

A Case of Cardiomyopathy with a Reverse Takotsubo-Shaped Myocardial Abnormality Associated with Malignant Syndrome

Daiki O_TA, Akira M_UR_AI, Junichi T_AN_AK_A,
Takao M_AS_UZ_AK_I, Eiichi G_OT_O and Keiichi T_AN_AK_A

Emergency and Critical Care Medicine, Faculty of Medicine, Fukuoka University

Abstract : We herein describe a case with malignant syndrome associated with psychiatric disease who presented at our ICU showing bilateral diffuse pulmonary edema followed by a sudden elevation in ST-T change on ECG. Ischemic heart disease was suspected at first. However, a reverse takotsubo-shaped left ventricular wall motion abnormality was detected by left ventricle angiography while coronary angiography did not reveal any signs of coronary artery stenosis. A hemodynamic study showed a reduced left ventricular contractility and a rapid elevation in the arterial pressure as well as in the peripheral vascular resistance. Moreover, a serum examination revealed an increased level of catecholamines. The possibility of organic disease was ruled out as the cause of cardiomyopathy. We therefore speculated that the extreme mental and physical stress experienced by a patient related with ICU management who is also associated with psychiatric disease may thus have caused an increase in the endogenous catecholamine level, thus resulting in the occurrence of catecholamine induced cardiomyopathy. In cases where a sudden elevation in ST-T level is seen on ECG, catecholamine induced cardiomyopathy should therefore be considered in the differential diagnosis for ischemic heart disease.

Key words : "Reverse Takotsubo-shaped" cardiomyopathy, Diffuse pulmonary edema, Catecholamine induced cardiomyopathy, ICU management, Mental and physical stress