

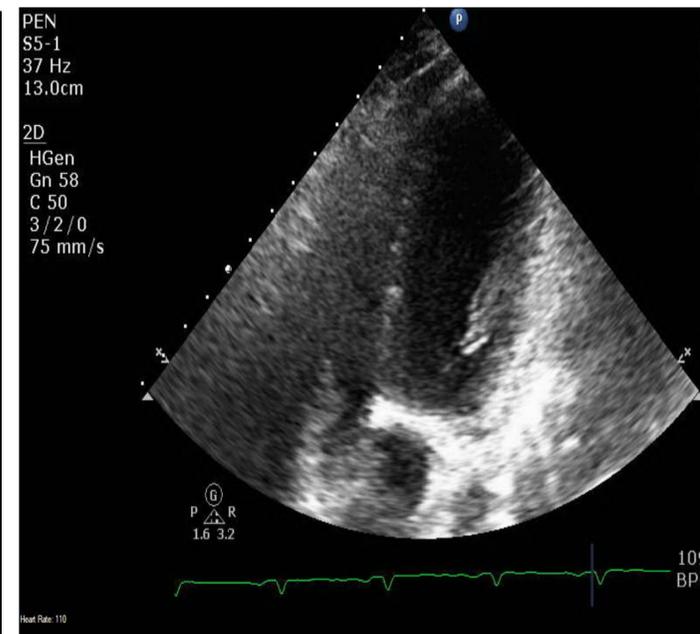
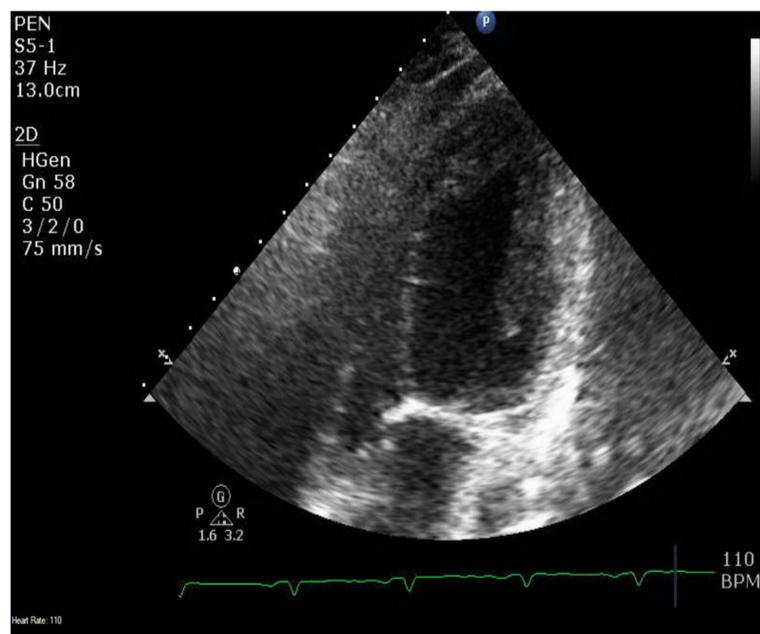
## INTRODUCTION

Takotsubo cardiomyopathy (TTC) is a reversible acute heart failure with an incidence of about 1-2%. It is more common in post-menopausal women. Prognosis is generally good with full recovery in 3-6 months. Reverse Takotsubo cardiomyopathy (rTTC) is a rare variant of TTC. It is challenging to differentiate it from acute coronary syndrome (ACS) due to similar presentation

## CASE PRESENTATION

A 29-year-old female with a past medical history of anxiety and depression presented with abdominal pain, nausea, and vomiting to another facility where she had an episode of grand mal seizure and post seizure became hypoxic, likely due to aspiration pneumonitis. She was intubated and transferred to our facility. On arrival blood work showed elevated troponin and pro-BNP. Chest Xray showed bilateral opacities suggestive of pulmonary edema. EKG showed sinus tachycardia. She was started on anticoagulation for possible ACS and was given diuresis for pulmonary edema. Echocardiogram showed ejection fraction of 20 to 25% with basal to mid-ventricular hypokinesis with apical sparing. There was no evidence of coronary artery disease on cardiac catheterization. She was diagnosed with rTTC likely precipitated by grand mal seizures.

## CARDIAC CATHETERISATION AND ECHOCARDIOGRAPHY IMAGES



## DISCUSSION

TTC is an acute reversible left ventricular dysfunction which is usually precipitated by emotions or physical stress. According to Mayo Clinic criteria, TTC is characterized by transient hypokinesis, akinesis, or dyskinesis of the left ventricular mid-segments with or without apical involvement, absence of obstructive coronary disease or angiographic evidence of acute plaque rupture, new electrocardiographic abnormalities (either ST-segment elevation and/or T-wave inversion) or modest elevation in cardiac troponin, and absence of pheochromocytoma or myocarditis. There is apical ballooning of the heart due to cardiac apical akinesis/hypokinesis and basal hyperkinesis. Catecholamine cardiotoxicity, coronary artery spasm, coronary microvascular impairment, and estrogen deficiency are the various proposed pathophysiological mechanisms of TTC. Reverse TTC is a rare variant with basal ballooning instead of apical ballooning and is usually seen in younger women. These patients frequently present with heart failure symptoms usually complicated by pulmonary edema and cardiogenic shock. The management is predominantly supportive with management of the complications. In patients with cardiogenic shock, vasopressor agent or intra-aortic balloon pump is indicated and in patients with LV obstruction, beta blockers can be used to reduce contractility of the affected myocardium. Pulmonary edema is treated with oxygen supplementation, mechanical ventilation and diuretics. Thrombus in akinetic segment should be treated with anticoagulation for at least three months. Long term therapy with beta blockers reduces the incidence of recurrences. The recurrence is about 3% in the first four years. Physicians must be aware of this rare condition which usually presents as ACS but with normal coronaries.