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Case Report / Olgu Sunumu

Silent Giant Left Atrium 'Giant Atrium'

Kahraman Coşansu[1], Çağın Mustafa Üreyen[2], Harun Kılıç[1]

[1] Sakarya University, Education and Research Hospital, Department of Cardiology, Turkey.

[2] Antalya Education and Research Hospital, Department of Cardiology, Turkey.

Abstract

Giant left atrium (GLA) is a rare condition closely related to rheumatic mitral valve disease. GLA was defined that left atrial anterior-posterior diameter of >8 cm on transthoracic echocardiography. The mechanism of GLA remains unknown but is possibly related to inherent weakening of the atrial wall tissue. GLA may be asymptomatic in a minority of cases. When symptomatic, most common manifestations are: arrhythmia, palpitations, chest pain, shortness of breath, and fatigue dyspnea, orthopnea, atrial fibrillation, nocturnal paroxysmal dyspnea, and thromboembolic events. In this case we reported one of the two biggest asymptomatic GLA in the literature.

Key words: Echocardiography; giant left atrium; mitral valve

Özet

Dev sol atriyum, romatizmal mitral kapak hastalığıyla yakın ilişkili olan nadir bir durumdur. GLA transtorasik ekokardiyografide sol atriyumun ön arka çapının >8 cm olması olarak tanımlanır. GLA 'nın mekanizması hala bilinmemekle birlikte muhtemelen atriyal duvar dokusunda doğuştan zayıflıkla ilişkilidir. GLA vakaların çok azında asemptomatik olabilmektedir. Semptom varlığında en sık bulgular; aritmi, çarpıntı, göğüs ağrısı, nefes darlığı, efor dispnesi, ortopne, atriyal fibrilasyon, noktürnal paroksismal dispne ve tromboembolik olaylardır. Bu vakamızda literatürdeki en büyük iki asemptomatik GLA'dan birini sunduk.

Anahtar Kelimeler: Ekokardiyografi, Dev sol Atrium, Mitral kapak

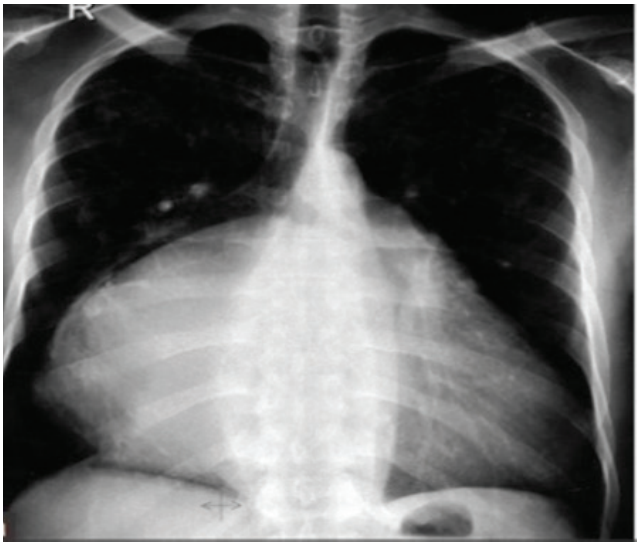
Corr. Author: **Kahraman COSANSU – M.D.**
Deparment of Cardiology, Sakarya Education and Research Hospital, Sakarya/Turkey, 54100
P: **+905357864725** E-mail: **Kahraman141@gmail.com**

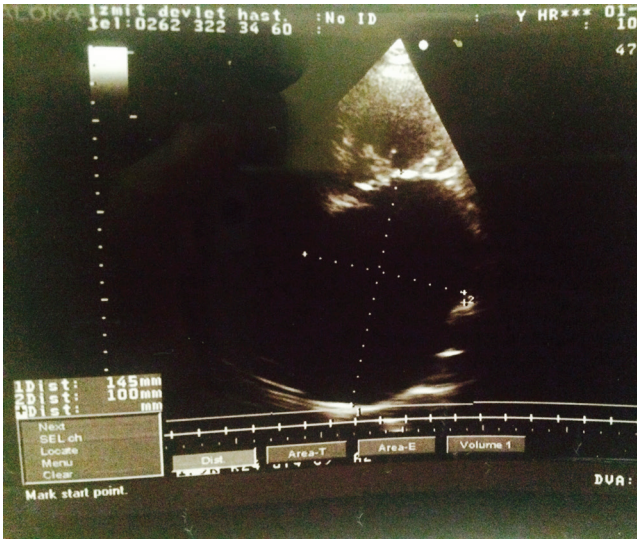
Introduction

Extreme enlargement of the left atrium more than 80 mm is known as giant left atrium (GLA). The condition has been closely related to rheumatic mitral valve regurgitation or mixed mitral valve disease causing severe pressure and volume overload. The mechanism of formation of GLA is not fully understood. Patients with GLA are generally presented with complaints of shortness and/or dysfagia. The enlarged left atrium is associated with blood stasis and thrombus formation. Echocardiography is an excellent modality to establish its diagnosis, assess etiology, and direct the correct management. Such a giant left atrium like ours with minimal symptom is a rare presentation of severe mitral stenosis.

Case

A 80 year-old female patient presented to the cardiology department of Izmit Seka State Hospital with complaint of palpitation and mild dispnea for the last one month. Aside from mild progressive shortness of breath during the past month, the patient had been asymptomatic all her life. She had not taken medical treatment before. Her physical examination revealed a pulse rate of 114/min, irregularly. All peripheral pulses were equally palpable. Blood pressure was 100/70 mmHg in the right arm supine position. On auscultation, the first heart sound was variable; second heart sound with narrow splitting and loud P2. Transthoracic echocardiography showed severe mitral stenosis (with mitral valve area 0.3 cm2) with mild mitral regurgitation and revealed a left atrial diameter of 14.5x10 cm (Figure 1). Also there was no evidence of any thrombus in the left atrium. Chest rountgeunogram revealed complete opacification of the right mid to lower lung areas. Cardiotoracic ratio was %80 with right side contributing %55 of it (Figure 2). Electrocardiogram was suggestive of atrial fibrillation. In view of the clinical examination and echocardiography, the patient was diagnosed as rheumatic heart disease with severe mitral stenosis, mild mitral regurgitation and atrial fibrillation with giant left atrium. Surgical management was felt necessary for the further management of the patient and she was advised surgical intervention. But patient refused operation and was discharged on medical management.





Discussion

Giant left atrium (GLA) is a rare condition with a reported incidence of 0.3%1. GLA commonly happens due to mitral lesions with history of rheumatic heart disease leading to mitral valve stenosis, regurgitation, or both. Frequently, it is associated with atrial fibrillation and increased risk for stroke and sudden death. It is difficult to distinguish GLA symptoms from the conditions giving rise to initial increase in left atrial size. Nonetheless, GLA may be asymptomatic in a minority of cases like ours. Most common manifestations are arrhythmia, palpitations, chest pain, shortness of breath, and fatigue, dyspnea, orthopnea, atrial fibrillation, nocturnal paroxysmal dyspnea, and thromboembolic events. Transthoracic echocardiography is the easiest, most reliable, and least

expensive method for diagnosing and monitoring GLA. Also this should be done for mitral valve assessment. The largest ever GLA reported to our knowledge measured 19.3 × 14.7 cm and was due to untreated rheumatic heart disease2. There were only two reports for silent GLA. One of these reported by Badui et.al. in 1995 with 14.5 cm3. The other one was reported by Valente et.al in 2014 with 10.5 cm4. Our GLA case is one of the two largest silent GLA in our knowledge with 14.5 cm. Surgical options for GLA are divided for either performing mitral valve surgery with left atrial volume reduction or performing mitral valve surgery alone5. In general, the surgical indication of GLA is the presence of intracardiac or extracardiac compressive symptoms from neighboring organs. This was a very rare case because of the patient's advanced age and a long asymptomatic period until one month before her admission. In addition she had not taken anticoagulation anytime and there was no thrombus formation. We had learned that sedentary patients may be asymtomatic although they have severe mitral stenosis.

Conflict of interest statement:

All authors disclose no conflict of interest.

The material contained in the manuscript has not been previously published and is not being concurrently submitted elsewhere.

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