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Covid-19 pandemic associated broken heart syndrome**Wei Juan Lim***National Heart Institute Kuala Lumpur, Malaysia*

COVID-19 is caused by novel severe acute respiratory syndrome coronavirus-2 that result in acute respiratory distress syndrome (ARDS) with multiorgan involvement.[1] COVID-19 infection also causes cardiac injury presenting as myocarditis, myocardial ischemia reflected by raise in biomarkers, cardiomyopathy, and hemodynamic instability.[2] Besides the physical complications resulting in multiorgan failure, emotional distress is also an important part that we should not ignore. Takotsubo cardiomyopathy, also known as stress cardiomyopathy or broken heart syndrome is a morbid condition thought to be triggered by emotional or physical stress leading to cardiac endothelium or microvascular dysfunction.[3] Here we described a patient with no history of cardiovascular disease, developed and recovered from Takotsubo cardiomyopathy during COVID-19 pandemic. A 52 years old menopausal woman with no underlying medical illness but overweight (BMI 26.7kg/m²) presented to our emergency department for left sided chest pain. Blood investigation showed cardiac Troponin T was 35ng/L. COVID-19 nasopharyngeal swab test for was negative which excluded COVID-19 infection. Electrocardiogram was done showed T inversion V2-V5, normal axis. Transthoracic echocardiogram showed left ventricular function with ejection fraction of 38% and severe mid to apical hypokinesia. Diagnosis of non-ST segment elevation myocardial infarction (NSTEMI) was made. Coronary angiogram was proceeded which showed normal left main artery, left circumflex artery and right coronary artery. There was only mild disease at mid segment left anterior descending artery which could not explain the significant reduced ejection fraction with RWMA. [Figure 2,3,4] Cardiac magnetic resonance imaging (MRI) was done to investigate other causes of myocardial infarction with non-obstructive coronary arteries (MINOCA). Cardiac MRI showed mid to apical severe hypokinesia with ballooning of the apical segment which is consistent with Takotsubo cardiomyopathy. There was no myocardial fibrosis, infarction, infiltration or late gadolinium enhancement. She was given medical therapy and showed improvement during clinic follow up.

Biography

Dr Lim Wei Juan graduated from UNIMAS in 2012. He has undergone internship at Hospital Sultanah Aminah Johor bahru in 2012-2013. He subsequently joined cardiology department as medical officer. He completed his internal medicine speciality training in 2019. He was the visiting physician to Hospital Permai, physician in charge of departmental roster. He then joined National Heart Institute Kuala Lumpur to further his training. He is professional member of European Society of Cardiology (ESC), council member of ESC hypertension and member of Academy of Medicine Malaysia (AMM). His interest is in interventional cardiology, not forgetting the fundamental of cardiology. He has published numerous papers to international conferences and journals.

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