

Diagnostic Value of Different Noninvasive Criteria of Latent Myocarditis in Comparison with Myocardial Biopsy

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Abstract : Purpose: to quantify the value of various clinical, laboratory and instrumental signs in the diagnosis of myocarditis in comparison with morphological studies of the myocardium. Methods: in 100 patients (65 men, 44.7 ± 12.5 years) with «idiopathic» arrhythmias ($n = 20$) and dilated cardiomyopathy (DCM, $n = 80$) were performed 71 endomyocardial biopsy (EMB), 13 intraoperative biopsy, 5 study of explanted hearts, 11 autopsy with virus investigation (real-time PCR) of the blood and myocardium. Anti-heart antibodies (AHA) were also measured as well as cardiac CT ($n = 45$), MRI ($n = 25$), coronary angiography ($n = 47$). The comparison group included of 50 patients (25 men, 53.7 ± 11.7 years) with non-inflammatory heart diseases who underwent open heart surgery. Results. Active/borderline myocarditis was diagnosed in 76.0% of the study group and in 21.6% of patients of the comparison group ($p < 0.001$). The myocardial viral genome was observed more frequently in patients of comparison group than in study group (group (65.0% and 40.2%; $p < 0.01$). Evaluated the diagnostic value of noninvasive markers of myocarditis. The panel of anti-heart antibodies had the greatest importance to identify myocarditis: sensitivity was 81.5%, positive and negative predictive value was 75.0 and 60.5%. It is defined diagnostic value of non-invasive markers of myocarditis and diagnostic algorithm providing an individual assessment of the likelihood of myocarditis is developed. Conclusion. The greatest significance in the diagnosis of latent myocarditis in patients with 'idiopathic' arrhythmias and DCM have AHA. The use of complex of noninvasive criteria allows estimate the probability of myocarditis and determine the indications for EMB.

Keywords : myocarditis, "idiopathic" arrhythmias, dilated cardiomyopathy, endomyocardial biopsy, viral genome, anti-heart antibodies

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