Localized Regional Wall Motion Abnormalities in Acute Myocarditis

Rozen, Guy; Kuperstein, Rafael; Goitein, Orly; Feinberg, Micha; Hod, Hanoch; Matetzky, Shlomi
Sheba Medical Center, Ramat Gan, Israel

Background: The differential diagnosis between acute myocardial infarction (AMI) and acute myocarditis continues to pose an important clinical challenge. Although echocardiographic regional wall motion abnormality (WMA) mimicking MI were reported, global hypokinesis, with or without pericardial effusion, is still considered as the hallmark of myocarditis.

Objective: To assess the real life prevalence of localized regional WMA in patients with acute myocarditis.

Methods: We conducted a retrospective analysis of consecutive patients discharged from Sheba heart center with the diagnosis of acute myocarditis between February 2002 and September 2010. The diagnosis was based on the combination of suggestive clinical setting, cardiac biomarkers elevation and either evidence of normal coronary arteries per angiography and/or cardiac MRI findings consistent with myocarditis. All patients underwent full echocardiographic examination within 48 hours of admission. Comprehensive social, clinical, laboratory and imaging data regarding the patients was gathered to a registry.

Results: Of 134 screened patients 115 were included, average age of 35.3 ± 11.3 years. Sixty nine patients (60%) had normal global and regional left ventricular (LV) function per echocardiography. Of the 46(40%) patients with documented WMA, global hypokinesis was found only in 5 patients (4.35% of total and 10.9% of patients with WMA). More than two-third (68.3%) of the patients with regional WMA exhibited some combination of localized inferior, lateral and/or posterior wall hypokinesis mimicking ischemia. Anterior wall and septum dysfunction were rare, found in 2.35% and 8.7% of those patients, respectively. Interestingly, all of the documented in-hospital ventricular arrhythmias occurred in 6 patients with normal LV function.

Conclusion: Localized regional WMA is prevalent in patients with suspected acute myocarditis, emphasizing the diagnostic dilemma between myocarditis and myocardial infarction.