A patient with dysphagia

Ahmed A. Montasir¹, Masudur Rahman², Swapna R. Mondal³, Minhaz Uddin⁴

¹Resident Physician, Department of Medicine, ²Professor, Department of Medicine, ³Associate Professor, Department of Radiology and Imaging, ⁴Registrar, Department of Medicine, TMSS Medical College, Bogura, Bangladesh

ABSTRACT

Mitral stenosis (MS) is the most common valvular heart disease in developing countries where rheumatic fever is common. It is also more common in women. The normal mitral orifice is 4–5 square cm in area and the symptoms do not occur until the orifice area falls to below 2.0 square cm and usually below 1.5 square cm. The orifice area decreases by 0.1–0.3 square cm per year. Rarely, the dilatation of the left atrium may cause the symptoms of dysphagia from esophageal compression. Although cardiovascular dysphagia is rare, it should be considered in the case of mitral stenosis. The etiologies of mitral stenosis can be congenital, acquired, or iatrogenic. This case report presents a patient having dysphagia due to an enlarged left atrium.

Keywords: Dilated left atrium, dysphagia, mitral stenosis

Introduction

The incidence and prevalence of rheumatic heart disease varies greatly. It varies among different age groups and regions of the world. The global prevalence of rheumatic heart disease is around 1 per 1,000 in children aged 5–14 years. The prevalence varies widely by region. Fewer cases were reported from the developed than from the developing countries. Rheumatic heart disease usually affects the mitral valve and one of the consequences is mitral stenosis. Untreated, mitral valve stenosis can lead to complications such as pulmonary hypertension, heart failure, enlargement of different chambers of the heart causing pressure effects on surrounding structures, atrial fibrillation, and thromboembolism. Mostly, patients present to primary care physicians with various symptoms of mitral stenosis-related complications. Although dysphagia is not a common presenting complaint of mitral stenosis, primary care physicians should be vigilant not to miss enlarged left atrium as one of the possible causes of dysphagia.
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Dimension was 41 mm. There was severe mitral stenosis. The pulmonary arterial systolic pressure was estimated to be 75 mmHg. Computed tomography (CT) of the thorax was done to exclude noncardiac causes of extrinsic esophageal compression and it confirmed a grossly dilated left atrium indenting the esophagus [Figures 5 and 6]. The patient was referred for mitral valve repair.

Discussion

Dysphagia is a common presenting symptom in primary care service. Dysphagia can result from several disorders. Cardiovascular dysphagia is not so common. It may be due to congenital conditions or acquired. There have been several cardiovascular conditions that are associated with dysphagia.\cite{2,3} Cardiovascular dysphagia was first described by Kapil in 1999. Cardiovascular structures such as double aortic arch, right aortic arch, an aberrant subclavian artery may cause dysphagia. Dilated left atrium and aortic aneurysm are the most important
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acquired cardiovascular causes of dysphagia.\textsuperscript{1,4,5} Iatrogenic aortoesophageal fistula and postoperative dysphagia are also seen. Most cases of mitral stenosis stem from the previous episodes of rheumatic fever.\textsuperscript{6} Most cases of rheumatic heart diseases are seen in areas of the world where rheumatic fever is common, including the Middle East, South East Asia, and South Africa. Primary care physicians practicing in these countries have to attend patients suffering from rheumatic fever and the long-term sequela of it, the rheumatic heart disease. Mitral stenosis which is the most common rheumatic heart disease inhibits the normal free flow of blood from the left atrium to the left ventricle in diastole.\textsuperscript{1,2,4} The stenotic valve impedes left atrium emptying, inducing a diastolic gradient between the left atrium and the left ventricle. Prolonged elevation of the left atrial pressure causes the dilatation of left atrium and an increase in pulmonary pressure. In severe mitral stenosis, the mean pressure gradient across the mitral valve is more than 10 mm Hg. Left atrial dilatation usually occurs in moderate to severe mitral stenosis. A normal left atrium is 2.7 to 3.8 cm in diameter.\textsuperscript{1} Giant left atrium can be caused by chronic rheumatic mitral valve disease, permanent atrial fibrillation, and chronic left ventricular failure. It is most commonly the result of chronic pressure and volume overload from rheumatic mitral valve disease.\textsuperscript{1,2,4} Dilated left atrium may cause pressure effects on the surrounding structures in the middle mediastinum. The left atrium is located on the left posterior side of the heart, in front of the esophagus. The left atrial enlargement causes dysphagia by external compression of the esophagus.\textsuperscript{6,2,4} Dysphagia can also be caused by the extrinsic compression of the esophagus that can result from vascular anomalies, such as an aneurysmal thoracic aorta. Besides, direct compression on esophagus causing dysphagia and other suggested mechanisms for cardiovascular dysphagia include deranged peristalsis due to local ischemia of the esophageal mucosa and nerve plexus caused by the elevated external pressure; prolonged exposure of the distal esophagus to high external pressure may cause proximal esophageal muscle fatigue and dysphagia.\textsuperscript{1,2,5-7} Our patient was suffering from dysphagia and had mitral stenosis. Dysphagia was also progressively worsening and due to it our patient suffered from malnutrition and weight loss. Dysphagia was caused by the extrinsic compression of the esophagus by the giant left atrium.\textsuperscript{5,8} Although cardiovascular dysphagia is not so common in practice, it should be suspected as a cause in patients having mitral valvular disease.

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Conflicts of interest
There are no conflicts of interest.

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