Atypical Takotsubo syndrome

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DESCRIPTION

A 52-year-old woman without cardiovascular risk factors was admitted with oppressive chest pain following an emotionally stressed situation. The ECG showed an ST segment elevation in leads V2–V3 and biphasic T-wave in antero-septal and lateral leads (DI, aVL, V1–V3) (figure 1A). Laboratory test revealed slightly elevated levels of Troponin I (0.068 ng/ml (<0.012 ng/ml)). Transthoracic echocardiography revealed akinesia of the midportion of the septum and free wall of the left ventricle (LV) and normal contractility of the basal and apical region with 68% ejection fraction. The left ventriculogram confirmed the akinesia with compensatory hypercontractility of the basal and apical segments (figure 1B). Coronary angiogram showed no coronary disease. She was discharged with carvedilol (3.125 mg/once daily), ramipril (1.25 mg/once daily), aspirin (100 mg/once daily) and atorvastatin (10 mg/once daily). The echocardiogram performed at discharge and follow-up (6 months) showed regression of the wall motion abnormalities.

In Takotsubo syndrome ('left ventricular apical ballooning syndrome' or 'broken-heart syndrome') the majority of reported cases involve the apical

region of the LV. Only a small number of atypical cases (new variants) have been described involving the midportion of the LV or the basal portion (inverted Takotsubo).¹ As in classical forms symptoms and the ECG findings mimic myocardial infarction in patients without obstructive coronary artery disease. It is predominantly found in female patients. Emotional or physical stress is the common trigger.

The course is usually benign and reversible with total recovery of the ventricular function in most cases.² Potential fatal complications like cardiogenic shock and lethal arrhythmias can occur in the acute phase.

Learning points

- ▶ Takotsubo syndrome is a differential diagnosis of acute myocardial infarction that occurs in the absence of coronary artery disease.
- ▶ It occurs mainly in middle-aged women in the context of stressful events and presents transient contractility changes.
- ▶ Despite the fact that the most cases involve the apical region of the left ventricle (preserving the more basal segments), sometimes variants with a more focal commitment may occur.

Figure 1 (A) 12-lead electrocardiogram showing an ST segment elevation in leads V2–V3 and biphasic T-wave in antero-septal and lateral leads (DI, aVL, V1–V3). (B) Left ventricle angiogram with akinesia with compensatory hypercontractility of the basal and apical segments. (C) Follow-up echocardiogram without the wall motion abnormalities reported.

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