Acta Scientific Clinical Case Reports

Volume 3 Issue 8 August 2022

Case Report

Dysphagia After Left Atrial Enlargement: A Rare Case Report

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Received: June 29, 2022

Published: July 18, 2022

Abstract

Introduction: Dysphagia after Left Atrial Enlargement (LAE) is rare and usually occurs because of extensive enlargement of left atrium called Giant left atria (3). In this article, a rare case of dysphagia caused by relatively slight LAE is presented.

Case Presentation: 58-year-old female, with no history of serious disease, who presented with dysphagia to solids and postprandial heartburn. Electrocardiography (ECG) was performed prior to further work up regarding the history of exertional dyspnea and atypical chest pain after food intake. The patient's resting 12-lead ECG showed an AF rhythm. Transthoracic echocardiography (TTE) was performed to find out the cause of the AF rhythm. LAE were found in TTE while the size of the other heart chambers was almost normal. Also, severe rheumatismal mitral stenosis and dome shaped MVLs were observed. Trans Thoracic Echocardiography (TTE) was performed to find out the cause of the AF rhythm. LAE were found in TTE while the size of the other heart chambers was almost normal . In EUS view mild external pressure effect from vascular organs and left atrium to mid part was seen. Also, the results of TEE confirmed the evidence of TTE and showed that there is a large left atrial appendage thrombus in left atrium while almost completely have filled it. The diameter of left atrium was calculated 5.7 cm. The patient underwent mitral valve replacement surgery and Tricuspid valve repair and was discharged after a week with a good general condition

Conclusion: Although LAE due to mitral stenosis may be asymptomatic or have not a prominent symptom, however, dysphagia following LAE is a rare condition that may delay the diagnosis and mislead the physicians. In these cases, accurate history taking and clinical examination are critical for proper approach and ECG, CXR and echocardiography help to diagnose after clinical suspicion.

Keywords: Dysphagia; Left Atrial Enlargement; Giant Left Atria

Introduction

Left atrial enlargement (LAE) most of the time occurs due to mitral valve stenosis, which results in volume overload causing gradually increasing the size of the left atrium. Given that this process usually occurs slowly, patients may be asymptomatic for many years [1]. Although the symptoms are uncommon, the most common clinical manifestation is shortness of breath or hoarseness because of left laryngeal nerve injury [2]. Dysphagia after LAE

is rare and usually occurs because of extensive enlargement of left atrium called Giant left atria [3]. In this article, a rare case of dysphagia caused by relatively slight LAE is presented.

Case Presentation

58-year-old female, with no history of serious disease, who presented with dysphagia to solids and postprandial heartburn. After consulting with a general practitioner with a diagnosis of gastro esophageal reflux, was treated with proton pomp inhibitor (PPI). The patient's pain initially had a relative improvement with PPI, but it gradually did not respond to treatment. So, after two months, for work up of dysphagia, esophagogastroduodenoscopy (EGD) was done. Evidence of a large mass in esophagus was proposed in EGD. Therefore, the patient referred to our center for further work up. During the last year, the patient experienced progressive exertional dyspnea (FC II,III) and gradual and minor weight loss, and did not mention another problem. The patient never experienced the same symptoms. There were not any other gastrointestinal symptoms include anorexia, regurgitation, nausea and vomiting, or any cardio-pulmonary symptoms, including cough, sputum, palpitations, swelling of the organs and voice hoarseness in the patient. She did not smoke and did not drink alcohol, but she consumed oral opium since about 20 years ago. There were no similar symptoms in people close to the patient and no history of serious cardiopulmonary, gastrointestinal diseases or malignancy in her family. When referring to our center, blood pressure was 110/80 mmHg, heart rate was irregular and 80 per min, respiratory rate was 20 and O_2 Sat was 97%. In the examination, the appearance of the patient was normal and there was no respiratory distress. Except presence of variable S2 and diastolic rumble in heart auscultation, heart and lung examinations and other systems were generally normal. The level of cardiac enzymes and routine laboratory tests were normal. In general, gastrointestinal problems such as esophageal stricture or achalasia were considered as the main differential diagnosis, and heart problems were considered less likely. Electrocardiography (ECG) was performed prior to further work up regarding the history of exertional dyspnea and atypical chest pain after food intake. The patient's resting 12-lead ECG showed an AF rhythm (Figure 1). Transthoracic echocardiography (TTE) was performed to find out the cause of the AF rhythm. LAE were found in TTE while the size of the other heart chambers was almost normal (Figure 2). Also, severe rheumatismal mitral stenosis and dome shaped MVLs were observed, while the other valves were almost normal and LVEF was calculated to be 50%. The recommendation was to perform TEE after proper control of the heart rate. The patient was treated with beta-blocker and warfarin. In the next step endoscopic ultrasound (EUS) and transesophageal echocardiography (TEE) were performed (Figure 3). There was normal mucosa and no obvious mass lesion in esophagus. In EUS view mild external pressure effect from vascular organs and left atrium to mid part was seen. Also, the results of TEE confirmed the evidence of TTE and showed that there is a large left atrial appendage thrombus in left atrium while almost completely have filled it. The diameter of left atrium was calculated 5.7 cm. A cardiac catheterization was performed showing normal coronary arteries and there was isolated post capillary pulmonary hypertension (20 mmHg transmitral gradient) with severe MS. The patient underwent mitral valve replacement surgery and Tricuspid valve repair and was discharged after a week with a good general condition. There was no problem in one week, one month and three months' follow-up after the intervention. CXR of patient after treatment is shown in figure 4.

Figure 1: ECG which shows AF rhythm.

Figure 2: TTE showing left atrial enlargement.

Figure 3: TEE: a large left atrial appendage thrombus in left atrium.

Figure 4: CXR after treatment, prosthetic valve can be noticed.

Discussion

Dysphagia is a gastrointestinal complaint that generally occurs either due to nervous system problems or because of problems with the esophagus [4]. Conditions such as extrinsic compression that can narrow the esophageal lumen can cause dysphagia. Extrinsic esophageal compression is found in inflammatory, postoperative and neoplastic mediastinal diseases [5]. A normal LA is 27 to 38 mm in diameter. LAE causes dysphagia by external compression of the esophagus. Giant left atria is an unusual condition where the left atrial anteroposterior diameter with a mean of about 90 mm. The esophageal stricture due to LAE and the subsequent development of dysphagia are rare and usually occur in the giant left atria condition [6,7]. On the other hand, dysphagia followed by pseudoaneurysm and left atrial myoxoma has also been reported, although the diameter of the masse was more than 70 mm [8]. In our patient, left atrium with diameter of 5.7 cm strangely caused dysphagia. On the other hand, if LAE is symptomatic, dyspnea or voice hoarseness, known as the Ortner syndrome, are more common than dysphagia [1]. There was no voice hoarseness and typical dyspnea in our patient which is a rare aspect of it. The results of the studies indicate that LAE occurs more often as a result of rheumatismal mitral stenosis which was also observed in our patient. But nowadays, rheumatic heart disease is an extremely uncommon finding and it has significantly decreased over recent years that makes our patient more interesting. While clinical suspicion, although chest radiography and ECG are helpful, echocardiography is the best diagnostic method for LAE diagnosis [9]. Of course, CT scans, and especially MRI, are also diagnostic in examining the size of the atrium. In our patient, after clinical suspicion due to evidences of ECG, results of TTE and TEE confirmed our diagnosis, while the results of endoscopy may have been misleading. Today, LAE treatment due to mitral stenosis is mitral valve surgery, which was also effective in our patient, so that the symptoms have improved significantly after 3 months.

Conclusion

Although LAE due to mitral stenosis may be asymptomatic or have not a prominent symptom, however, dysphagia following LAE is a rare condition that may delay the diagnosis and mislead the physicians. In these cases, accurate history taking and clinical examination are critical for proper approach and ECG, CXR and echocardiography help to diagnose after clinical suspicion.

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