DO NOT STRESS OVER YOUR HEART! : A CASE REPORT OF TAKOTSUBO CARDIOMYOPATHY

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INTRODUCTION

Takotsubo cardiomyopathy (TCM), is a transient wall motion abnormality of the left ventricular (LV) apex following an emotionally or physically stressful event[1]. This reversible cardiomyopathy was named after a Japanese octopus fishing pot called takotsubo[2] (Figure 1). We present a case of a lady with atypical presentation of acute coronary syndrome following a stressful life event.

CASE REPORT

- A 48 years old diabetic Malay lady presented to ED with syncopal episode preceded by giddiness.
- She was alert, not in respiratory distress with stable vital signs and unremarkable physical examination findings.
- Her ECG showed ST elevation in lead I and aVL with reciprocal ST depression in lead III and aVF (Figure 2).
- A diagnosis of Acute Lateral Myocardial Infarction (Killip 1) was made and patient underwent primary PCI.
- Coronary angiography (COROS) findings were normal coronaries with Takotsubo appearance of the left ventricle (Figure 3).
- An MRI Cardiac done the next day showed hypo-dyskinesia of the mid to apical segments of her left ventricle, suggestive of Takotsubo cardiomyopathy (Figure 4)
- Patient later revealed she was under significant duress as she was taking care of her special needs son and mother in law.
- She was admitted in CCU and was discharged well. During follow-up, repeated cardiac MRI later showed the Takotsubo cardiomyopathy had resolved.

Figure 1

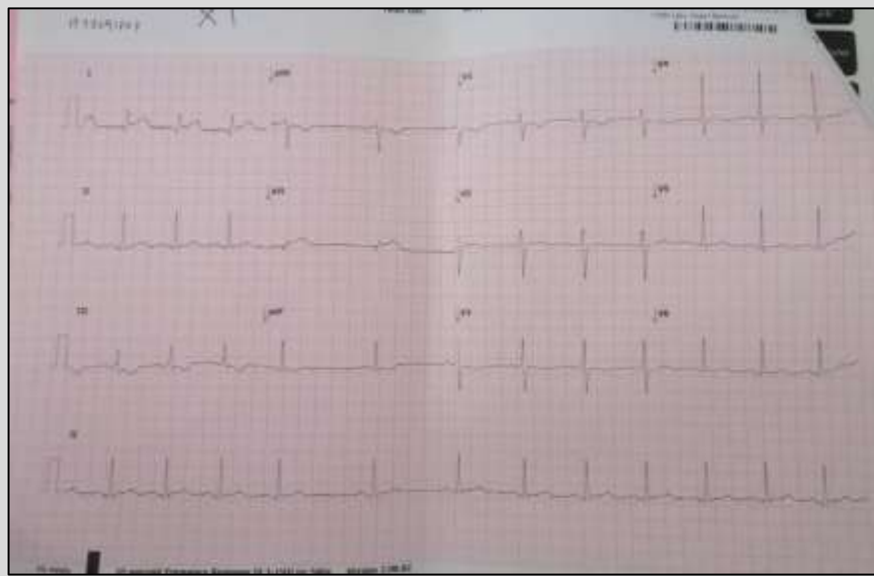

Figure 2

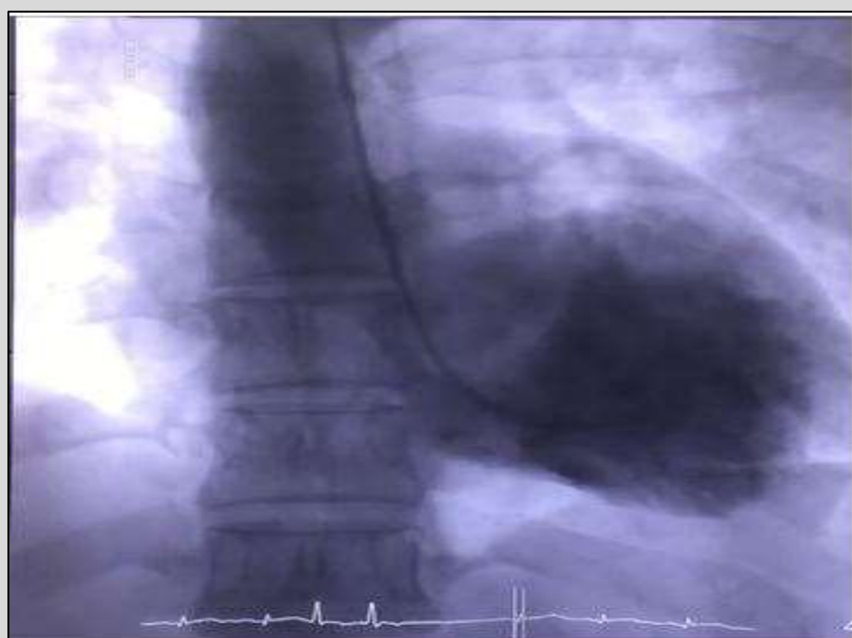

Figure 3

Scan me for more pictures and video

DISCUSSION

- Various hypotheses have been suggested for the pathophysiology of TCM, including catecholamine-induced cardiotoxicity and microvasculature dysfunction[1].
- Most common symptoms of TCM are indistinguishable from acute myocardial infarction (AMI) at the first glance[3]. ECG changes often include ST elevation in precordial leads and subsequent T-wave inversion and Q-wave formation[2]
- There is lack of a worldwide consensus on the diagnostic criteria for TCM. The diagnostic criteria most widely accepted were published by the Mayo Clinic in 2004, which have been modified in 2008[1] (Figure 5)
- Treatment of TCM is primarily focused on monitoring and supportive care[3]

Proposed mayo clinic criteria for diagnosis of TC (All four are required for the diagnosis)

1. Transient hypokinesis, akinesis or dyskinesis of the left ventricular mid segments with or without apical involvement. The regional wall motion abnormalities typically extend beyond a single epicardial coronary distribution.
2. Absence of obstructive coronary disease or angiographic evidence of acute plaque rupture.
3. New electrocardiographic abnormalities (either ST-segment elevation and/or T-wave inversion) or modest elevation in cardiac troponin.
4. Absence of pheochromocytoma and myocarditis.

Figure 5

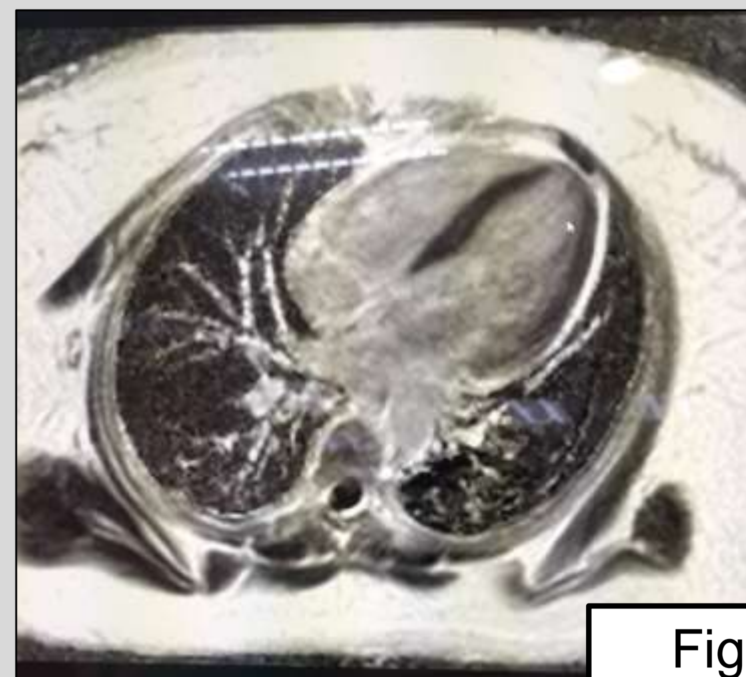

Figure 4

CONCLUSION

TCM is easily missed as it is indistinguishable from other ACS. A high index of suspicion for TCM should be considered especially if patients volunteer a stressful life event recently. The prognosis is also favourable with almost perfect recovery within weeks[1].

REFERENCES

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3) Ghadri JR, Wittstein IS, Prasad A, et al. International Expert Consensus Document on Takotsubo Syndrome (Part I): Clinical Characteristics, Diagnostic Criteria, and Pathophysiology. *Eur Heart J*. 2018;39(22):2032-2046. doi:10.1093/eurheartj/ehy076