

Takotsubo Cardiomyopathy, presentation as a cardiac arrest in a 67 year old female with depression and anxiety history

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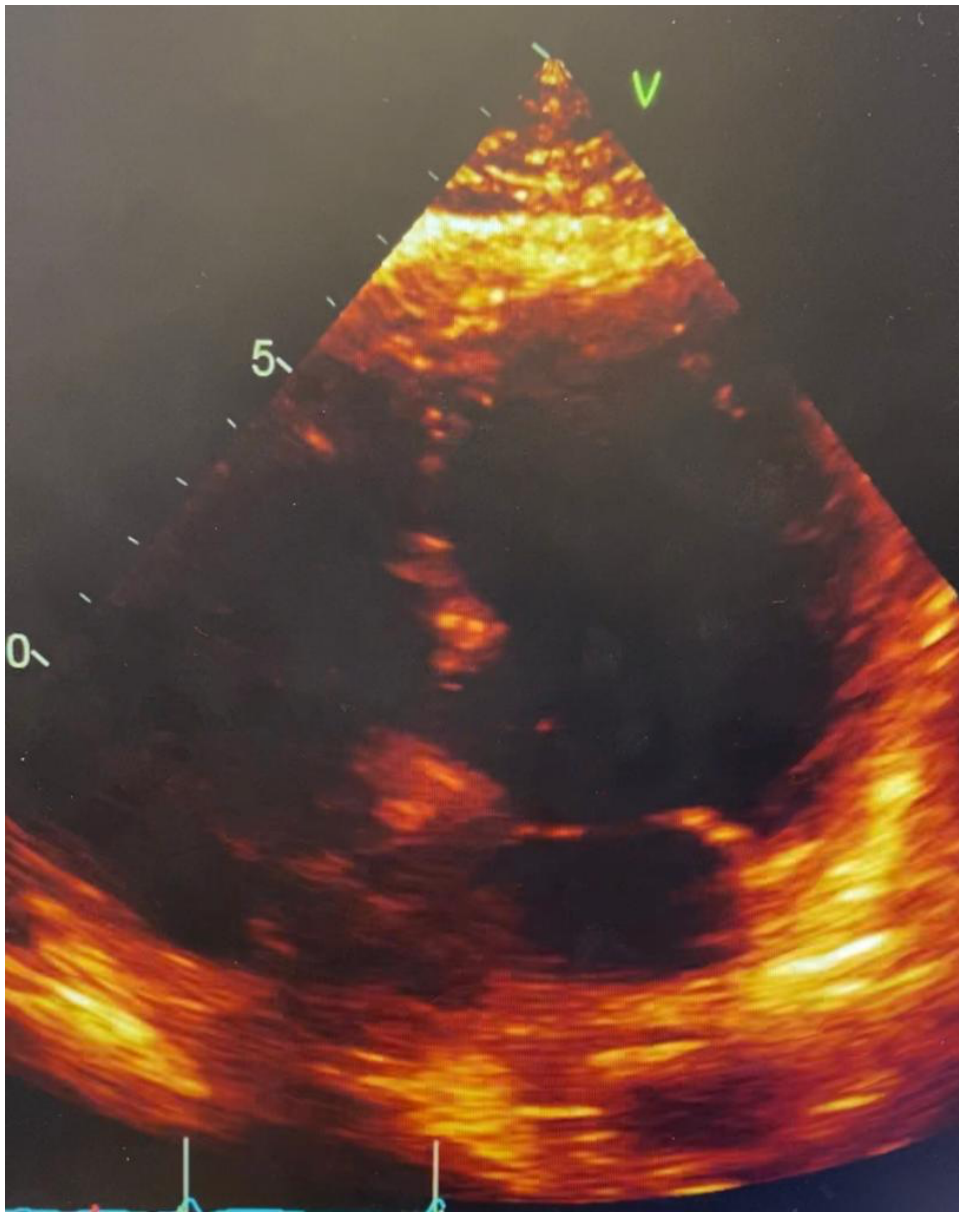
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## Background

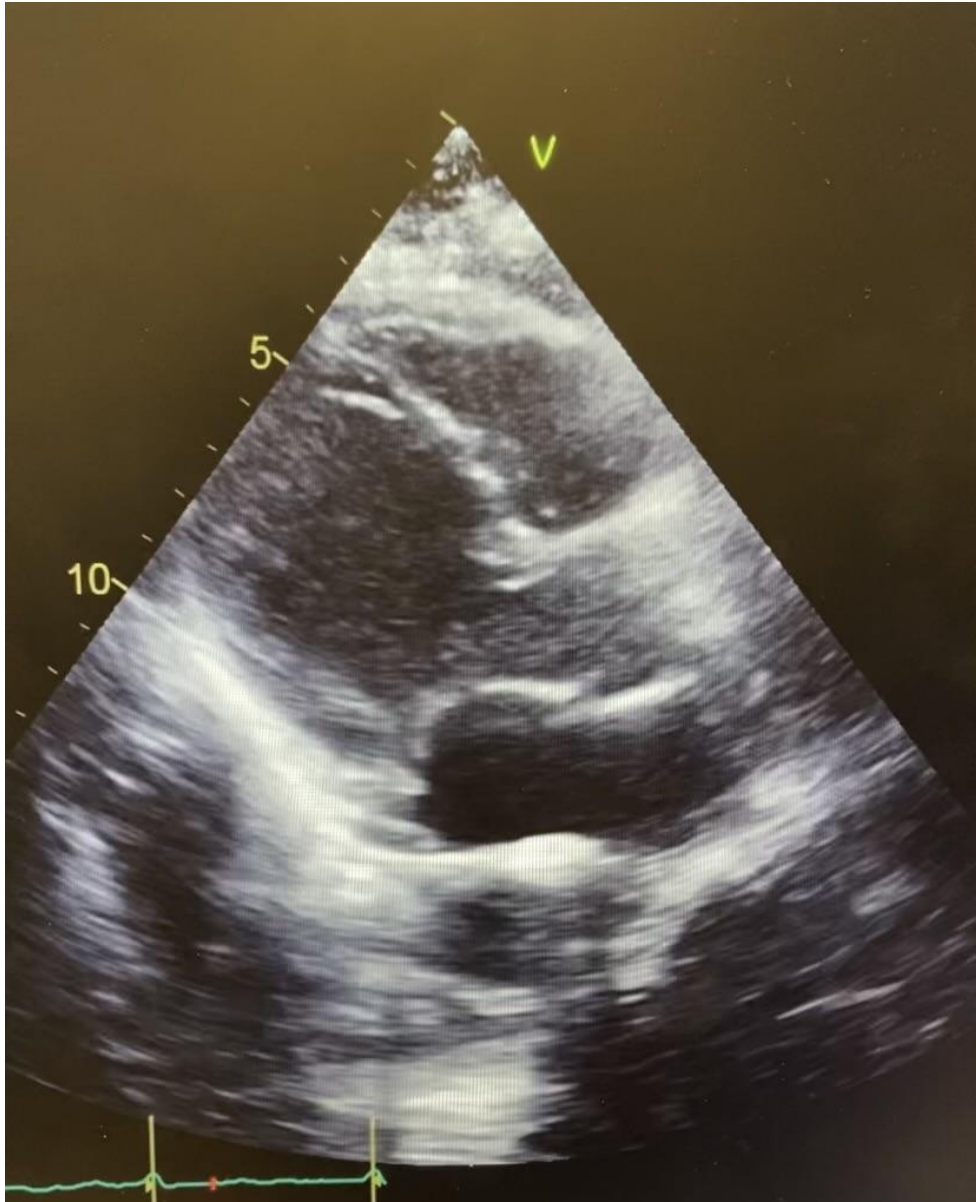
Takotsubo cardiomyopathy also known as broken heart syndrome or stress induced cardiomyopathy is a sudden transient reversible dramatic left ventricular apical akinesis mimicking acute coronary syndrome, making it a diagnostic challenge. Most common mechanism for Takotsubo is stress induced catecholamine release causing sympathetic activation leading to microvascular dysfunction or direct toxicity. Mayo Clinic Criteria for making diagnosis at the time of presentation requires 1) transient hypokinesis, dyskinesis, or akinesis of the LV midsegments with or without apical involvement, and a stressful trigger is often but not always present. 2) absence of obstructive coronary disease or angiographic evidence of acute plaque rupture 3) new ECG abnormalities (either ST segment elevation and or T wave inversion) 4) absence of pheochromocytoma or myocarditis.

## Case presentation

A sixty-seven year old Hispanic woman with past medical history of depression and anxiety, presented to emergency department with generalized body weakness, chronic severe lower back pain. In emergency department, patient experienced cardiac arrest with return of spontaneous circulation achieved in 5 mins, was intubated for airway protection. Electrocardiogram showed sinus tachycardia with elevated cardiac troponins. Echocardiogram revealed large area of akinesis involving mid anteroseptal, lateral wall, inferoapical; severe left ventricular dysfunction with ejection fraction 30-35%. She was found to have pulmonary edema and was started on vasopressors, heparin drip, and aggressive diuresis for cardiogenic shock. Imaging negative. Eventually she was able to be weaned off vasopressor support and extubated. Her repeat echo three days later revealed improved left ventricular systolic function with ejection fraction of 45-50%. Patient underwent left heart catheterization which demonstrated no significant obstructive coronary disease. Patient improved clinically and was discharged to a skilled nursing facility for rehabilitation on beta blocker and angiotensin receptor blocker.



Echo on arrival.



Improved ECHO



## Discussion

The exact etiology of our patient's arrest remains unknown. Early suspicion and use of Mayo clinic criteria at time of presentation is important especially in patients with a history of psychiatric disorders as there is a high rate of recurrence and complications reported among them. Our patient has a history of anxiety and depression, which can be considered precipitating factors predisposing the patient to a stress induced cardiomyopathy.