

doi: <http://dx.doi.org/10.11606/issn.1679-9836.v97i2p256-257>

LETTER TO THE EDITOR

Eosinophilic myocarditis and heart transplantation: context, clinical condition and importance

Vinícius Vitor de Oliveira¹, Fabiana G. Marcondes-Braga¹, Luiz Alberto Benvenuti²,
Fabio Antonio Gaiotto¹, Fernando Bacal¹

In Brazil, the patient with severe heart failure listed in transplant row is maintained with inotropic drugs, in special the dobutamine. Different from developed countries where there are mechanical assistance devices to assist in the treatment of these patients along with this type of drug.

The use of dobutamine correlates with the presence of Eosinophilic Myocarditis (EM), a rare disease in which infiltrate eosinophilic occurs. It is mainly related to hypersensitivity reaction and hematological diseases. For present nonspecific signs, it is rarely diagnosed antemortem¹. The studies indicate an incidence of 0.5% in autopsy series and 23% in explanted hearts after cardiac transplantation^{2,3,4}. According to a study that evaluated the relationship of drugs with EM, 86% of patients with Eosinophilic Myocarditis received dobutamine³. Being the drug more involved with this entity, which explains the difference in the incidence.

Clinical manifestation is very ranging, from asymptomatic cases to conditions as cardiogenic shock and

sudden death from ventricular arrhythmias. The nonspecific signs are cardiac chest pain, dyspnea, fatigue, palpitations and syncope. Furthermore, allergic manifestation such as fever, rashes and blood eosinophilia may occur⁵. However, symptoms and signs of hypersensitivity are not present in all patients⁶. And there is no consistent association between these and the severity of myocardial involvement⁷.

Moreover, the eosinophilic myocarditis, at the time of transplantation, correlates with high rejection rates. Which coincides with the reduction of immunosuppressive drugs⁸.

Thus, the patient may have its clinical condition aggravated by this disease. Considering that the average waiting for a transplant is 45 days for a patient Intermacs 3, with an inotropic dependence⁹, to understand this entity is fundamental because it interfere directly with the patient's life in row.

Few studies in the literature correlate Eosinophilic Myocarditis and the use of inotropes. And in our service,

Award Panels Surgical "Assessment of the impact of eosinophilic myocarditis in patients underwent heart transplant in use inotropic drugs" - COMU-2017 - Researches Classified - Award Panels Surgical.

FAPESP Protocol Number: 2016/23770-4

Department of Heart Transplant, Heart Institute (InCor), Hospital das Clínicas (HCFMUSP), São Paulo, SP, Brazil. Av. Dr Eneas de Carvalho Aguiar, 44 - 2º Floor

1. Núcleo de Transplante Cardíaco, Instituto do Coração InCor, Hospital das Clínicas HCFMUSP, Faculdade de Medicina FMUSP, Universidade de São Paulo, São Paulo, SP, BR. Emails: vinicius.vitor@fm.usp.br, fgmarcondes@yahoo.com.br, fabio.gaiotto@incor.usp.br, fbacal@uol.com.br

2. Laboratório de Anatomia-Patológica, Instituto do Coração InCor, Hospital das Clínicas HCFMUSP, Faculdade de Medicina FMUSP, Universidade de São Paulo, São Paulo, SP, BR. Emails: anp.luiz@incor.usp.br.

Correspondence: Vinícius Vitor de Oliveira. Rua Calogero Mirizola, 109. Jd. Estela Maris. Cotia, SP, BR. CEP: 06703-220.

the use of dobutamine is more prolonged and the etiologies are different. As chagasic disease for which there is no data in the literature correlating with ME.

Thus, our study presented at the XXXVI COMU, with the title “*Assessment of the impact of eosinophilic myocarditis in patients submitted to heart transplant in*

use of inotropic drugs”, consists in a database survey of patients submitted to heart transplant, where we evaluated the prevalence of this entity, clinical and laboratory markers and correlations with mortality and rejection. The results of this work may guide the detection of the problem and allow new approaches, propitiating a better state to the patient that is waiting for the transplant.

REFERENCES

1. Ginsberg F, Parrillo JE. Eosinophilic myocarditis. *Heart Failure Clin.* 2005;1(3):419-29. doi: 10.1016/j.hfc.2005.06.013
2. Johnson MR. Eosinophilic myocarditis in the explanted hearts of cardiac transplant recipients: Interesting pathologic finding or pathophysiologic entity of clinical significance? *Crit Care Med.* 2004;32(3):888-90. doi: 10.1097/01.CCM.0000117973.88429.BB.
3. Spear GS. Eosinophilic explant carditis with eosinophilia? Hypersensitivity to dobutamina infusion. *J Heart Lung Transplant.* 1995;14(4):755-60.
4. Yoshizawa S, Sugiyama Kato T, Mancini D, Marboe C. Characteristics of patients with advanced heart failure having eosinophilic infiltration of the myocardium in the recent era. *Int Heart J.* 2013;54(3):146-8. doi: <https://doi.org/10.1536/ihj.54.146>.
5. Kuchynka P, Palecek T, Masek M, Cerny V, Lambert L, Vitkova I, Linhart A. Current diagnostic and therapeutic aspects of eosinophilic myocarditis. *BioMed Res Int.* 2016;2016:2829583. <http://dx.doi.org/10.1155/2016/2829583>.
6. Al Ali AM, Straatman LP, Allard MF, Ignaszewski AP. Eosinophilic myocarditis: case series and review of literature. *Can J Cardiol.* 2006;22(14):1233-7. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2569073/>.
7. Takkenberg JJ, Czer LS, Fishbein MC, Luthringer DJ, Quartel AW, Mirocha J, Queral CA, Blanche C, Trento A. Eosinophilic myocarditis in patients awaiting heart transplantation. *Crit Care Med.* 2004;32(3):714-21. doi: 10.1097/01.CCM.0000114818.58877.06.
8. Yoshizawa S, Sugiyama Kato T, Mancini D, Marboe CC. Hypersensitivity myocarditis and outcome after heart transplantation. *J Heart Lung Transplant.* 2013;32(5):553-9. doi: 10.1016/j.healun.2013.01.1052.
9. Bacal F, Souza Neto JD, Fiorelli AI, et al. II Brazilian Guidelines for Cardiac Transplantation. *Arq Bras Cardiol.* 2010;94(1 Suppl):e16-e76. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0066-782X2010000700001&lng=en&tlng=en.

Submitted in: December, 15, 2017

Accepted in: January, 19, 2018