A CASE OF TAKOTSUBO CARDIOMYOPATHY FOLLOWING SPINAL DECOMPRESSION SURGERY

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INTRODUCTION

Takotsubo cardiomyopathy (TCM), also known as Broken Heart Syndrome, is a stress induced syndrome of transient systolic dysfunction of the apical or mid left ventricle often precipitated by a period of severe stress. Clinically, it may resemble ACS, however without evidence of CAD on angiography. We describe a patient who developed TCM in the postoperative period.

CASE DESCRIPTION

A 65-year-old woman with hypertension, depression and progressive back pain presented for spinal decompression surgery. Imaging visualized spondylolisthesis at L5-S1 and multilevel lumbar spinal stenosis. She underwent posterior spinal decompression and fusion of L2-S1 complicated by hypovolemic shock from intraoperative blood loss requiring a short course of vasopressor. The patient was discharged home in stable condition but readmitted two days later for palpitations. Troponin was elevated to 4,100 ng/L. EKG showed nonspecific ST-T wave changes. TTE showed akinesis of the apical/anterolateral left ventricle wall with an EF of 38%. Coronary angiogram showed no CAD, confirming TCM. She was started on Metoprolol Succinate, Lisinopril, and discharged home with a Life Vest. One month later she was readmitted following a suicide attempt. A repeat TTE showed improved EF to 63%. She was transferred to inpatient psychiatry in stable condition.

DISCUSSION

Despite postoperative TCM incidence remaining low, it must be considered in patients presenting with symptoms of ACS in the postoperative period. Surgical procedures predispose to physical and emotional stress which can cause one of the most likely explanations of pathogenesis - catecholamine-induced microvascular dysfunction and myocardial stunning or toxicity. This case presents a complicated picture of predisposing factors for TCM. The patient suffered a postoperative complication of hypovolemic shock, received a catecholamine agent for acute supportive care, and had a history of anxiety and depression. All can contribute to different stress mechanisms resulting in TCM. She met diagnostic criteria of transient LV systolic dysfunction, typical absence of CAD, new EKG abnormalities and a modest troponin elevation. Management is supportive and like that of heart failure with reduced EF. Although risk of severe in-hospital complications is similar to ACS, there is lower mortality with TCM and prognosis is favorable with return of normal LV function within approximately 4 weeks.

REFERENCES