



BACKGROUND:

Takotsubo cardiomyopathy (TCM) is an important differential diagnosis of acute coronary syndrome and myocarditis. It is characterized by normal or near-normal coronary arteries and regional wall motion abnormalities that extend beyond a single coronary vascular bed. Variants of the classical left ventricular (LV) apical ballooning including mid or basal left ventricular wall motion abnormalities and biventricular involvement are increasing in recognition as cardiac magnetic resonance (CMR) is used more extensively throughout the world.

CASE REPORT:

69-YEAR-
OLD
WOMAN

PREVIOUS HISTORY:

- ⇒ Hypertension; diabetes; dyslipidaemia
- ⇒ Atrial Fibrillation

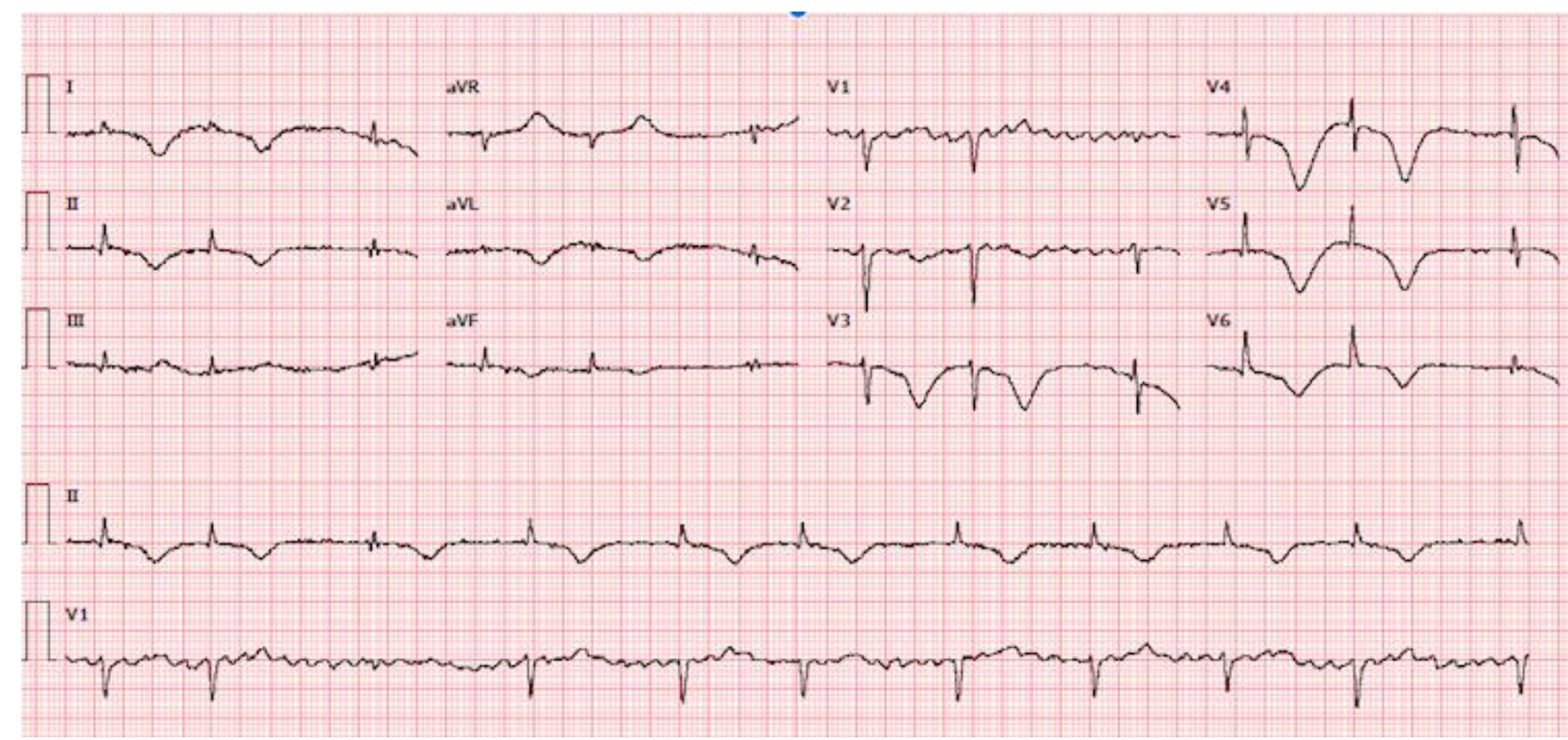
- Transferred to our emergency department due to suspected acute coronary syndrome
- History of **two episodes** of an **oppressive chest pain** longer than 1 hour, orthopnoea and paroxysmal nocturnal dyspnoea 36 hours before.
- Two weeks before she had had a lower tract respiratory infection, empirically treated (Amox/Clav plus azithromycin), that was not totally resolved.



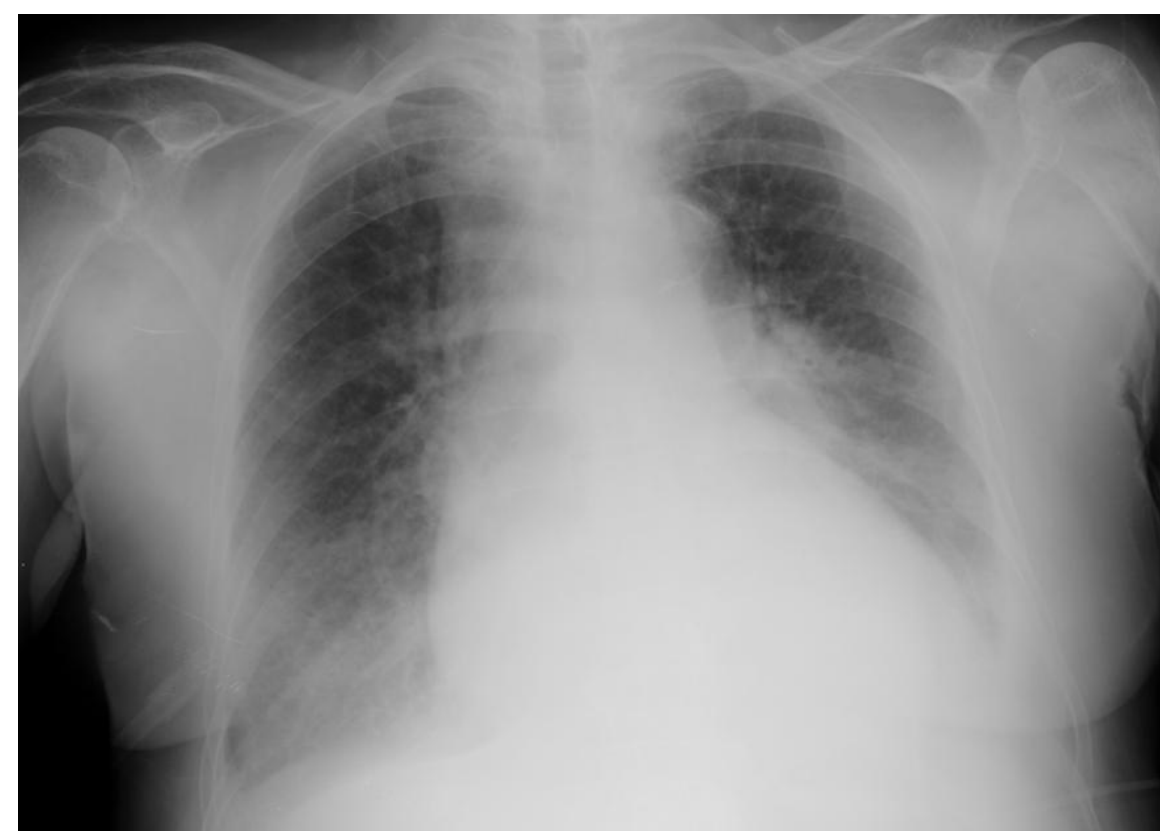
- She had **polypnea; wheezing**, pulse oximetry: 88%.
- BP: **178/110 mmHg**; Pulse **115/min**.
- S1 variable; S2 present; no murmurs or pericardial friction.
- **Breath sounds were absent in lower chest and rales were also noted.**



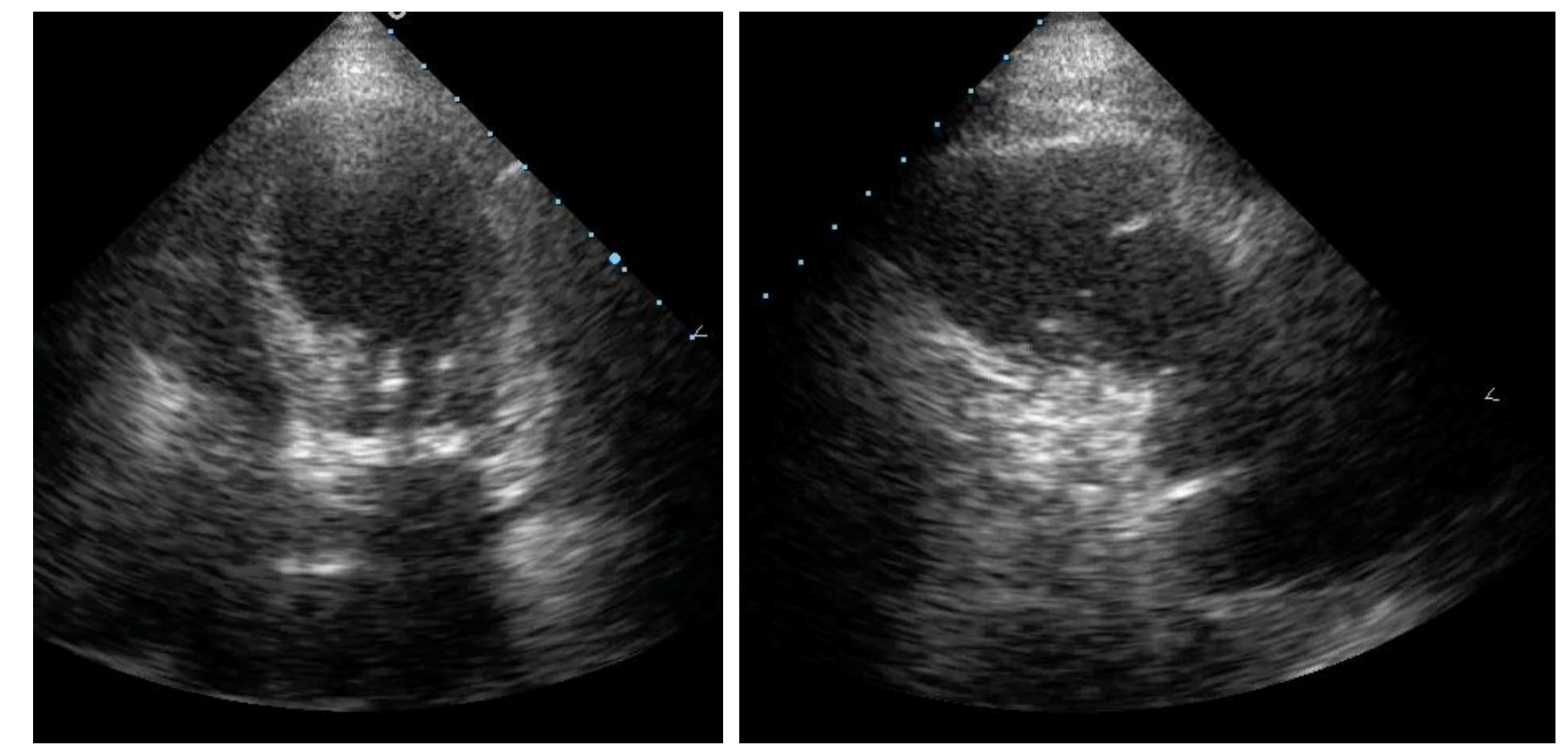
- **Trop I (peak): 4.55 ng/ml**; CK – MB 32 U/L;
- Hg 15.6 g/dl; HCT 44.4%; Leucocytes; Platelets 124 000; PCR mg/L; creatinine 0.9 mg/dl; no electrolytes abnormalities.



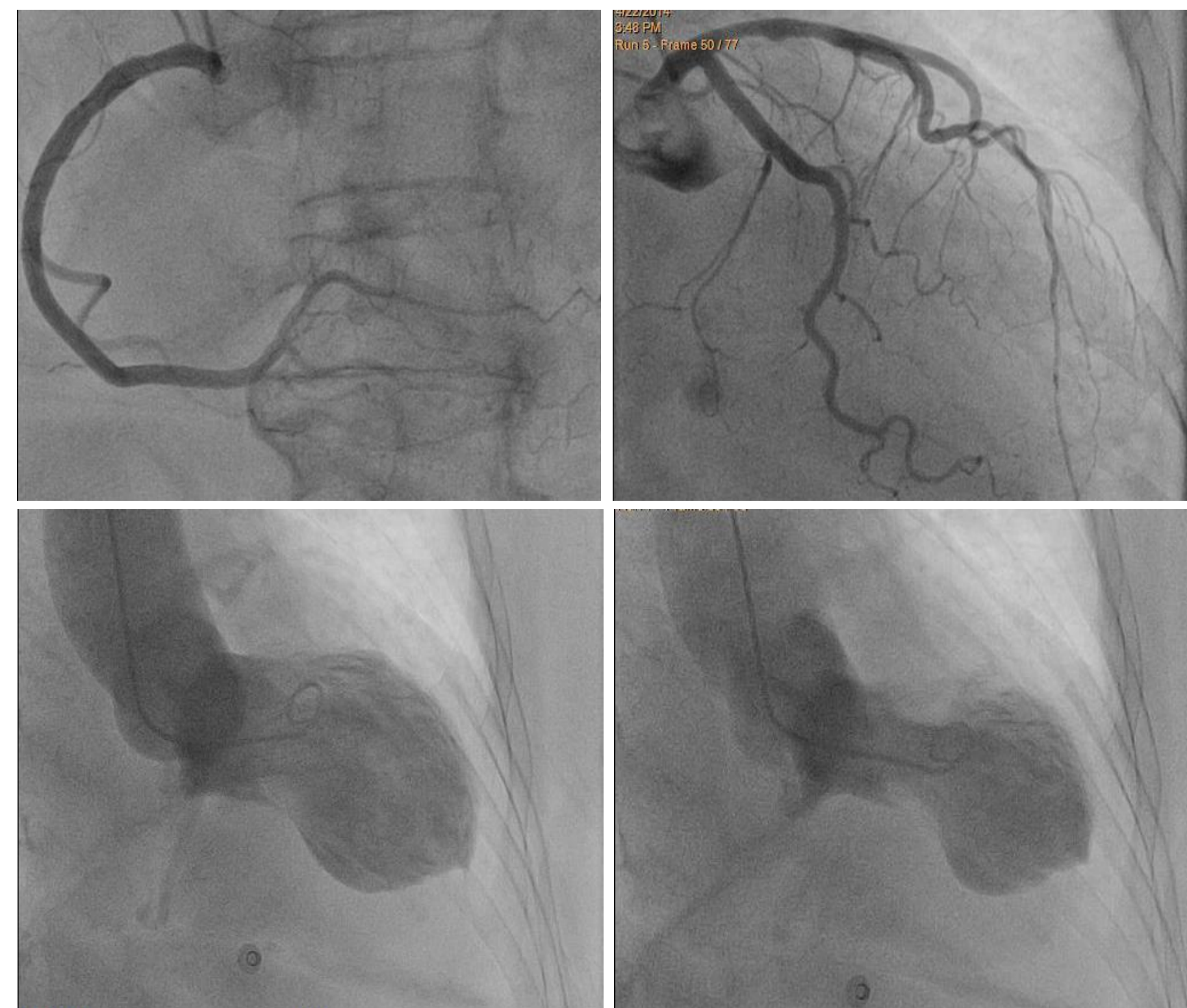
Rapid atrial fibrillation, poor R wave progression in anteroseptal leads and inverted T waves in I, aVL and V2-V6 leads



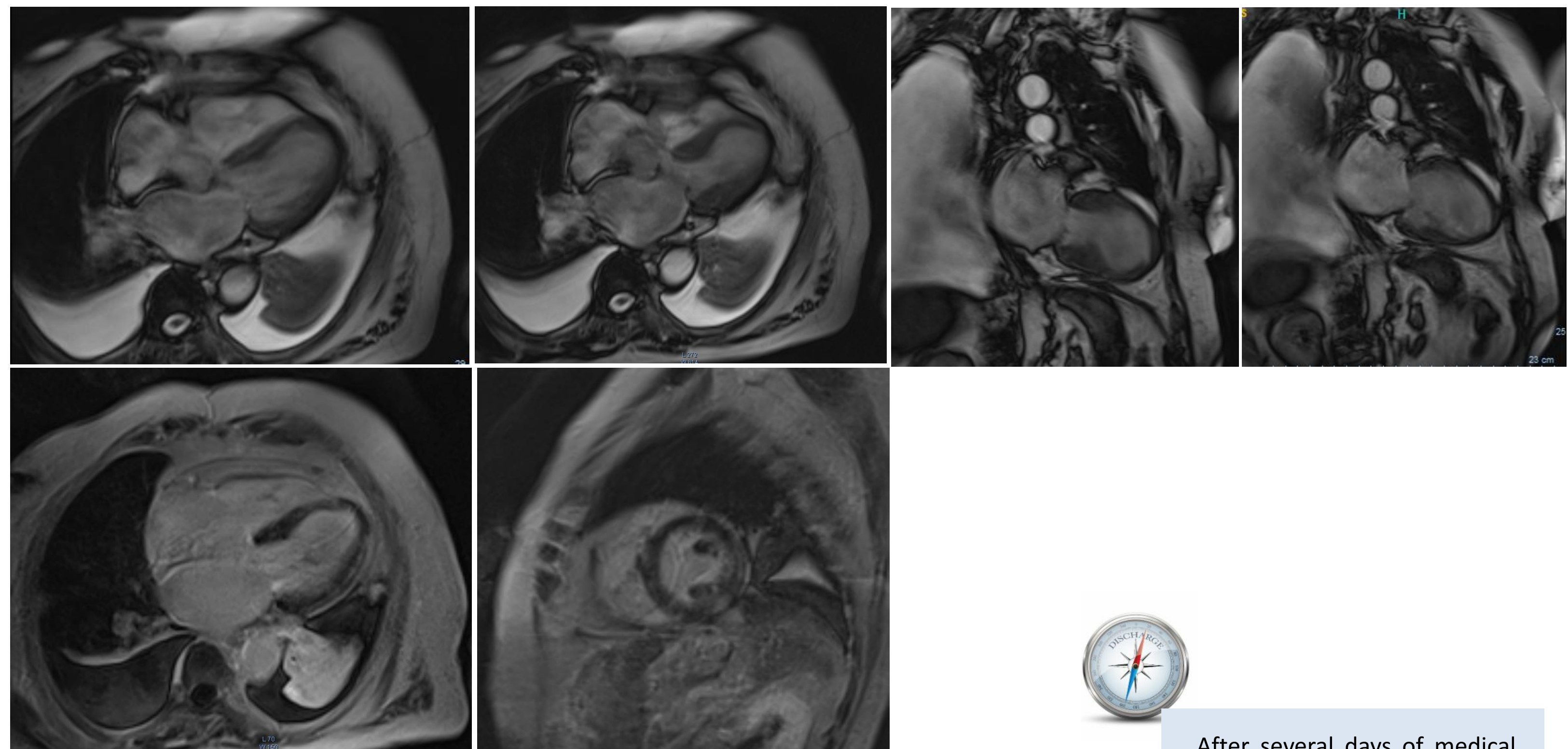
Chest x-ray showed bilateral pleural effusion.



Transthoracic echocardiography revealed severe biventricular dysfunction; akinesis/dyskinesis of mid to apical segments (apical ballooning) of both ventricles, extended beyond a single epicardial coronary distribution, compatible with biventricular Takotsubo cardiomyopathy.



Cardiac catheterism showed **absence** of obstructive coronary disease. Akinesis/dyskinesis of all mid to apical segments. Hypercontractility of basal segments. Severe dysfunction of left ventricle.



A CMR, performed two days later, showed moderate biventricular systolic dysfunction, hypokinesis in mid to apical segments of LV and hypokinesis in apical right ventricle. It also showed non-ischemic late gadolinium enhancement in antero-apical and lateral apical segments.

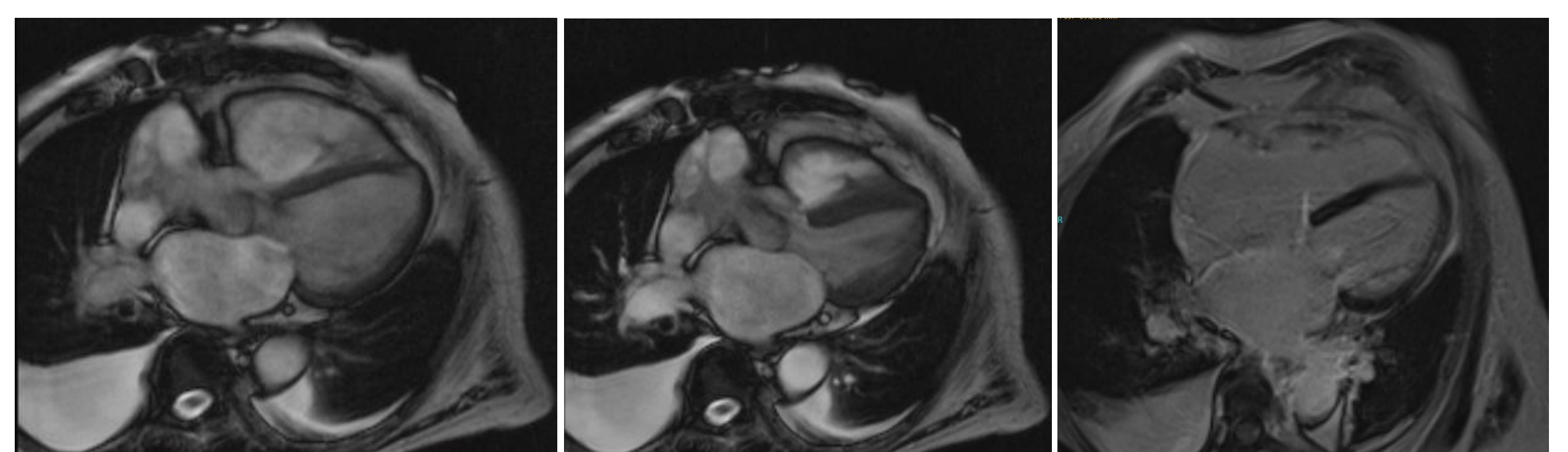


After several days of medical management, the patient was discharged from the hospital in stable condition.

6-MONTH FOLLOW-UP



Transthoracic echocardiography performed 6-month after evidenced complete biventricular function recovery and no segmental contractility changes.



CMR supported the functional recovery and the resolution of contractility abnormalities, but noticed the intramyocardial late gadolinium enhancement in the segments previously reported.

CONCLUSION:

- There are **fewer reports** of this **unusual** presentation of Takotsubo cardiomyopathy, described by transthoracic echocardiography. It appears to be associated a more severe LV dysfunction and pleural effusion, which result in a significant hemodynamic instability and consequently worse prognosis.
- This case represents a good example of the diagnostic challenge between myocarditis and takotsubo cardiomyopathy.
- Taking in account the **exuberance of the case**, the **mild elevation of troponin**, the **full recovery of biventricular function and resolution of contractility abnormalities**, it seems more probably to be a Takotsubo cardiomyopathy, in a patient who, probably had a previous scar of myocarditis. Although, the hypothesis of acute myocarditis as the primary diagnosis cannot be excluded.