Transient apical ballooning and apical sparing variant stress cardiomyopathy in the same patient

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A 60-year-old woman presented with chest pressure and emesis. Her electrocardiogram was abnormal but non-diagnostic for an acute myocardial infarction. Echocardiography revealed mid- and basal-left ventricular akinesis, with sparing of the apical segments, consistent with apical sparing variant of stress cardiomyopathy (see Supplementary data online, Multimedia files 1 and 2 and Figure 1A). Coronary angiography revealed no significant disease.

The patient was dismissed, but presented 2 months later with abdominal pain and emesis, and was diagnosed with acute pancreatitis. An echocardiogram revealed akinesis involving the mid- and apical-myocardial segments (see Supplementary data online, Multimedia files 3 and 4 and Figure 1B) with preserved function of the basal LV segments. Her pancreatitis resolved with conservative management, and she was discharged in stable condition. Two weeks later, a stress myocardial positron emission tomographic scan revealed no evidence for myocardial ischaemia or infarction. A follow-up echocardiogram confirmed normal left ventricular function without regional wall motion abnormalities (see Supplementary data online, Multimedia file 5).

It is unclear why some patients with stress cardiomyopathy present with apical involvement while other patients present with apical sparing morphologic variants. Regional differences in adrenergic sensitivity may explain morphologic variants of stress cardiomyopathy in different patients, but do not explain the two morphologic variants which occurred in our patient over a short-time period. There have been only two reported cases of different morphologic variants of stress cardiomyopathy occurring in the same patient. This case highlights the need for further research into the underlying pathophysiologic mechanism responsible for stress cardiomyopathy.

Conflict of interest: none declared.

Supplementary data

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