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LETTER TO THE EDITOR

Myocarditis after thymoma resection, with left ventricular hypokinesia mimicking acute coronary syndrome

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To the Editor:

There are no reported cases of the presentation of cardiogenic shock associated with thymoma as an isolated regional wall motion abnormality. Myocarditis demonstrated using clinical and histological criteria has been reported to mimic acute myocardial infarction [1].

A 51-year-old man with no previous comorbid illness presented to us with fever, myalgia, reduced urine output, and pedal edema of 1–2 weeks duration. Computed tomography (CT) chest revealed a lobulated mediastinal mass (approximately 10.8 × 6.5 × 9.5 cm) suggestive of thymoma (Fig. 1). Preoperative transthoracic echocardiogram (TTE) was normal, with ejection fraction (EF) of 68 %. Nine days later, thymectomy was performed.

Intraoperative biopsy confirmed it to be an AB type of thymoma as per the WHO classification [2]. The patient was extubated the same evening. However, the next morning his blood pressure remained 80–90 mmHg systolic, heart rate 140/min, and CVP 11 mmHg. He was tachypneic, 36/min, SpO_2 88 % on room air, arterial blood gas (ABG) on 60 % venturi mask showed PaO_2 99.2 mmHg, pH 7.46, $PaCO_2$ 27 mmHg, base excess (BE) −3.1. Chest X-ray showed perihilar opacities suggestive of pulmonary edema. He was electively intubated; ECG showed ST depression and T inversion in V3 to V5 leads, sinus tachycardia, low-voltage QRS complexes, occasional ventricular premature complexes (VPC); cardiac troponin-T was elevated to 2.48 ng/ml (normal, 0–0.03 ng/ml), total leukocyte count was 21,400/mm^3, and normal serum creatinine 0.9 mg/dl. Transthoracic echocardiogram (TTE) showed moderate left ventricular (LV) dysfunction, EF of 36.4 % with hypokinesis of mid-inferolateral wall motion.

Coronary angiography showed right-dominant, normal coronaries except for mild narrowing of the origin of the posterior descending artery (PDA), with normal flow. Endomyocardial biopsy was deferred. With a presumptive diagnosis of thymoma-associated myocarditis, therapy was commenced with intravenous (IV) methylprednisolone 1 g, twice-daily dosing. Additional support was provided with IV infusion of epinephrine, dobutamine, and norepinephrine, together with intraaortic balloon counter pulsation (IABP). The patient was weaned off supports, based on maintenance of hemodynamics, with normal ABG, and he was extubated after 4 days. TTE showed EF of 34 % as earlier. However, he had to be reintubated for respiratory distress after 3 days. TTE then showed global hypokinesia with EF of 10 %, and poor response to maximal inotropic therapy. Extracorporeal membrane oxygenation (ECMO) was not available. The patient expired a few hours after being reintubated.

A clinical diagnosis of myocarditis was made because of the elevation of cardiac troponin-T, with ECG and echocardiographic changes, in the presence of a normal coronary angiogram and no evidence of alternative causes. The classic histopathological Dallas criteria used for the

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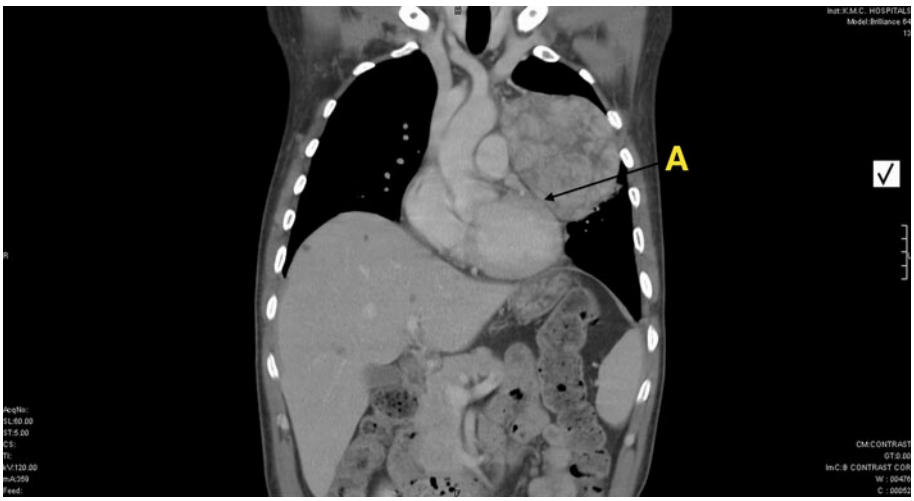

Fig. 1 Preoperative computed tomography (CT) of chest, coronal section, shows a large mediastinal mass suggestive of thymoma. The mass is seen to abut the left ventricle (*A*)

diagnosis of myocarditis is reported to have low sensitivity [3]. Clinical criteria may provide strong suspicion of myocarditis even without histological confirmation [4]. Because of the lack of myocardial tissue biopsy, both thymoma-associated and viral myocarditis may be equally suspected. Intraoperative transesophageal echocardiogram (TEE) could have revealed the new onset of LV dysfunction in our case.

Our experience should remind anesthesiologists to be aware and maintain a high degree of suspicion of the possibility of LV dysfunction and myocarditis occurring perioperatively in patients with thymoma.

Conflict of interest None.

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