

# Takotsubo Cardiomyopathy, Confusing Misnomer

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## Introduction

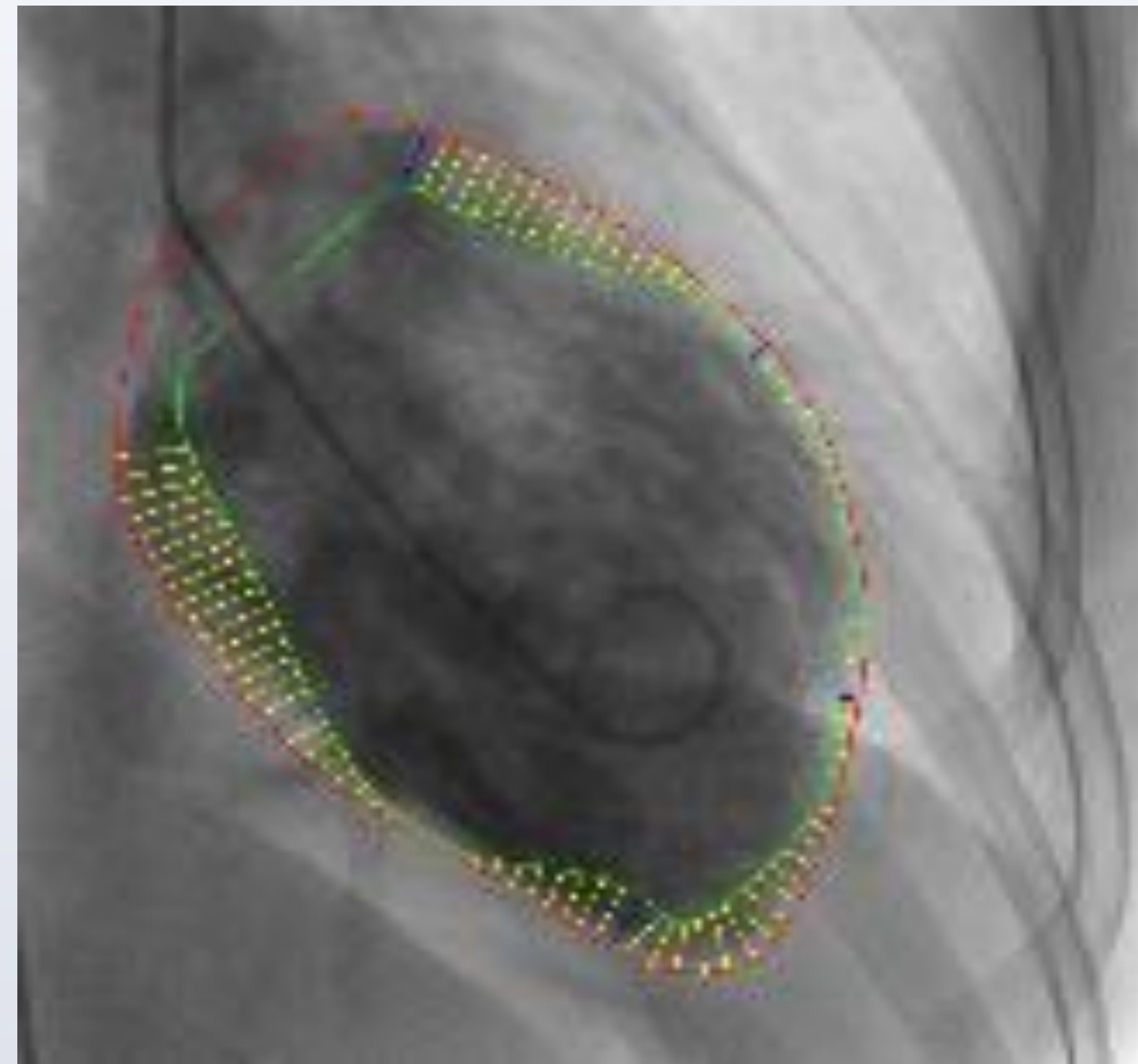
Takotsubo cardiomyopathy (TCM) which mimics acute myocardial infarction, usually in the setting of acute psychological or physical stress, is typically characterized by left ventricular apical ballooning, electrocardiographic changes in the absence of angiographic evidence of coronary artery disease and improvement within weeks in most cases. In Japanese, “tako tsubo” translates to “octopus pot,” a fishing jar with a narrow neck and wide base used to trap octopus, and describes the visual appearance of the heart on left ventriculography. In this case we describe a fairly common variant of TCM that appears differently on ventriculogram and may misrepresent the given name to this cardiomyopathy.

## Case Presentation

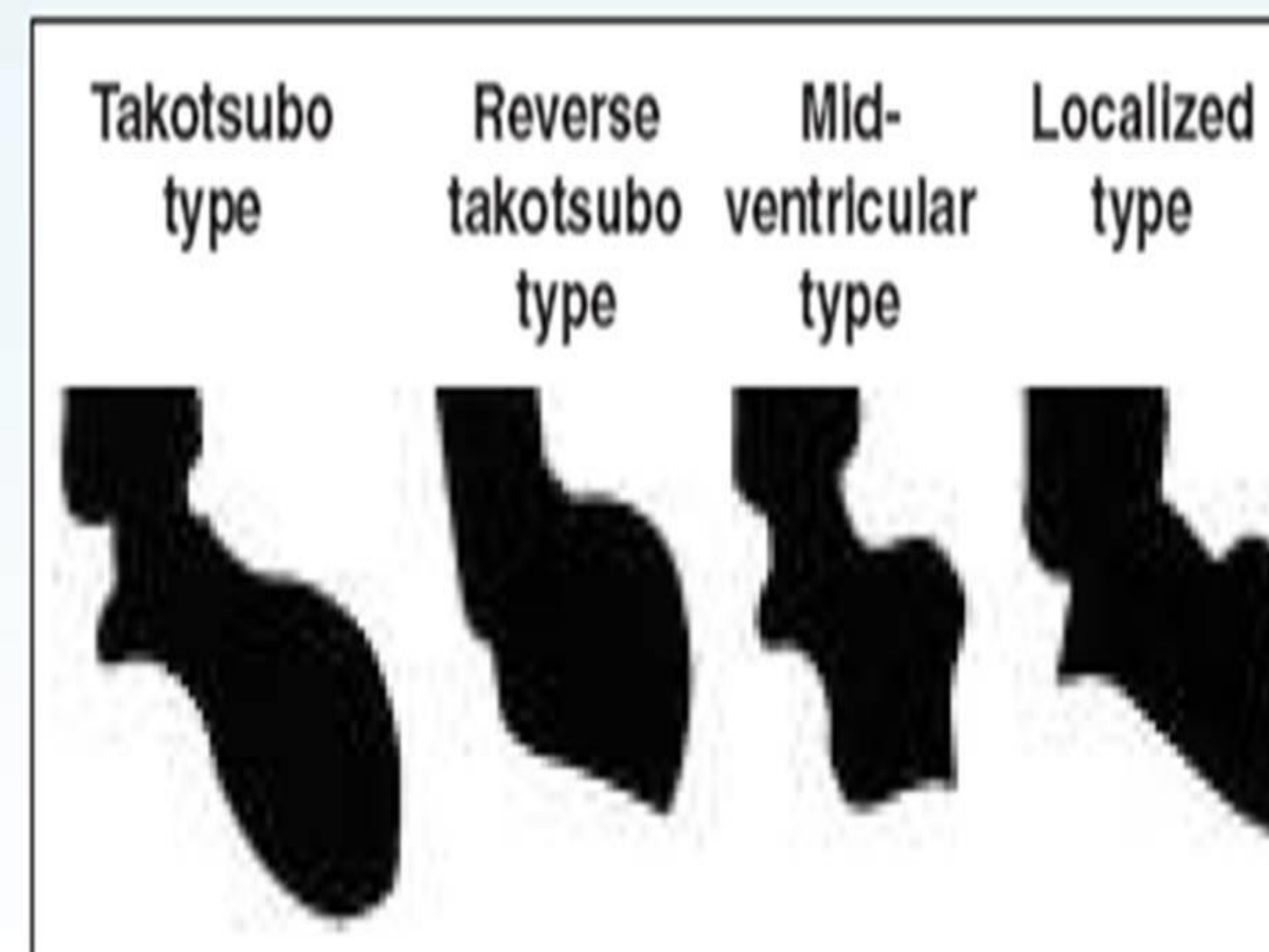
A 51- year-old Asian woman with no cardiovascular risk factors had laparoscopic salpingo-oophorectomy for left ovarian cyst. Immediately after surgery patient became tachycardic and hypotensive, without associated chest pain, dyspnea, or diaphoresis. EKG showed normal sinus rhythm at 73 bpm, low voltage QRS, anterior fascicular block with possible septal infarct. Laboratory work up revealed CK-MB 1.97 (0.00 - 3.38 ng/ml), troponin 0.065 (ref 0.00 – 0.033 ng/ml). Patient received aspirin, metoprolol, atorvastatin and clopidogrel but no anticoagulation in view of recent surgery. However, cardiac enzymes continued to trend up, CK-MB to 4.56 ng/ml and troponin to 1.890 ng/ml. The rest of the work up including lipid panel, TSH and chest X-ray were normal. Repeat EKG showed normal sinus rhythm at 77 bpm, low voltage QRS, new anterolateral T wave inversion with possible septal infarct. The echocardiogram revealed LVEF 35%, severe left ventricular systolic dysfunction, severe hypokinesia of the mid septum with sparing of the apex. The decision was made to send the patient for cardiac catheterization which showed angiographically normal coronary arteries and mid-ventricular hypokinesia. Subsequently, she was discharged home to follow up with outpatient cardiologist

## Images

Figure 1



Hypokinesia of mid ventricle on Ventriculogram



Different variants of TCM

## Discussion

TCM is a benign but important diagnosis in 1 to 2 percent of patients presenting with suspected ACS or STEMI. Mid-ventricular type in which ventricular hypokinesia is restricted to the mid-ventricle with sparing of the apex is a variant that misrepresents the given name to this cardiomyopathy. The mid-ventricular type of TCM needs to be further incorporated into the differential diagnosis because most of the reported cases are focused on typical presentation of this cardiomyopathy and overlooks this fairly common presentation. Although the exact mechanism of TCM is unknown, it is hypothesized that onset of the disease is triggered by intense physical or psychological stress. Suggested theories include loss of estrogen in postmenopausal women, catecholamine stimulation which leads to coronary artery spasm, and difference in density and sensitivity of adrenoceptors in the mid and apical portions. Our case presented with the atypical mid-ventricular variant, apparently triggered by the laparoscopic salpingo-oophorectomy in a patient with no cardiac risk factors

## References

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