

Assessment of the impact of eosinophilic myocarditis in patients underwent heart transplant in use inotropic drugs

Academic authors: Vinícius Vitor de Oliveira

Academic advisors: Fabiana Goulart Marcondes Braga, Luiz Alberto Benvenuti, Fábio Antônio Gaiotto, Fernando Bacal

Introduction: The Eosinophilic Myocarditis (EM) is a rare myocardial disorder caused by hypersensitivity reaction, but it has a higher frequency in patients on hearts transplant waiting list, probably due to prolonged use of dobutamine. EM can worsen the state of the patient with congestive heart failure, because they already have low cardiac reserve. Furthermore, its variable clinical manifestation and non-specific heart signs make the antemortem diagnosis difficult.

Objectives: To evaluate the incidence of EM in patients underwent heart transplant, correlate with clinical evolution, use of dobutamine, etiology of heart disease, post-transplant rejection and death.

Methods: A survey of medical records data was performed from patients transplanted between January 2013 and June 2016. The criteria for clinical worsening were the need for dobutamine increase, association with Milrinone and intra-aortic balloon implantation. Explanted hearts were reviewed in search of eosinophilic infiltration the myocardium. When this infiltration exceeded 50% it was considered EM. Subsequently, it was classified as mild, moderate and intense.

Results: Among all the transplanted patients (n= 138), 19% (13,8%) presented eosinophilic infiltrate and 11 (8% of the total) were classified as EM, being mild (3), moderate (6) and intense (2). Among patients who received dobutamine (n= 118), was noticed EM in 9,3%. The profile of the patients with EM was evaluated mid those who received dobutamine (see table). Sex; Age; Etiology; Time, final dose and increase of dobutamine; Association with Milrinone; Use of intra-aortic balloon; Ejection fraction and LVDD; 2R or greater cell rejection and death did not have statistically significant differences. Blood eosinophilia occurred in 11 (100%) with a significant difference compared to the group without EM.

Conclusions: The presence of eosinophilic myocarditis, although not infrequent, did not affect mortality and rejection rates. Blood eosinophilia was an important feature found in all cases of EM.

Keywords: Eosinophilic myocarditis; Heart transplant; Heart disease.

Table.

Variables	Eosinophilic Myocarditis		p
	Absent	Present	
Sex n (%)	72 (67,3)	5 (45,5)	0,148
Age (years)	45,2±12,8	48,2±9,6	0,463
Etiology n (%)			0,661
Dilated	32 (29,9%)	5 (45,5%)	
Ischemic	17 (15,9%)	2 (18,2%)	
Chagasic	41 (38,3%)	2 (18,2%)	
Valvar	3 (2,8%)	0	
Others	14 (13,1%)	3 (18,2%)	
Time of Dobutamine (days)	70,7±68,7	38,7±26,8	0,130
Increase dobutamine dose on admission n (%)	78 (75%)	10 (90,9%)	0,236
Final dose of Dobutamine (mcg/kg/min)	14,6±6,2	11,4±6,3	0,101
Association with Milrinone n (%)	35 (32,7%)	3 (27,3%)	0,713
Use of intra-aortic balloon n (%)	63 (58,9%)	3 (27,3%)	0,044
Eosinophilia (>5 %) n (%)	51 (47,7%)	11 (100%)	0,001
Ejection Fraction (%)	25,2±8,4	27,9±10,9	0,353
Left Ventricular Diastolic Diameter (mm) n(%)	69,8±11,1	68,3±10,5	0,684
Cell Rejection ≥ 2R in first biopsy n (%)	32 (35%)	3 (30%)	0,762
Death on admission n (%)	22 (20,6%)	1 (9,1%)	0,360