**LEFT VENTRICULAR OUTFLOW TRACK OBSTRUCTION AND MITRAL VALVE REGURGITATION IN A PATIENT WITH TAKOTSUBO CARDIOMYOPATHY**

**Y. Wu1**, W.Q. Fan1, L. Chachula3, G. Costacurta1,2, R. Rohatgi1,2, F. Elmi1,2

1. Department of Medicine, Easton Hospital, Drexel University, Pennsylvania, USA

2. Easton Cardiovascular Associates, Pennsylvania, USA

3. Philadelphia College of Osteopathic Medicine, Pennsylvania, USA

*Introduction*: Takotsubo cardiomyopathy (TCM) can be complicated by left ventricular outflow tract (LVOT) obstruction and severe acute mitral regurgitation (MR) leading to hemodynamic instability in an otherwise benign disorder. Up to 20-25% of TCM patients develop LVOT obstruction and/or MR, it is important to recognize the clinical manifestations of these complications and adhere to specific management in order to reduce patient morbidity and mortality.

We report the clinical history, imaging, treatment strategy and clinical outcome of a patient with TCM that was complicated with severe MR and LVOT obstruction. We then discuss the pathophysiology, characteristic imaging, key clinical features and current treatment strategy for this unique patient population.

*Case report*: A postmenopausal woman with no clear risk factor for coronary artery disease (CAD) presented to the ED with chest pain after an episode of mental/physical stress. Physical exam revealed mitral regurgitation (MR), mild hypotension and pulmonary vascular congestion. Her troponins were mildly elevated. Cardiac catheterization excluded obstructive CAD, but revealed severe apical hypokinesia and ballooning. Diagnostic tests revealed the presence of severe acute MR and LVOT obstruction. The patient was diagnosed with Takotsubo cardiomyopathy (TCM) complicated by underlying MR and LVOT obstruction. The mechanism of her LVOT and MR was attributed to systolic anterior motion of the mitral valve (SAM), which the TEE clearly showed during workup. She was treated with beta-blocker, aspirin and ACE-I with good outcome. Nitroglycerin and inotropes were discontinued and further avoided.

*Conclusion*: Our case illustrated LVOT obstruction and MR associated with underlying SAM in a patient with TCM. LVOT obstruction and MR are severe complications of TCM and may result in heat failure and/or pulmonary edema. Timely and accurate identification of these complications is critical to achieve optimal clinical outcomes in patients with TCM.