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Estrogen deficiency leading to stress induced cardiomyopathy: A case series in 5 post menopausal women.

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Introduction: Takotsubo syndrome, also called stress induced cardiomyopathy, was first described two decades ago in Japan. It was named after the octopus fishing pot which depicts the constriction around the base of the ventricle. The highest incidence is in postmenopausal women, and proposed to be due to estrogen deficiency.

Cases: We are presenting a case series in 5 postmenopausal women who developed stress induced cardiomyopathy due to various life stressors.

The first patient is a 60 year old woman who developed Takotsubo's cardiomyopathy following induction anesthesia for colon surgery, ejection fraction (EF) 32%. She did have a history of mild coronary artery disease inadequate to explain her clinical presentation. The second patient is a 68 year old woman female who developed apical ballooning with EF 20% and normal coronaries after she struck a deer with her car. The third patient is a 68 year old woman who was under significant family stress, suffered a global amnesic episode, and was found by echocardiography to have apical ballooning with EF 25%. The fourth patient is a 72 year old woman with stroke and hypertensive emergency which led to apical ballooning and EF 25%. The last patient is a 67 year old woman who had a choking episode with water, developed respiratory distress requiring intubated. An Echocardiogram showed EF 25 % with apical ballooning. In all five patients the ejection fraction recovered to normal within 2 weeks to 2 months.

Discussion: Takotsubo cardiomyopathy has been increasingly described in post menopausal women presenting with chest pain or dyspnea, possibly related to an estrogen deficient state leading to increased catecholamine sensitivity during extremely stressful situations, myocardial vessels vasoconstriction, and myocardial stunning. The presence of wall motion abnormalities out of proportion and inconsistent with coronary distribution, and complete recovery, are pathognomic features of Takotsubo. About 1- 2% of patients present as acute coronary syndrome with troponin elevation and electrocardiographic changes. The early and prompt recovery of ventricular function with supportive treatment is the most reassuring entity. Prognosis is excellent with reoccurrence of less than 10%.

(This article may be cited as Sharma V, Haupt MT, Sallach S M. Estrogen deficiency leading to stress induced cardiomyopathy: A case series in 5 post menopausal women E-Journal of cardiology 2011;1(1):13.)