



A 74-year-old woman with acute chest pain

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1. Case description

A 74-year-old woman presented to our emergency department with acute chest pain. She had been diagnosed with depression two years earlier, for which she was taking antidepressants. Chest radiograph was normal. Electrocardiogram showed ST segment elevations and T wave inversions in the anterior leads (Fig. 1a). Blood tests revealed elevated levels of creatine kinase, brain natriuretic peptide, and troponin I. Echocardiography demonstrated left ventricular severe apical hypokinesis. While coronary angiography denoted no coronary artery disease, left ventriculography detected systolic apical ballooning with basal wall hyperkinesis (Fig. 1b, c, and video 1). Head magnetic resonance imaging showed no cerebrovascular disease. Whole-body computed tomography revealed no pheochromocytoma. Conservative treatment was initiated. Her symptom, electrocardiographic findings, and echocardiographic wall motion abnormalities resolved in 1 week.

2. What is the diagnosis?

2.1. Discussion

Takotsubo cardiomyopathy is a rare, reversible cardiomyopathy characterized by transient regional systolic ventricular dysfunction in the absence of obstructive coronary artery disease. The Japanese word takotsubo means an octopus-trapping pot with upper narrow part and lower wide part, which resembles the systolic ventricular appearance in the typical form of this condition. The similar reversible cardiomyopathy can be observed in patients with pheochromocytoma, head trauma, cerebrovascular disease, or cocaine intoxication. Although the mechanism is not clear, catecholamine excess is considered a possible pathogenesis of this condition [1]. It is common in postmenopausal women [2]. Medical histories of psychiatric or neurologic disorders and triggers of emotional or physical stress are observed in 55.8% and

71.5% of patients, respectively [2]. Common symptoms include chest pain and dyspnea mimicking acute myocardial infarction or myocarditis. Moreover, takotsubo cardiomyopathy has electrocardiographic abnormalities, such as ST segment elevation, ST depression, T wave inversion, and abnormal Q wave, and release of myocardial enzyme in common with them. Both identification of regional systolic ventricular dysfunction by echocardiography or left ventriculography and exclusion of coronary artery disease by coronary angiography are necessary in the diagnosis. Takotsubo cardiomyopathy is generally managed with conservative treatment and resolution of the stress triggers. Intensive treatment is required in patients developing acute heart failure. The prognosis is good. Rapid normalization can occur, but normalization commonly occurs in about 3 weeks [3].

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Contributors

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Conflict of interest statement

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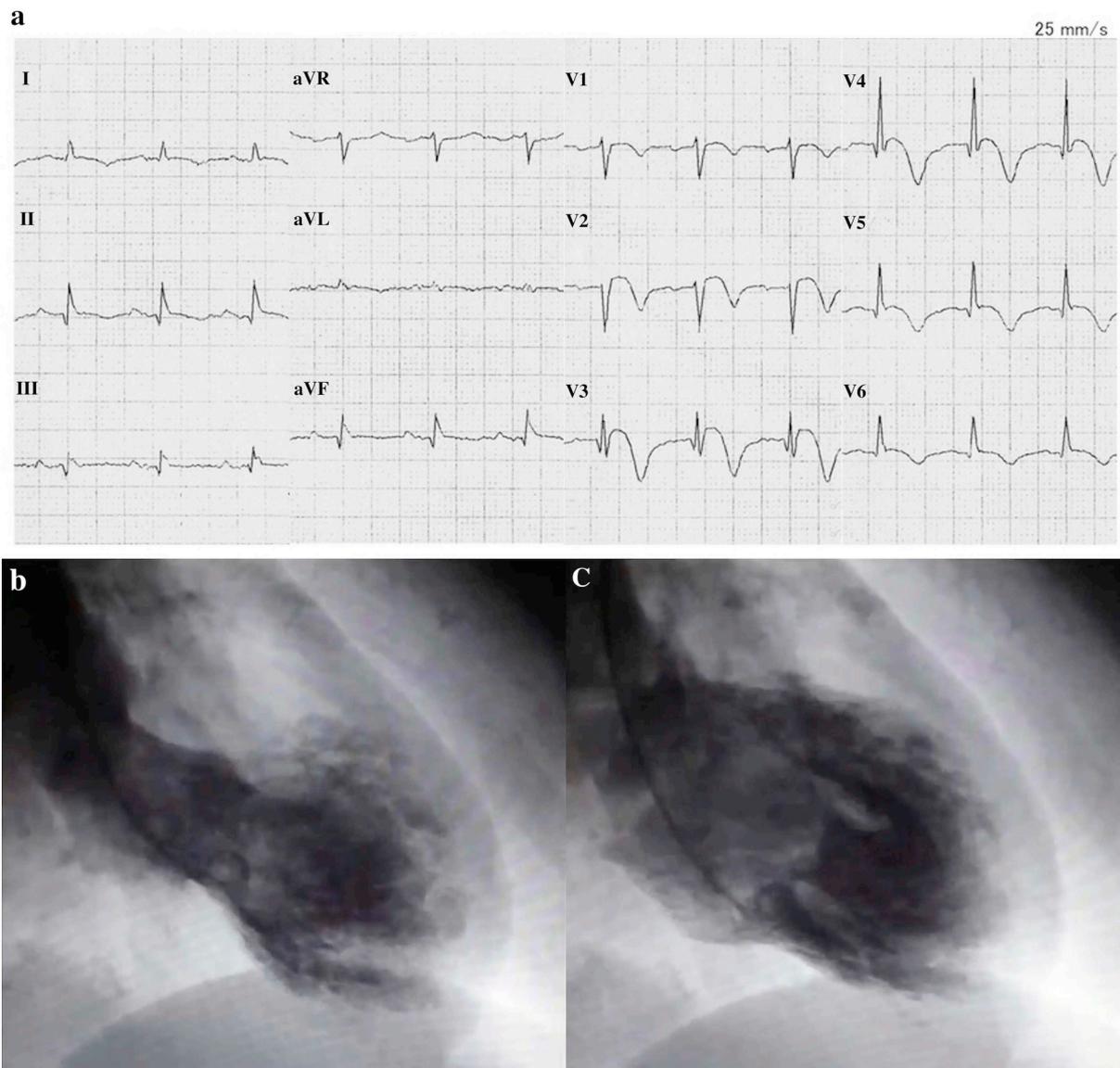


Fig. 1. Electrocardiogram showing ST segment elevations and T wave inversions in the anterior leads (a). Systolic (b) and diastolic (c) left ventriculographic findings. Apical ballooning with basal wall hyperkinesis observed in the systole.

Patient's consent and permission to publish

Written consent to publish this report was obtained from the patient.

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