

Subtle right ventricular affection in patients with acute myocardial infarction

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ABSTRACT

Objective: The aim of our work was to study the subtle right ventricular affection in patients with acute myocardial infarction of the left ventricle and treated with primary PCI.

Background: An acute myocardial infarction, particularly one that is large and transmural, can produce alterations in the topography of both the infarcted and noninfarcted regions of the ventricle.

Methods: The study was conducted on forty patients admitted to the critical care department, Cairo University with acute ST-elevation myocardial infarction (STEMI) and subjected to primary percutaneous coronary intervention (PCI). Our study was done within 48 hours of admission. We excluded all patients with RV infarction and patients with pulmonary hypertension. RV function was assessed by echocardiography and radionuclide angiography.

Results Regarding the incidence of right ventricular dysfunction in patients with acute left ventricular STEMI and treated with 1ry PCI, there were 19(47.5%) patients with TAPSE < 1.7 cm, 24(60%) patients with RV longitudinal strain less negative than -19 percent, 21(52.5%) patients with RV EF% < 40% , 16(40%) patients with RV peak emptying rate (PER) < 1.9 EDV/s, 18(45%) patients with RV peak filing rate (PFR) < 2.5 EDV/s and 19(47.5%) patients with RV time to peak filling rate (TPFR) >180 msec.

Conclusion: : There was a correlation between right ventricular dysfunction and poor outcome in acute STEMI patients (as proved by the correlation between RV dysfunction and duration of ICU stay, impairment of LV systolic function, regional wall motion scoring index (RWMSI), failure of reperfusion, occurrence of in- hospital complications and one year mortality

Key Words: STEMI – Right – Ventricular – Affection – TAPSE – Strain.

