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Clinical significance of histopathological evaluation using endomyocardial biopsy to predict prognosis on response to modern therapies in patients with non-ischemic dilated cardiomyopathy
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Purpose: The clinical significance of myocardial tissue characterization estimated by cardiomyocyte degeneration (CD) and interstitial fibrosis (IF). LV reverse remodeling (LVRR) was defined as a 10% increase in LV ejection fraction accomplished by a 10% decrease in LV end-diastolic dimension at 12 months after administration of optimal medical therapy.

Methods: A total of 147 consecutive NIDCM patients treated by optimal medical therapy who underwent EMB of the left ventricular (LV) posterior wall between 1996 and 2011 were investigated. Patients with myocarditis were excluded. Myocardial specimens were semiquantitatively evaluated according to a 4-point score (1-4) measuring cardiomyocyte degeneration (CD) indicated by vacuolization and scarcity of myofibrils) and interstitial fibrosis (IF). LV reverse remodeling (LVRR) was defined as a 10% increase in LV ejection fraction accomplished by a 10% decrease in LV end-diastolic dimension at 12 months after administration of optimal medical therapy.

Results: Seventy-four (50%) patients showed LVRR. Multivariate analysis revealed that CD (odds ratio: 0.14; 95% confidence interval: 0.02 to 0.92) and IF (P=0.003) and maintenance of nonischemic dilated cardiomyopathy (NIDCM) and the subsequent response to advanced treatments, including beta-blockers (BB) and cardiac resynchronization therapy.

Conclusions: In accordance with previous data, we observed better outcomes in younger patients with chronic HF with lower HR compared to those with higher HR. In contrast, relation between HR and outcomes was not seen in older patients with chronic HF.