Abstract: 1100

Right ventricle, the forgotten ventricle?

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We present a case of a 64-year-old caucasian male, with past medical history of arterial hypertension, dyslipidaemia and former smoking, that was admitted to our centre due to a 1-hour history of acute oppressive anterior chest pain without association of other symptoms.
At admission he was hemodynamically stable, without remarkable signs at observation. The electrocardiography was in sinus rhythm, heart rate of 96 bpm, and revealed the presence of ST-segment elevation at both inferior and right leads.
An urgent invasive coronary angiography was performed but did not reveal any obstructive coronary artery disease (CAD), showing only a 40-50% lesion in proximal right coronary artery.
Laboratory analysis showed elevated high-sensitivity troponin T levels (maximum 1790 ng/L, normal level <13 ng/L). The transthoracic echocardiography was normal, without segmental wall motion abnormalities and with preserved left and right ventricular systolic function.
During hospitalization, the patient remained asymptomatic without chest pain recurrence, heart failure symptoms or arrhythmias.
Due to the presence of an acute myocardial infarction with ST-segment elevation with non-obstructive coronary arteries (MINOCA), a cardiac magnetic resonance imaging (MRI) was performed. MRI showed hypokinesis of right ventricle inferior wall, with myocardial edema on T2-weighted images and myocardial necrosis on late gadolinium enhancement study. The diagnosis of isolated right ventricular myocardial infarction was assumed. A sizeable proportion of myocardial infarctions occur in the absence of obstructive CAD. MINOCA should lead the treating physician to investigate underlying causes, once failure to identify the underlying cause may result in inadequate and inappropriate therapy in these patients.
Isolated right ventricle myocardial infarction is rare, being often silent with only 25% of patients developing clinically evident hemodynamic manifestations on presentation.
The authors would like to emphasize the importance of cardiac MRI in the diagnosis of isolated right ventricular myocardial infarction in this case, in which both transthoracic echocardiography and invasive coronary angiography were normal.
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