Case Report:
Broken Heart Syndrome: Is The Heart Really Broken?

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Citation

Open Access Archives
http://cogprints.org/view/subjects/OJHAS.html
http://openmed.nic.in/view/subjects/ojhas.html

Submitted: Aug 5, 2015; Accepted: Dec 12, 2015; Published: Jan 30, 2016

Abstract: Stress induced cardiomyopathy, which is also known as Takotsubo cardiomyopathy, is a cardiac syndrome of a transient, reversible left ventricular dysfunction that is caused by emotional and/or physical stress. Its clinical manifestations are similar to those of myocardial ischemia without a coronary artery lesion. Stress-induced cardiomyopathy is more common in middle-aged women, and the prognosis is favorable. We report the case of a 54-year-old female who had consulted a psychiatrist regarding her problematic son and were in the process of venting her feelings when she had an episode of cardiomyopathy. She fulfilled the ICD criteria for a Double Depression. Implications of condition are discussed.

Key Words: Stress cardiomyopathy, Emotional stress, Reactive depression

Introduction:
Stress-induced cardiomyopathy(SIC) is a deterioration of the myocardium function caused by emotional or physical stress that results in transient, reversible ventricular dysfunction.[1,2] Since Dote et al first reported a clinical case in 1991[3], there has been an increase in the number of clinical reports of this form of cardiomyopathy. This syndrome is also known as ‘tako-tsubo cardiomyopathy,’ (In Japanese, “tako-tsubo” means “fishing pot for trapping octopus,” and the left ventricle of a patient diagnosed with this condition resembles that shape) ‘apical ballooning syndrome,’ or ‘broken heart syndrome’ because its electrocardiographic (ECG) changes and clinical manifestations are similar to those of a myocardial infarction while the coronary artery shows normal findings.[4-6] Moreover, the cardiac apex decreases in mobility while the basal segment shows hyperkinesia. The precise pathophysiological mechanism of stress induced cardiomyopathy has not been known. However, its development is linked to a range of psychological and physical stresses, and occurs frequently in women in their postmenopausal period. This condition can occur following a variety of emotional stressors such as grief, fear, extreme anger, and surprise. We report the case of a 54-year-old female who had consulted a psychiatrist regarding her problematic son and were in the process of venting her feelings when she had an episode of cardiomyopathy.

Case Report
A 54 years old married bank employee got admitted to coronary care unit (CCU) with an acute chest pain. This began while she was ventilating her feelings in the outpatient department with the psychiatrist in connection with her 21-year old adopted son. Her son had completed his Diploma and reported that from his childhood days has been having conduct problems such as telling lies, stealing, forging parent’s signature and as he grew up to become an adolescent started spending lavishly on his friends, making loans from family friends, had night outs and not receiving mother’s phone calls. She reported that her spouse was facilitating all his behaviors and was anxious that her spouse’s bank balance was dwindling and he had almost exhausted all his savings and was on the verge of retirement in a week’s time. She became quite emotional at this juncture and started c/o chest pain. She was transferred to the
coronary care unit at this point and referred to the physician immediately.

Her blood pressure was 200/120 mm Hg, pulse rate was 98/min, respiratory rate was 22 breaths/min, SPO2 96%, temperature was 36°C. Blood cell counts, renal, liver and thyroid function tests and electrolytes were within normal limits. ECG showed ST depression in leads 1, aVL, V3 – V6 indicating subendocardial ischemia. Patient was transferred to an adjacent multispecialty hospital after preliminary first aid for cardiology evaluation. Her echocardiography showed apical hypokinesia and fair LV function. Coronary angiogram showed normal coronaries, and LV angio showed wall motion abnormalities in LAD territory with apical ballooning which is classical of Tako-Tsubo cardiomyopathy. She was managed medically with Aspirin 150 mg/d, Clopidogrel 75 mg/d, Atorvastatin 40 mg/d. She was transferred back after 48 hours, and was readmitted to the hospital and referred for further psychotherapy sessions. She was considered for supportive psychotherapy and mental state examination at that point revealed a low depressed mood state which was more or less pervasive in nature, in addition to a lot of desperation about her current living situation, terminal insomnia, and poor appetite. She had attempted to reform the son which had proved futile and she ultimately had sent him out of the house about one and half years back. He was also recently involved in a case and father had helped him out of that. She also reported of ideas of pessimism, helplessness that the chances of him becoming well would be just a dream. A diagnosis of double depression and moderate depressive disorder. (Dysthymia + Bipolar Depression) was made. Score on HAM (D) was 22 indicating moderate depression. She was started on Escitalopram 10 mg/d, and Clonazepam 0.5 mg/d.

Her husband was secretly supporting their son, financially and morally, which she very much resented but could not discuss about it with him. She felt that son had been blackmailing his father to extract money from him. Throughout it was evident that there were inconsistencies in disciplining the son with no limit setting or proper reinforcements. She reported that she was not averse towards her husband or son but wanted to see them both well but was skeptical about it. She continued her sessions of supportive psychotherapy and showed a decrease in her HAM (D) score of 8.

Cardiology review after a month showed normal ECG and normal angiography.

Currently she is asymptomatic and has resumed her bank duties and is on a regular follow up. The issue related to her son remains unchanged.

Discussion:
Stress-induced cardiomyopathy (SIC) is a reversible form of myocardial cardiopathy that is likely to be triggered by physical or psychological stress. It is now a well-established clinical syndrome reported in a variety of clinical settings. This syndrome occurs frequently in post-menopausal women mostly over the age of 50, but its precise prevalence is unknown. Depression is relatively common in this population, with a reported prevalence between 24 -40% in patients with stable heart failure.[7,8] Psychiatric conditions may not only predispose an individual to develop SIC in response to a strong emotional and/or somatic stressor, there have been published reports describing exacerbations of psychiatric illnesses that have, in themselves, acutely triggered SIC.[9]

Since this condition has a possible complication of, among others, neurological and psychiatric conditions, we consider that increased awareness of the syndrome is desirable, not only among cardiologists but also among other specialists. The heart can be broken literally and psychiatrists and physicians should be aware of such a phenomenon when dealing with intense emotions.

References