

## A Large Mass in the Right Atrium: Tumor or Thrombus? - A Case Report from Cabinda, Angola

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### Abstract

A 65-year-old male presented with hypertension and asymptomatic atrial fibrillation and was found on 2D Echocardiogram a right atrial mass. Cardiac magnetic resonance imaging to more accurately characterize the mass was not possible to be performed. Response to anticoagulation was ineffective. The patient remained asymptomatic and clinically stable however the prognostic is uncertain. This case report highlights the difficulties on medicine practicing in the poor setting countries and the need for more investment in the health sector.

**Keywords:** Cardiac Masses; Right Atrium; Tumor; Thrombus

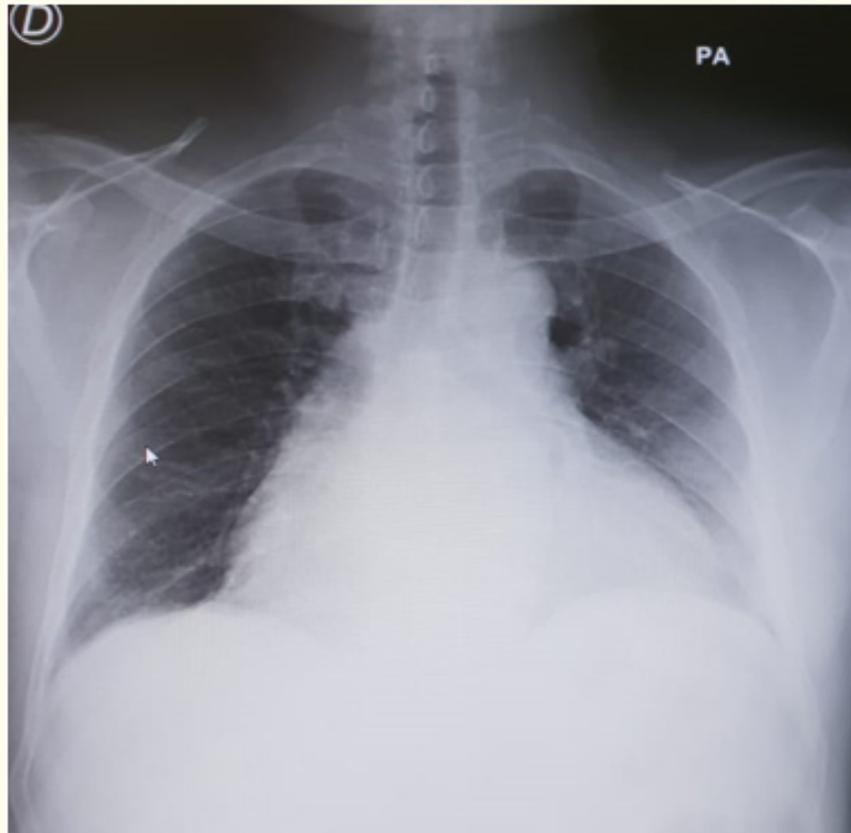
### Introduction

Cardiac masses always represented a diagnostic challenge for clinicians all over the world [1]. This diagnostic challenge becomes more intriguing for clinicians in poor settings countries. The distinction between the different types of intracardiac masses, including thrombi, vegetation, and tumors, is an important step in providing therapeutic and prognostic information to the patient [1]. Transthoracic 2D Echocardiogram is the primary diagnostic tool used widely to detect and evaluate intracardiac mass and the cardiac magnetic resonance (CMR) has become a useful tool to further characterize the mass. However, CMR is not available and even not performed in many non-developed countries. We present a case in which the lack of cardiac CMR was a limiting factor in the evaluation of an isolated mass obstructing tricuspid inflow in the right atrium.

### Case Presentation

A 65-year-old male, black, diagnosed with hypertension three years ago, and irregularly treated with Enalapril 20 mg once a day and Aspirin 100 mg once a day. In October 2018, he has been assisted in primary unit care at his district with cough and dyspnea and was treated with antibiotics for bronchopneumonia. It was also performed a thorax X-ray that revealed an increased cardiothoracic index and so was referenced to cardiology consultation (Figure 1). At the first cardiology evaluation, the patient was asymptomatic and clinically stable.

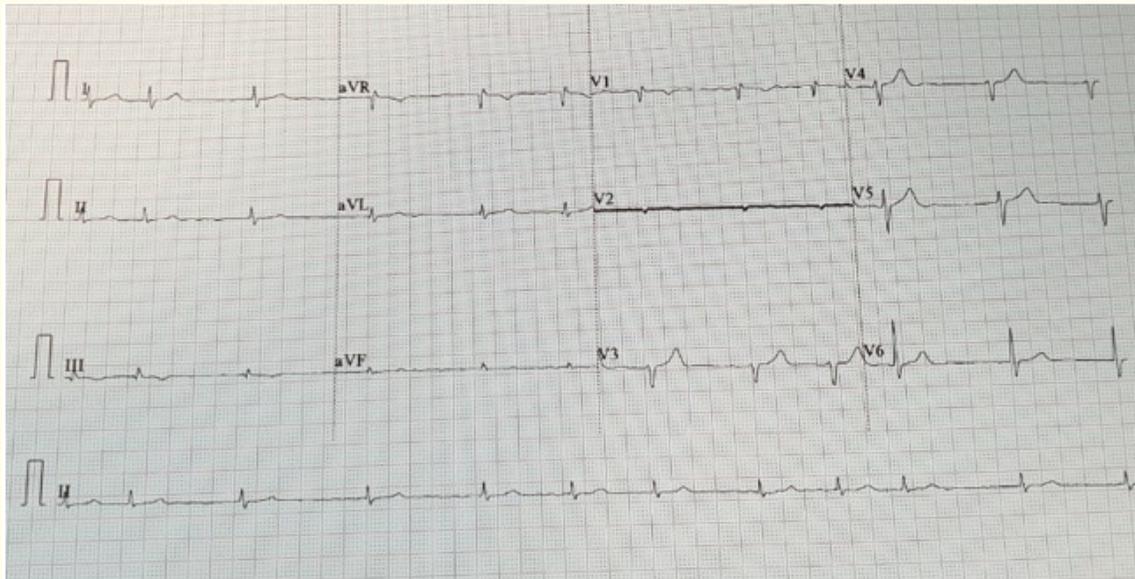
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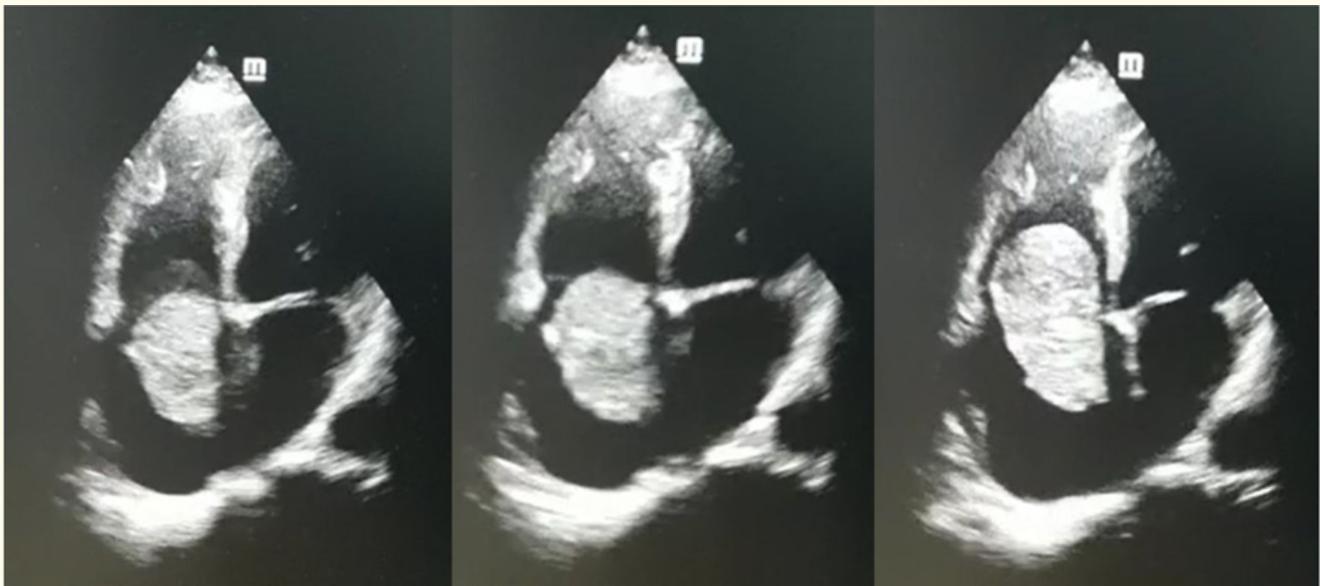
**Figure 1:** Thoracic X-ray.

On the physical examination, the blood pressure was 150/90 mmHg, the pulse 90 bpm, the respiratory rate 17 breaths per minute, and the oxygen saturation was 95% while breathing in ambient air. The heart sounds were irregular, hypophonetics, with a systo- diastolic murmur (3+/6) in the tricuspid focus and systolic murmur (2+/6) in mitral focus; the vesicular murmur on both lung fields was normal. The abdomen and inferior limbs had no clinically relevant changes.

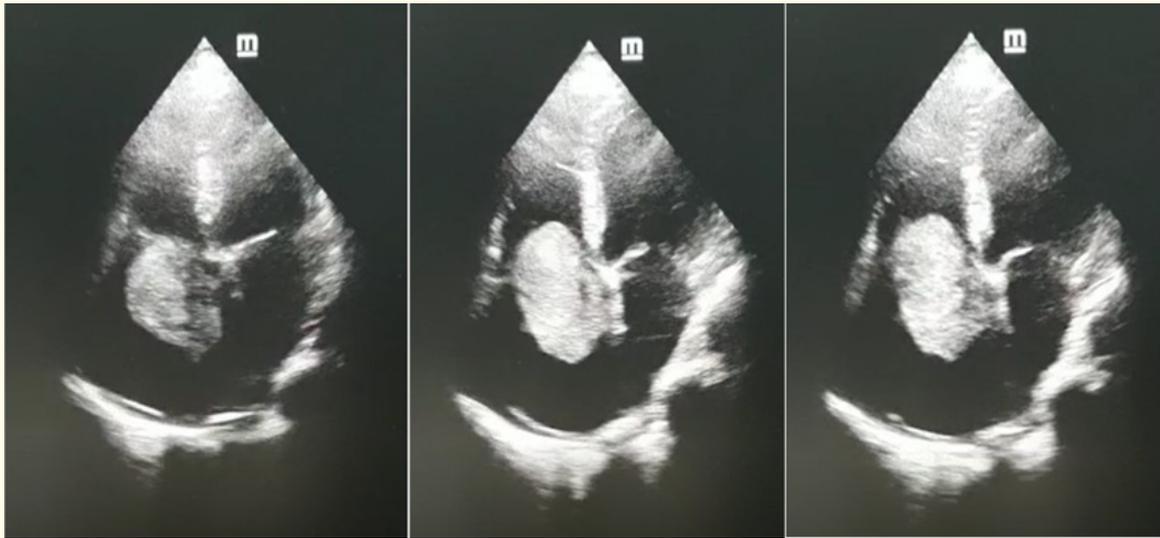
The electrocardiogram showed atrial fibrillation rhythm (Figure 2) and the Thorax X-ray showed an increased cardiothoracic index. Two-dimensional transthoracic echocardiogram (Figure 3) showed increased dimensions of both left and right atria, moderate ventricular hypertrophy and a large image trespassing the tricuspid valve and involving both the right ventricle and right atrium measuring 27.3 mm x 17.4 mm, suggesting both thrombus or cardiac tumor. Tomography image evaluation was considered, but it was unavailable; cardiac magnetic resonance imaging (CMR) is not performed in our country. The CHA2DS2VASC score was 2. Because the use of warfarin would be more difficult in our reality considering the INR control limitations, Rivaroxaban 20 mg once a day was considered as anticoagulation therapy option and a transthoracic echocardiogram was performed 10 weeks later (Figure 4). As we can see in this figure, the image in the right atrium remained unchanged. Antihypertensive therapy was adjusted to enalapril 20 mg twice a day and hydrochlorothiazide 25 mg once a day. The patient remained asymptomatic and clinically stable with blood pressure under control.



**Figure 2:** Electrocardiogram.



**Figure 3:** First diagnostic echocardiogram performed. Four-chamber view, showing a large image in the right atrium, trespassing the triscupidic valve toward right ventricle.



**Figure 4:** Second echocardiogram performed 10 weeks later. Four-chamber view, showing the same image evidenced at the first exam.

## Discussion

The presence of a right-atrial thrombus is a rare phenomenon that can potentially lead to devastating pulmonary embolism, hemodynamic instability and is associated with a high mortality rate [2].

When it comes to cardiac masses assessment, accurate diagnosis depends on pattern recognition and “guilt by association” [3]. In the criminal world, suspects are often judged by the company they keep, and our typical method of cardiac mass differentiation is no different. However, suspicions must be proven beyond a reasonable doubt. Cardiac magnetic resonance (CMR) is well-positioned to provide more objective evidence to support our clinical suspicions and help close the case [3,4].

Intracardiac thrombi are typically diagnosed by the “company they keep”. A left atrial mass in the setting of mitral stenosis or atrial fibrillation is a thrombus until proven otherwise. Left ventricular masses associated with apical aneurysms or other regional wall motion abnormalities are highly suggestive of mural thrombi. In this setting, anticoagulation and watchful waiting may be a reasonable management strategy; however, once the milieu for thrombus development has been proven, lifelong anticoagulation is usually warranted in those without risk of bleeding.

In this case report, CMR was not possible because it is not performed in our country. So, whether this mass is thrombus or tumor remains unclear. Because of the concurrent atrial fibrillation, the diagnosis of intracardiac thrombus may be acceptable.

There is a debate over the appropriate therapeutic approach. Options include thrombolytic therapy, surgical or percutaneous embolectomy and therapeutic anticoagulation [5]. In this case, it was decided to manage this patient with anticoagulation therapy, although surgical management would fit better mainly because of the size of the mass and its effect on the tricuspid outflow. However, although the ongoing therapy with Rivaroxaban 20 mg once a day, the anticoagulation approach has been proven ineffective and the mass remained unchanged. The surgery was indicated, but its performance in a public hospital in Angola is not possible so far. The patient remains asymptomatic, with blood pressure and heart rate under control, but his evolution remains unpredictable.

## **Conclusion**

This case report figure out the dilemma in Medicine practicing in countries with poor resources, highlighting the importance on health systems development policies and the need of huge investment in health sector to improve the quality of Medicine care among their people.

## **Conflict of Interest**

The authors declare that there is no financial interest or any conflict of interest.

## **Bibliography**

1. Hassane Abdallah H., *et al.* "An unusual case of isolate obstructive thrombi in the right atrium". *Journal of Integrative Cardiology* 1.5 (2015): 129-131.
2. Rawat RS., *et al.* "Asymptomatic type B right atrial thrombus in a case with protein S deficiency". *Annals of Cardiac Anaesthesia* 17.3 (2014): 237-239.
3. Desai MY and Jellis CL. "Differentiation of cardiac masses by CMR: judging a character by the company it keeps". *JACC: Cardiovascular Imaging* 7.9 (2014): 906-908.
4. Rinuncini M., *et al.* "Differentiation of cardiac thrombus from cardiac tumor combining cardiac MRI and 18F-FDG-PET/CT Imaging". *International Journal of Cardiology* 212 (2016): 94-96.
5. Yang JY., *et al.* "Neonatal and childhood right atrial thrombosis: recognition and a risk-stratified treatment approach". *Blood Coagulation and Fibrinolysis* 21.4 (2010): 301-307.

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