MASSIVE PULMONARY EMBOLUS COMPLICATING LEFT ATRIAL MYXOMA

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Atrial myxomas may present with a classic triad of constitutional symptoms, embolic events, and intracardiac obstruction.¹ We report a case of a massive pulmonary thromboembolus complicating a left atrial myxoma in the absence of an atrial or ventricular septal defect.

Clinical summary. A 62-year-old woman with a history of hypertension was admitted to a peripheral hospital with a right middle cerebral artery territory stroke, resulting in a dense left hemiplegia. Carotid duplex studies demonstrated only minimal disease. A transthoracic echocardiogram revealed a 3-cm left atrial mass. She was then transferred to our institution for further investigation and treatment.

A transesophageal echocardiogram demonstrated a solitary 3 × 2-cm left atrial mass attached to the interatrial septum. There was no abnormality of the atrioventricular or semilunar valves, and left and right ventricular function was normal. No septal defects were identified. The stroke was therefore attributed to the presence of an embolus from the cardiac tumor. Her hemiplegia was slowly improving, but she could only walk a few steps with the assistance of a physiotherapist. No anticoagulation or antiplatelet treatment had been used up until this point.

An operation was recommended, and coronary angiography was performed, which demonstrated no significant coronary disease. The following morning (18 days after the initial stroke), she had a cardiac arrest lasting approximately 1 minute and requiring cardiopulmonary resuscitation. Immediately after this, however, she remained hypotensive and was started on an epinephrine infusion. Further tumor embolism or obstruction of the mitral valve was suspected, and a transthoracic echocardiogram was immediately undertaken. Rather unexpectedly, a large amount of thrombus was seen in the right atrium and right ventricle. A heparin infusion was commenced, and the patient was transferred urgently to the operating theater, still requiring a high-dose epinephrine infusion.

Cardiopulmonary bypass was instituted on an emergency basis through femoral artery and femoral vein cannulation. Cooling was commenced to a core temperature of 26°C. A median sternotomy was then performed; the superior vena cava was cannulated, and both cavae were snared. The heart was arrested with antegrade cold blood cardioplegia, and the

Fig 1. Pulmonary thromboemboli.

Fig 2. Left atrial myxoma.

right atrium was opened longitudinally. No thrombus was evident in the right atrium or right ventricle. The main pulmonary artery was therefore opened transversely. No clot was seen in the right ventricular outflow tract; however, 2 large thrombi were removed from each of the left and right pulmonary arteries (Fig 1).

The interatrial septum was incised, and a 3-cm pedunculated, gelatinous tumor was found attached by a short base to the left side of the interatrial septum. This was excised in toto with a small margin of normal septum (Fig 2). No other tumors were found in any of the cardiac chambers or valves.

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The septum and cardiectomy incisions were closed primarily, and the heart was deaired. The patient was rewarmed and weaned from bypass in sinus rhythm, with a moderate amount of epinephrine.

Histopathologic study confirmed a left atrial myxoma and pulmonary thromboemboli (without tumor).

Postoperatively, she required ventilation and inotropic support for right heart failure, which resolved completely after approximately 1 week. Duplex studies of lower limb veins did not reveal deep vein thrombus; however, an inferior vena caval filter was inserted. Warfarin was commenced. The left hemiplegia persisted at discharge on day 21 postoperatively.

Discussion. Many reports exist regarding left- and right-sided emboli from cardiac tumors. Systemic embolism involving the central nervous system, as occurred in this case, complicates approximately 20% of cardiac tumors.² Fatal pulmonary embolism from a right ventricular myxoma has also been reported.³ The unusual feature in this case was that systemic tumor embolus, as well as pulmonary thromboembolus, occurred within 3 weeks in the same patient. Presumably, the pulmonary embolus occurred as a result of immobility after the initial stroke and was not directly related to the left atrial myxoma. Fortunately, in one sense, this occurred preoperatively rather than postoperatively.

To our knowledge, concomitant pulmonary embolectomy and excision of a left atrial myxoma have not previously been reported. The transseptal approach to the left atrium allows for detection of multiple myxomas,⁴ which was a preopera-

tive possibility in this patient that may have accounted for the left- and right-sided events. Multiple myxomas are reported to occur in about 6% of cases.⁵ However, acute pulmonary thromboembolism, a much more common event, proved to be the cause of this patient's emergency presentation.

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