

Reverse Takotsubo syndrome in a patient with diagnosed multiple sclerosis

Odwrócony zespół Takotsubo u pacjentki ze stwardnieniem rozsianym

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Takotsubo cardiomyopathy is a temporary systolic dysfunction of the myocardium, unrelated to flow alterations in coronary arteries. However, clinical presentation and the results of laboratory tests as well as electrocardiogram (ECG) may suggest acute coronary syndrome. It typically affects women over 50 years old and is usually associated with a sudden, severe emotional situation. We present a case of a 43-year-old woman who was admitted to the Department with suspicion of ST segment elevation myocardial infarction. She presented chest pain and retrosternal discomfort lasting 5 h before admission, dyspnoea, numbness of the left arm, nausea, and headache. Moreover, six years ago the patient was diagnosed with multiple sclerosis (MS). On admission, during the physical examination, tachycardia of 105 bpm was noted as well as ptosis of the upper left eyelid. In ECG an elevation of ST segment in V1–V3 leads and ST segment depression in II, III, aVF, V4, and V5 leads were reported (Fig. 1). The patient was immediately transported from the Emergency Room to the Coronary Care Unit. No significant changes in coronary arteries were found in coronary angiography (Fig. 2), but a dyskinesia of posterior basal and anterior basal segments of the left ventricle was discovered in the ventricle angiography (Fig. 3). The laboratory tests showed elevated levels of troponin I (2.44 ng/mL) and creatinine kinase-MB mass (9.3 ng/mL). In the echocardiography akinesia of basal segments and hypokinesia of middle segments of all the left ventricular walls was reported, with a moderate tricuspid regurgitation. Computed tomography of the head ruled out intracranial bleeding. Fresh relapse of MS was also ruled out based on neurological examination. In anamnesis the patient associated the outburst of pain with severe stress (suspicion that her daughter has MS). The patient was diagnosed with reverse Takotsubo syndrome (TTS). In follow-up echocardiography, performed in the eighth day of hospitalisation, systolic function of all the segments of the left ventricle has returned. Also, normalisation of ST segment was observed in ECG. In major clinical registries up to 40% of cases of TTS were described as “atypical”, of which around 2/3 were, similarly to the presented, reverse TTS [Kurowski V et al. *Chest*, 2007; 132: 809–816]. In comparison with other types of TTS, patients diagnosed with the reverse type are younger. However, no differences in clinical data, angiographic or laboratory findings, or prognosis were found among patients with typical and atypical TTS. Also, some cases of atypical TTS associated with severe neurological disorders were described in the literature, including one case of MS relapse. The presented case indicates the need for a more diverse look at TTS, which can also present itself in an atypical form. It is also important to remember that it can be induced by acute neurological disorders, even though it was not the case in this situation.

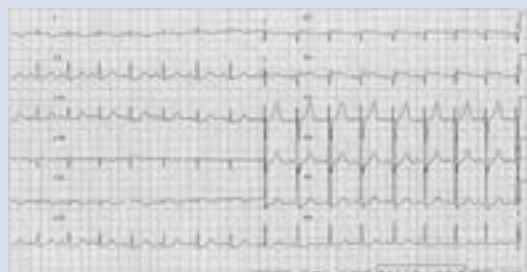


Figure 1. Electrocardiogram performed in admission



Figure 2. Image of coronary arteries

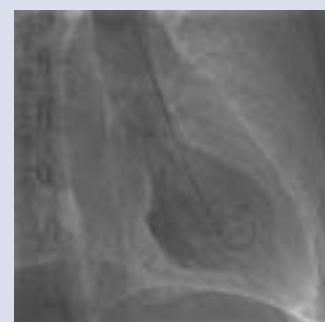


Figure 3. Ventriculography. Image of left ventricle in contraction

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Conflict of interest: none declared

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