Transient focal left ventricular ballooning: a new variant of Takotsubo cardiomyopathy

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A 63-year-old woman suddenly felt chest pain after an argument. Since the symptom continued until the next day, she was taken to our hospital. The electrocardiogram showed significant ST-elevation in leads V2–4. Coronary angiography revealed no obstructive coronary artery disease. A left ventriculogram showed mid-anterior segmental ballooning associated with basal, mid-inferior and apical hyperkinesis (Panels A and B; see Supplementary data online, Video S1). Troponin I level was 5.03 pg/mL and creatine kinase was 345 U/L on admission, and they peaked out immediately. On Day 2, cardiovascular magnetic resonance (CMR) imaging demonstrated focal dyskinesis and myocardial oedema localized from the mid-septum to mid-anterior wall of the left ventricle (Panel C, arrows) and no late gadolinium enhancement (Panel D). Four months later, follow-up CMR revealed complete recovery of the wall motion abnormality (Panels E and F; see Supplementary data online, Video S2) and segmental myocardial oedema disappeared (Panel G) without irreversible myocardial change (Panel H).

The present case showed clinical features of Takotsubo cardiomyopathy, except for the area of the left ventricular wall motion abnormality. CMR demonstrated that the segment of transient focal dyskinesis was not identical to the ordinary territory of a coronary artery. Apical ballooning is the most common morphological abnormality in Takotsubo cardiomyopathy. Mid-ventricular circumferential ballooning and basal ballooning have also been presented. In this report, we describe a new variant of focal mid-ventricular ballooning. It may be misdiagnosed as coronary artery disease. It may be possible that the patterns of morphological abnormalities in Takotsubo cardiomyopathy are more multifarious.

Supplementary data are available at European Heart Journal – Cardiovascular Imaging online.

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