**Background**

- Stress cardiomyopathy: left ventricular dysfunction that arises after emotional or physical stress due to the release of catecholamines
- Characterized by myocardial hypocontractility
- Ballooning of the apex resembles a tako-tsubo, a pot used by Japanese fishermen to trap octopuses
- **KEY distinguishing finding is the lack of evidence of coronary artery disease on an angiogram**
- Mimics physical manifestations of myocardial infarction and heart failure which include:
  - Chest pain
  - Shortness of breath
  - Elevated troponin levels
  - Abnormal LV movement and ballooning

**Case**

57 yo presents to ED with SOB, fever, chills, CP, nausea, and vomiting
- Day 1: Patient was septic and received Levophed
- Day 3:
  - ECG shows severely reduced EF of 30% compared to 4 days ago before the initiation of Levophed
  - Elevated troponin levels

**Imaging/Tests**

- **ECG revealing NSTEMI**
- Classically characteristic of a myocardial infarction
- **Clinically:** patient was experiencing chest pain and shortness of breath
- CT angiogram revealing the lack of obstruction in her arteries
- **Clinically:** Patient was still experiencing signs of MI and heart failure

**Case (Cont.)**

- Patient taken off of Levophed and started on aspirin and a higher dose of Propanolol
- ECG reveals NSTEMI
- Angiogram results: nonobstructive CAD, elevated LVEDP, reduced LV systolic function
- Day 4: Echocardiogram performed following day, EF: 55%, mild LVH, pleural effusion, and no significant pericardial effusion

**Discussion**

- Patient was initially given Levophed to treat her sepsis
- From literature review, we have only found two cases reported in humans of norepinephrine induced takotsubo
- We hypothesize that the patient had Levophed induced Takotsubo.
- Takotsubo cardiomyopathy was reversed when the source of norepinephrine was removed.

**Resources**