

HEART FAILURE SECONDARY TO SCHISTOSOMIATIC FIBROSIS

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Abstract: Introduction: Heart failure is a complex clinical condition that chronically affects millions of people around the world, significantly compromising quality of life and being associated with high rates of morbidity and mortality. Objective: To report a case followed by the cardiology team at Hospital de Base de São José do Rio Preto, which presented with a rare etiology of congestive heart failure due to schistosomiasis associated with eosinophilic syndrome. Final Thoughts: Heart failure can be caused by a variety of factors, including underlying heart disease, chronic conditions, and lifestyle. Currently, the etiological diagnosis is fundamental, aiming to act directly on the cause and, when not possible, stimulating the search for new forms of treatment.

Keywords: Etiologies of heart failure, Schistosomiasis

INTRODUCTION

Heart failure is a complex clinical condition that chronically affects millions of people around the world. Characterized by the inability of the heart to supply the body's demand for oxygen due to a primary impairment of the heart, this disease significantly compromises quality of life and is associated with high rates of morbidity and mortality.

In recent years, there have been significant advances in understanding the mechanisms underlying heart failure, as well as in the diagnosis and treatment of the disease. However, clinical practice is still faced with unusual etiologies that pose real diagnostic challenges. This article aims to report an unusual cause of heart failure, and reinforce the need for appropriate investigation for better clinical management.

CASE REPORT

Patient J.D.D.A, 59 years old, male,

presented 2 weeks ago with fever and pain in the back associated with dyspnea. He went to the original service and was diagnosed with pneumonia at the origin and started on Amoxicillin and Levofloxacin for 7 days, showing improvement only in the fever. He evolved with worsening epigastric pain, which he reported having for years, and was referred to the service of Hospital de Base de São José do Rio Preto to perform an Upper Digestive Endoscopy, which showed signs of hypertensive gastropathy and Sakita S2 ulcer. During examination, focal motor deficits were evidenced in MSD and referred to the clinic's emergency room for evaluation. Cranial tomography was performed, which showed the presence of hypodensity in the occipital region suggestive of previous/recent stroke, and hospitalization was chosen for investigation.

During the evolution, he presented with chest pain, being diagnosed with non-ST-segment elevation infarction. For this reason, he was referred to the ICU.

Since admission, the patient had a significant eosinophilia associated with a previous history of schistosomiasis. During the investigation of the cardiovascular condition, he witnessed alterations suggestive of fibrosis on the echocardiogram, and opted for an additional evaluation with MRI, which demonstrated the presence of cardiac fibrosis with a double V signal, with a possible etiology of schistosomiasis.

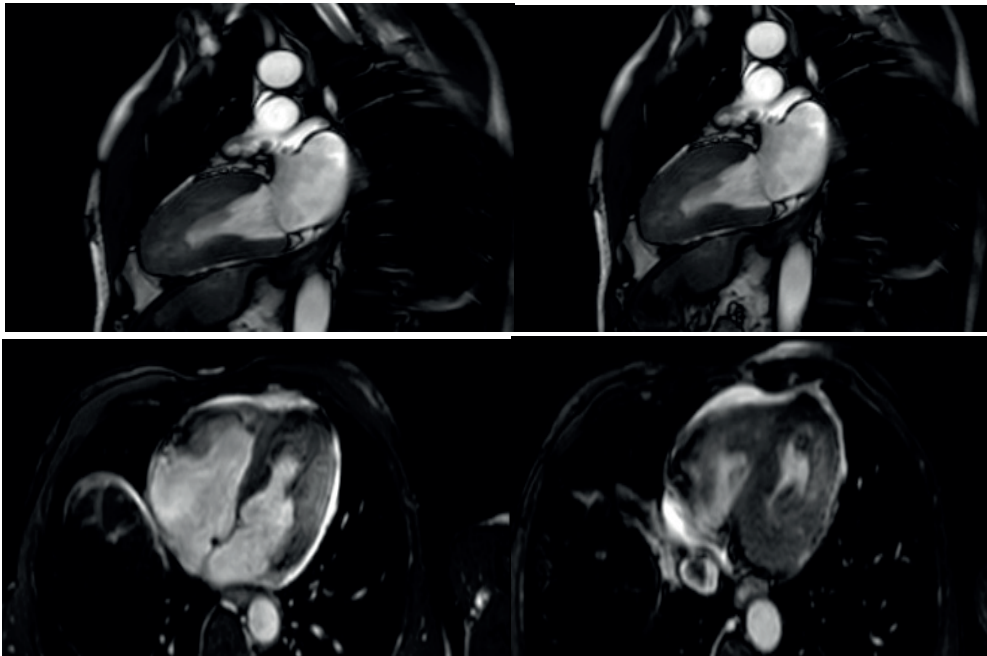


Figure 1: MRI with the presence of the double V sign in the myocardium

Diagnosis:
BONE MARROW BIOPSY: read the review.
Comment:
Biopsy representative of HYPERCELLULAR MO with significant myeloid hyperplasia at the expense of segmented granulocytes and intense EOSINPHILIA (photos 1/2). Megakaryocytes are hyperplastic and show important nuclear dyspoietic alterations, large shapes and cluster formation (CD61+photo 3). There is an important and diffuse increase in the reticulin network (MF grade 2/4). We suggest correlation of these findings with other clinical/hematological and molecular diagnostic criteria of the hypereosinophilic syndrome complex.
Immunohistochemical study: After dewaxing and treating the tissues with specific solutions for recovering epitopes, the histological sections were incubated with a panel of monoclonal and/or polyclonal antibodies. Next, the polymer-based detection system was used. Positive and negative controls were used to test the fidelity of the reactions. Individual results for the markers studied are summarized in the following table. The specified results relate to the cells of interest in the context of each case.

Antibodies	Clone	Result	Note/Block
CD61, integrin B3, megakaryocytes	2F2	Positive:	dyspoietic megakaryocytes (B23/6573)
Myeloperoxidase (myelogramulocytic lineage cells)	MPO7	Positive	(B23/6573)

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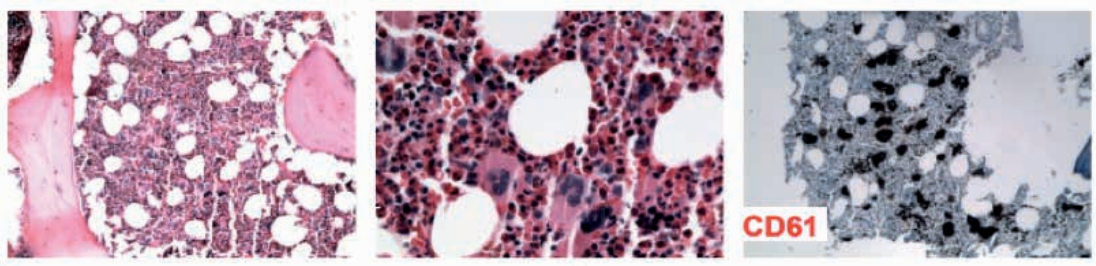


FIGURA 2: Biópsia de medula óssea com presença de infiltração por eosinófilos

DISCUSSION

Schistosomiasis, also known as bilharziasis, is a parasitic disease caused by *Schistosoma*, which is transmitted by contaminated water. Although most commonly associated with liver and intestinal complications, recent studies have shown a possible relationship between this disease and heart failure.

cardiac. *Schistosoma* infection can lead to a chronic inflammatory response and fibrosis, generating accumulation of scar tissue, which can lead to stiffness of the heart muscle, compromising its contractile function.

In some regions where schistosomiasis is endemic, such as parts of Africa and South America, the presence of cardiac fibrosis in infected patients has been reported. This condition may contribute to the development of structural alterations characterized by dilation of the heart chambers, impaired function and electrical conduction,

However, it is important to note that the association between schistosomiasis and heart failure is still being investigated, and further studies are needed to fully understand the mechanisms involved. In addition, the occurrence of heart failure related to schistosomiasis may be influenced by other factors, such as the intensity of the infection, duration of the disease and the host's immune response.

In conclusion, although the relationship between schistosomiasis and heart failure in the descriptions does indicate actual causality, further research is still needed to fully investigate this association and understand the underlying mechanisms involved.

FINAL CONSIDERATIONS

Heart failure can be caused by a variety of factors, including underlying heart conditions, chronic conditions and lifestyle. Among the main causes, coronary artery disease, arterial hypertension, valvulopathies, heart diseases,

diabetes, among others, stand out. Despite the basis of treatment to improve quality of life and increase survival having the same basis, it is necessary to accurately diagnose the cause due to the need for specific therapy in order to remove or alleviate the causal agent, so that it can be prevented. the progression of the disease. However, often at diagnosis, patients already have advanced conditions with little prospect of reversal, so that the therapeutic goal is focused on preventing disease progression and controlling symptoms.

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