Introduction

Broken Heart Syndrome is a unique condition in which there is transient systolic dysfunction of the apical segment or portions of the left ventricle without evidence of obstructive coronary artery disease. The condition presents as if there has been infarction of the myocardium, however the organ is found to have patent vessels. It is also known as Takotsubo Cardiomyopathy or “Stress-Induced Cardiomyopathy” because of its correlation with tragic life events. Takotsubo, the Japanese word for octopus trap, is used because the disorder mimics the shape of these traps when viewed during echocardiography (Figure). The vast majority of patients are women in their seventh or eight decade of life. The reason why this subgroup of the population is more prone to the disorder or why only certain areas of the heart are affected is unknown. We describe a case of Takotsubo Cardiomyopathy that presented as a myocardial infarction with acute onset of substernal chest pain or shortness of breath.

Case Report

The patient is a 57-year-old female with a history of hypertension and diverticulitis who had been recently discharged from an outside hospital after a sigmoid colectomy for bowel perforation. The patient presented to our team with shortness of breath and sudden onset substernal, stabbing chest pain that began at rest. Upon further review of systems, the patient admitted to severe stressors in her personal life that were only compounded by her recent hospitalization. There was a mild increase in her cardiac enzymes with nonspecific T-wave changes in her lateral leads on ECG. An echocardiography showed an ejection fraction of 25% with no wall motion abnormalities. Her hospitalization was relatively uneventful and she was discharged on medical management for heart disease. A cardiac catheterization as an outpatient a few weeks after discharge revealed what the cardiologists had suspected: Broken Heart Syndrome. There was non-obstructive coronary artery disease in the mid-left anterior descending artery and proximal right coronary artery with the remainder of the coronaries being patent. Her ejection fraction had significantly improved. As of this report, the patient was doing well on medical therapy for non-ischemic cardiomyopathy.

Case Report Cont’d

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Discussion

Emotional or physical stress has tremendous influence over the nature of many human disorders. It has been known for some time that conditions like Chronic Pain Syndrome and Fibromyalgia correlate well with external stressors. Only recently has this idea been extended to include changes in cardiac function. It has been postulated that massive catecholamine release during these events causes myocardial stunning or myocardial toxicity. The diagnosis is best made when a postmenopausal woman presents after a recent psychological stressor with acute coronary syndrome-like complaints. The workup will show electrocardiograph abnormalities out of proportion to the mild degree of cardiac enzyme elevation. The overall prognosis is surprisingly favorable given the initial severity of the acute illness. The transient nature of the underlying stressor allows for the heart to recover normal or near-normal function if this stressor is controlled.

References