

# Triple occurrence of Takotsubo cardiomyopathy

## Trzykrotne wystąpienie kardiomiopatii Takotsubo

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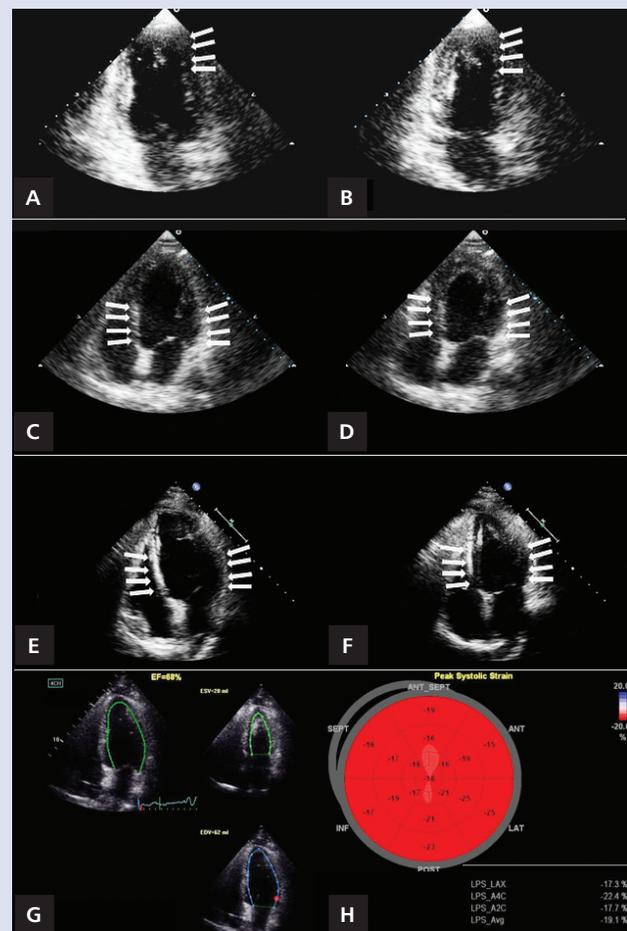
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A 51 year-old woman after a quarrel with her husband and with no previous cardiovascular history was admitted to hospital with a suspicion of anterior myocardial infarction (MI) in 2005. She was suffering from chest pain; ECG documented ST-segment elevation in the V<sub>1</sub>-V<sub>3</sub> leads and a positive troponin I level (2.8 ng/dL) was documented. An echocardiogram revealed akinesia of apical and mid-wall segments of left ventricular (LV) anterior wall and intraventricular septum with an ejection fraction (EF) of 45% (Fig. 1A, B). An urgent coronary angiography demonstrated no coronary artery disease (CAD). We observed full recovery with no LV contraction abnormalities at one-month follow-up. The subsequent focal type of Takotsubo cardiomyopathy (TTC) was diagnosed. Three years later, she presented with an inverse-type of TTC after knee surgery due to chest pain, ST-segment abnormalities in ECG and an increased troponin level (5.3 ng/dL).

An echocardiogram and ventriculography revealed akinesia of all basal and mid-wall LV segments with an EF of 38% (Fig. 1C, D). We observed again a full clinical recovery with no LV wall motion abnormalities. A third hospitalisation, following a panic attack, occurred in 2009. The patient was referred for invasive diagnostics due to chest discomfort, ST-segment depression in ECG and a troponin I level of 1.1 ng/dL. Echocardiography and coronarography results were similar to those from the second episode (Fig. 1E, F). Therefore, a third occurrence of TTC was subsequently recognised. The most recent echocardiography showed normal LV contraction with an EF of 68% and normal longitudinal peak systolic strain for all LV regions (Fig. 1G, H).

TTC, first described in 1990, usually affects postmenopausal women and is preceded by psychological or physical stress. TTC mimics acute MI due to angina chest pain, ST-segment elevation pattern in ECG and a positive troponin level. However, obstructive CAD is in the majority of cases excluded. TTC, which is sometimes also known as apical ballooning syndrome, is predominantly characterised by transient, reversible, regional systolic dysfunction involving the LV apex and mid-ventricle with hyperkinesis of the basal LV segments. Case reports from the last 2 decades have also shown different faces of TTC concerning atypical TTCs such as inverse TTC with basal wall motion abnormalities, mid-segment TTC with akinesia presentation of all LV mid-segment and hyperkinesias of the basal and apical regions of LV, and focal TTC with regional wall motion disturbances.

We here present a unique case of three TTC episodes in one patient after different stress events.



**Figure 1.** Two-chamber echo view in diastole (A) and systole (B); four-chamber echo view in diastole (C, E) and systole (D, F); auto-left ventricular ejection fraction (G) and bull's eye 2-D strain (H)

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