

Transient dynamic left ventricular outflow tract obstruction in a patient with pheochromocytoma

Odwracalne, przemijające zwężenie drogi odpływu lewej komory u pacjentki z guzem chromochłonnym

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A 49-year-old woman was admitted with a clinical suspicion of pheochromocytoma. For the past 6 years, she had been complaining of paroxysmal increases in blood pressure (BP), accompanied by sweating and headaches. On admission, transthoracic echocardiography (TTE) showed mildly decreased left ventricular (LV) diastolic diameter (32 mm) with increased posterior (12 mm) and septal wall (13 mm) thickness, with mild asymmetric hypertrophy of subaortic segments of septal wall (18 mm), preserved systolic function of left ventricle, without systolic anterior motion (SAM) of the mitral valve and LV outflow tract (LVOT) gradient. Shortly after admission, before α -blockade was started, sudden elevation of BP was noted (up to 195/95 mm Hg), accompanied by increased heart rate (90/min) and syncope. Loud systolic murmur along the left sternal border was heard. TTE revealed a hyperdynamic LV (ejection fraction 80%), SAM of the mitral valve and a dynamic LVOT gradient of 88–100 mm Hg (Figs. 1A, B). The patient was immediately put on α -blockade, which resulted in the resolution of clinical symptoms. Repeated echocardiography revealed normal LV systolic function with no SAM of mitral valve and no outflow tract gradient (Figs. 1C, D). The diagnosis of pheochromocytoma was based on biochemical and imaging evaluations (4.8 × 4.4 cm tumour) and then confirmed on histopathology after removal. The perioperative period and long term follow up were uneventful. In the described patient, both anatomical predisposition and hyperdynamic state resulting from excessive secretion of catecholamines by the tumour represented the most important mechanisms for the development of severe, transient, dynamic LVOT obstruction. This may illustrate a clinically important, although very rare, presentation of pheochromocytoma.

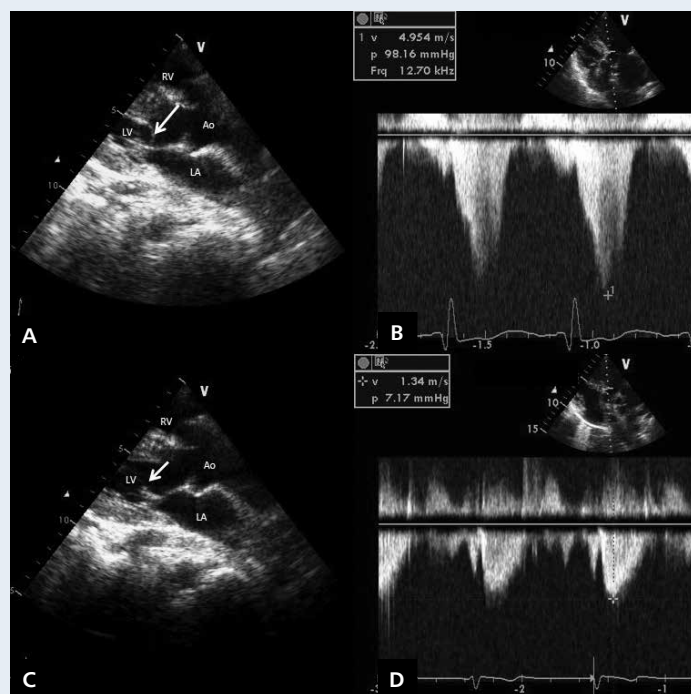


Figure 1. A. TTE. Long axis view in mid-systole. Systolic anterior motion of the mitral valve (arrow); B. Continuous-wave Doppler of LVOT with a peak velocity of 4.95 m/s and peak pressure gradient of 98.1 mm Hg; C. TTE. Long axis view of the left ventricle in mid-systole without SAM (arrow); D. Continuous-wave Doppler of LVOT flow, without LVOT obstruction; LV — left ventricle; LA — left atrium; RV — right ventricle; Ao — aorta

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