A case report of asymptomatic transient biventricular dysfunction after pericardiocentesis: importance of echocardiographic follow-up

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BACKGROUND: Transient ventricular dysfunction (TVD) is rare and potentially fatal complication of pericardiocentesis (PCC). Some authors refer to it as a pericardial decompression syndrome, others call it the stress cardiomyopathy (SCM). The most prevalent pathophysiologic hypothesis states that sudden increase in ventricular preload with concomitantly increased afterload (sympathetic drive) leads to TVD.¹⁻³ We present a case of asymptomatic TVD with classical features of SCM after PCC for imminent cardiac tamponade.

CASE REPORT: 49-year-old female presented with 1 month history of chest pain, dyspnea and dry cough. Clinical exam revealed BP of 140/80 mmHg, distended jugular veins, hepatomegaly and muffled heart sounds. ECG showed sinus tachycardia 101/min and microvoltage. Echocardiographically a large pericardial effusion (PE) with signs of cardiac tamponade was found and PCC was attempted. Only 100 ml of serosanguinous fluid was evacuated and since the patient was clinically stable we postponed the new PCC for the next day. Patient felt significantly better. The follow-up echocardiographic exam showed that the PE had drained into the left pleural cavity and that there was a newly developed apical biventricular akinesis with left ventricular apical thrombus. Cardiac enzymes were slightly elevated and ECG showed inverted T waves in all precordial leads. Treatment with enoxaparin, furosemide and bisoprolol was started. Chest CT scan and PE fluid analysis revealed metastatic pulmonary adenocarcinoma. Ten days after PCC, complete recovery of systolic function as well as complete resolution of the thrombus was found and patient was transferred to the pulmonary clinic for further treatment.

CONCLUSION: TVD is a rare complication of PCC and is more frequently observed in patients with rapid drainage of large PE. Since TVD can be asymptomatic, regular echocardiographic follow up after PCC is important in order to reveal potential complications and to guide optimal treatment.

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LITERATURE

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