

Right ventricular function in dilated cardiomyopathies with chagasic and idiopathic etiologies

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Chagas' disease has marked epidemiological importance, even with the significant reduction of its transmission, due to the contingent of infected individuals with potential for severe forms of development¹. Chronic chagasic cardiopathy is the most serious manifestation of the disease, constituting an important cause of heart failure in Brasil². Approximately 30 to 40% of infected individuals will present some degree of cardiac involvement during their life³. Chagasic cardiomyopathy (MCh) presents a variable clinical course, with a worse prognosis in comparison to other myocardopathies.

The involvement of the right ventricle represents a peculiar characteristic of Chagas' disease, especially when described in the early stages of the disease⁴. However, few studies have evaluated the functional and anatomical conditions of the right ventricle in MCh, compared to idiopathic dilated cardiomyopathy (MDI).

Right ventricular function is determined by the intrinsic contractility of this chamber and ventricular preload and afterload conditions. In MCh, VD dysfunction can be attributed to the inflammatory process itself, secondary to the infection by the parasite, causing depression of its contractility, but without clinical manifestations. Some abnormalities are not

detectable through conventional echocardiographic techniques, requiring more accurate techniques to analyze their contractility. With the elevation of pressure in the pulmonary artery, secondary to left ventricular dysfunction, there is an increase in the post-load, favoring dysfunction with clinical evidence of systemic congestion⁵.

The prognostic value of impaired right ventricular function was also verified in ischemic and non-ischemic heart failure⁶. Right ventricular dysfunction was associated with mortality⁶. Lewis et al. 1993, after studying 67 patients with MDI, found that the right ventricle area was the only significant predictor of death. In addition, a study of a subgroup of 205 more stable patients with moderate heart failure showed that the prognostic value was independent of right ventricular function⁷.

Regardless of the cause of myocardopathy, LV function contributes to VD performance through septal contractility. The interventricular septum represents an integral component of the VD architecture and mechanics. Under physiological conditions, septal contraction constitutes 1/3 of the VD contraction, evidencing the systolic interaction between the ventricles⁸. Ghio et al. 2001, studying 377 patients with heart failure and significant left ventricular dys-

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function, found no association between mean pulmonary artery pressure and right ventricular ejection fraction⁹. The ejection fraction of the right ventricle constituted an independent prognostic predictor of mortality or urgent transplantation.

VD dysfunction may be related to the worse prognosis of MCh, when compared to other cardiomyopathies. Patients with cardiomyopathy of different etiologies and similar degrees of left ventricular impairment may present different patterns of clinical evolution. The VD function would be implicated in this heterogeneity of presentation and prognosis⁹.

Thus, in this edition, we used original studies to analyze right ventricular function in the different cardiomyopathies using new echocardiographic techniques derived from tissue Doppler, and to compare the parameters of VD function among patients with MCh and MDI so that we can extrapolate for clinical studies.

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