A 48-year-old man with type 1 diabetes mellitus was admitted to our hospital with diabetic ketoacidosis precipitated by a persistent 7-day febrile illness related to a viral upper respiratory infection. Two days after admission he had an episode of chest pain with a rise of troponin I up to 29 ng/mL but no ECG changes. Coronary angiography demonstrated minor plaque but no flow-limiting disease. Left ventriculography showed severe hypokinesis of basal and mid segments but preserved contractility of apical segments, consistent with a pattern of inverted Takotsubo cardiomyopathy (Figure 1A and 1D and online-only Data Supplement Movie I). The patient was then referred for cardiovascular magnetic resonance (CMR) imaging to determine the underlying cause of left ventricular impairment. Cine CMR imaging confirmed left ventricular wall motion abnormalities affecting the basal and mid segments, sparing the apical segments (Figure 1B and 1E and online-only Data Supplement Movie II). Overall left ventricular systolic function was severely impaired (ejection fraction 31%). On T2-weighted edema-sensitive images, the basal and mid segments of the left ventricle showed diffuse significant increase in signal intensity compared to skeletal muscle (Figure 2A and 2B), which was consistent with acute myocardial edema. On late gadolinium imaging, there was patchy midwall hyperenhancement limited to the basal inferior and lateral wall and the septum (Figure 2C and 2D), typical of viral myocarditis. A follow-up CMR scan at 1 month showed complete restoration of global ventricular function (ejection fraction 65%) and no regional wall motion abnormalities (Figure 1C and 1F and online-only Data Supplement Movie III). There was significant regression of myocardial edema as shown on T2-weighted images (Figure 2E and 2F), although the areas of enhancement on late gadolinium imaging persisted (Figure 2G and 2H). To the best of our knowledge, this is the first
case of acute myocarditis presenting with regional wall motion abnormalities mimicking a pattern of inverted Takotsubo cardiomyopathy. Our case illustrates the usefulness of multiparametric tissue characterization with CMR imaging in distinguishing the variety of potential etiologies in patients with chest pain, troponin rise, and normal coronary arteries, who frequently represent a diagnostic challenge.

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Disclosures
None.
Acute Myocarditis Mimicking Reverse Takotsubo Cardiomyopathy
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