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Cardiovascular magnetic resonance imaging evidence of edema in chronic chagasic cardiomyopathy

Andres Diaz Garzon Universitat de Barcelona, Spain

R eactivation processes of Chagas Disease (CD) have been poorly investigated. Eighty-two CD seropositive patients (64.6% females; age=58.9±9.9) without ischemic heart disease nor conditions that cause myocardial fibrosis and dilation were considered. Late gadolinium enhancement (LGE) and T2-weighted magnetic resonance imaging of edema were obtained and represented using a 17-segment model. Patients were divided into three groups according to the left ventricular (LV) ejection fraction (EF) as: G1 (EF>60%; n=37), G2 (35%>EF<60%; n=33) and G3 (EF<35%; n=12). Comparisons were performed by the Fisher or ANOVA tests. A Spearmans correlation was also performed. Edema was observed in 8 (9.8%) patients; 2 (5.4%) of G1, 4 (12.1%) of G2 and 2 (16.7%) of G3. It was observed at the basal inferolateral segment in 7 (87.5%) cases. LGE was observed in 48 (58.5%) patients; 16 (43.2%) of G1, 21 (63.6%) of G2 and 11 (91.7%) of G3 (p<0.05). It was predominantly observed in the basal segments in 35 (72.9%) patients, and in the apical segments in 21 (43.7%), with midwall (85.4%;n=41), and subendocardial (56.3%;n=27) distribution (Fig. 1A). Subendocardial lesions were observed only in patients with LVEF <30%. There was no involvement of the mid segments with a LVEF >35% (p<0.05). Deteriorations of the LV and RV systolic functions were positively correlated (rs=0.69; p<0.05) without evidence of LGE in the RV (Fig. 1B). Edema can be found in patients with chronic chagasic cardiomyopathy.



Figure 1: LVEF of different LGE distributions and correlation of LVEF and RVEF (rs=0.69)

Biography

Andrés Díaz, MD, cardiologist, electrophysiologist, master in clinical electrophysiology and cardiac stimulation. PhD candidate in medicine and translational research from the University of Barcelona, Spain. He has published papers in reputed journals of cardiology and has been serving as an editorial Board member of repute scientific journals.

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