In this computed tomographic scan, 2 large ruptures (8 × 8 mm and 7 × 6 mm) in the lateral wall of the left ventricle were found (Figure 1). The patient probably survived up to that point because of pericardial adhesions, which might have prevented further massive perforation into the thoracic cavity. However, contrast enhancement in the pericardial wall and contrast flow in the pericardial cavity partly suggested perforation. Thus an emergency operation with the use of extracorporeal circulation was performed. Intraoperatively, we found 2 ruptures in the lateral myocardial wall, as well as blood in the pericardial cavity. Because of the freshly infarcted myocardial tissue, a direct closure of the ventricular defects was not possible. Therefore a polytetrafluoroethylene patch* was adapted to the lateral wall and secured with surgical glue. Because of the preop-

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Figure 1. MSCT images reconstructed in the 2-chamber view (A) and the short-axis view (B) showing the 2 ventricular free wall ruptures (small arrows) with flow in the pericardial cavity (arrow-head) and contrast enhancement in the pericardial wall (long arrow). LV, Left ventricle.

erative highly reduced left ventricular function, extracorporeal membrane oxygenation (ECMO) had to be implanted postoperatively. Because the hemodynamic condition recovered, ECMO explantation was performed on postoperative day 3. However, despite initial good clinical course, the patient died from septic multiorgan failure on postoperative day 12. Postmortem analysis showed a purulent pericarditis.

Discussion

MSCT is a fast and noninvasive tool for detection of ventricular ruptures, which sometimes are not sufficiently diagnosed by means of ventriculography or echocardiography. Dogan and colleagues³ recently described the detection of a ventricular septum rupture by means of MSCT. However, detection of a ventricular free wall rupture by means of MSCT has not yet been published. These severe complications are often postmortem findings because of the extremely high mortality.¹ If detected early enough, cardiac surgery is often the only therapeutic option. However, despite surgical intervention, mortality remains extremely high.^{4,5} The reason the diagnosis in the patient presented here could be achieved was the presence of massive pericardial adhesions caused by 3 cardiac operations previously performed, which probably prevented massive perforation. Despite immediate cardiac surgery and a promising clinical course after ECMO explantation, the patient died in septic multiorgan failure.

Conclusion

Free wall ventricular rupture after myocardial infarction is a severe complication with a high mortality. MSCT is a fast and noninvasive tool for detection of ventricular ruptures, which sometimes are not sufficiently diagnosed by means of ventriculography or echocardiography. Cardiac surgery is often the only therapeutic option, but mortality remains extremely high.^{4,5}

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