

## Enlarged Right Atrium Falsely Interpreted as a Mediastinal Mass: A Case Report

Farid Zand<sup>1</sup>, Mohammad Reza Sasani<sup>2\*</sup>, Shahrbanoo Shahbazi<sup>1</sup>, Kamran Hojabri<sup>3</sup>, Mansour Jannati<sup>4</sup>

<sup>1</sup> Anesthesiologist, Anesthesiology and Critical Care Research Center, Faculty of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran

<sup>2</sup> Radiologist, Medical Imaging Research Center, Department of Radiology, Faculty of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran

<sup>3</sup> Resident of Anesthesiology, Department of Anesthesia, Faculty of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran

<sup>4</sup> Cardiac Surgeon, Department of Cardiovascular Surgery, Faculty of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran

### ARTICLE INFO

Article type:  
Image in Cardio-Thoracic Medicine

Article history:  
Received: 3 Jun 2014  
Revised: 5 July 2015  
Accepted: 3 Aug 2015

Keywords:  
Chest X-ray  
Echocardiography  
Heart Atria  
Mass  
Mediastinal Disease

### ABSTRACT

Right atrial dilation due to left heart disease is a common complication among adults. The present review aimed to describe a case of massively dilated right atrium in a female patient presenting with valvular heart disease and no atrial fibrillation. The results of chest X-ray revealed a large opacity filling the lower right hemithorax, falsely interpreted as a mediastinal mass. During the transesophageal echocardiography, severe enlargement of the right atrium was detected, and open mitral and tricuspid valve replacements were performed successfully.

► Please cite this paper as:

Zand F, Sasani MR, Shahbazi S, Hojabri K, Jannati M. Enlarged Right Atrium Falsely Interpreted as a Mediastinal Mass: A Case Report. *J Cardiothorac Med.* 2015; 3(3):353-354.

### Image in Cardio-Thoracic Medicine

A 65-year-old woman with a history of easy fatigability was presented with recent onset of chest pain and palpitation. Additionally, the patient had a history of closed mitral valve commissurotomy (25 years ago).

The results of electrocardiography were indicative of normal sinus rhythm with T-wave inversions in leads II, III and aVF, as well as biphasic T waves in V1-2.

Chest X-ray of the patient revealed a large opacity filling the lower right hemithorax, falsely interpreted as a mediastinal mass (Figure 1). During the transesophageal echocardiography,

severe enlargement of the right atrium was detected (Figure 2). Moreover, moderate tricuspid stenosis with severe tricuspid regurgitation, right ventricular dysfunction and severe mitral stenosis with calcified leaflets were identified in the patient. Open mitral and tricuspid valve replacements were performed successfully, and the patient was discharged after two weeks under good conditions.

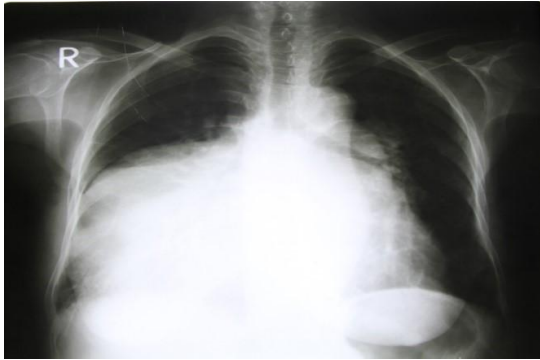
#### Learning Points:

- Right atrial dilation due to left heart disease is a common complication among adults.

\*Corresponding author: Mohammad Reza Sasani, Medical Imaging Research Center, Department of Radiology, Faculty of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran. Tel: +989177391618; Fax: +987136474329; E-mail: sasanimrz@gmail.com

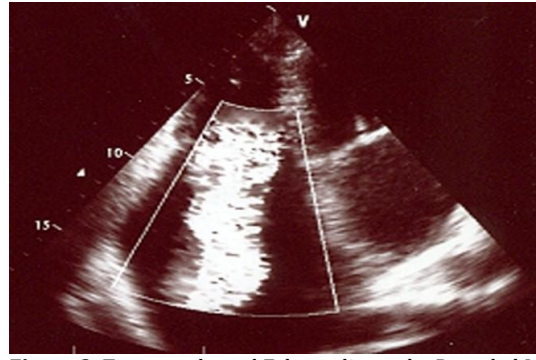
© 2015 *mums.ac.ir* All rights reserved.

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.



**Figure 1.** CXR Revealed Large Opacity in Lower Right Hemithorax due to Massive Dilation of Right Atrium (Falsely Interpreted as Mediastinal Mass)

- Therefore, it should be taken into account in the differential diagnosis of mediastinal masses.
- According to the literature, the most common causes of enlarged right atrium in adults are chronic pulmonary disease, tricuspid valvular stenosis, severe mitral valvular pathology with pulmonary hypertension, pulmonary embolism and infarction (1).
- Absence of atrial fibrillation in the described patient was noteworthy.



**Figure 2.** Transesophageal Echocardiography Revealed Large Atrium with Tricuspid Regurgitation

### Conflicts of Interest

None declared.

### References

1. Gomes S, Wolfenden H, Lambros J. Giant right atrium in an adult: case report of a rare condition. *Heart Lung Circ.* 2012; 21(1):50-2.