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Case Report

A different symptom due to mitral valve stenosis: Back pain

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Abstract. The most significant parameter that comes forth among symptoms affiliated with mitral stenosis is a chronic increase in the left atrium pressure. The very first symptom is effort dyspnea. Other symptoms may include fatigue, chronic coughing due to enlargement of the left atrium, hemoptysis, orthopnea, paroxysmal nocturnal dyspnea, tiredness, symptoms related with right cardiac failure and pulmoner edema. In our case, we present a very different symptom which accompanies these symptoms: back pain. Severe mitral stenosis was determined with echocardiography in patient. We assume that, back pain may have disappeared after mitral replacement and which makes us think that back pain had originated from the calcified thrombosis which completely covered the left atrium base and the atrium wall.

Key words: Mitral valve stenosis, back pain

1. Introduction

Calcification of the left atrium was originally described in 1898 (1). Usually associated with rheumatic valvular disease. Calcification in the left atrial appendage is usually located within less violent. The most severe form is called porcelain atrium atrium, or coconut. the left atrial appendage, atrial free wall and mitral valve apparatus includes. Here we are offering our patients, left atrial calcification back pain may have caused. Suggests that the disappearance of back pain after the operation. Back pain was thought to be caused due to placement of the specimen.

2. Case report

A 62 year-old male patient diagnosed with rheumatismal heart disease and undergone a left thoracotomy an open mitral commissurotomy operation on 1986, referred to our hospital because of shortness of breath (NYHA Class III) which showed a tendency to gradually increase during the last recent year. Due to a cerebral emboli 17 years ago, patient was a stroke patient with hemiparesis at the right side and was suffering from a speech disorder. Physical examination demonstrated a blood pressure of 130/80 mmHg and atrial fibrillation with a 100/minute heart rate. A pansystolic murmur was determined which showed an tendency to increase by inspiration at the tricuspid focus and a mid-diastolic murmur with a 3/6 intensity following a mitral opening sound and a hardened first heart sound at the mitral focus. Electrocardiogram revealed atrial fibrillation and deviation at the right axis and pulmonary congestion at the telecardiogram and an increased cardiothoracic ratio. Trans- thoracic echocardiography indicated advanced mitral narrowing while the plavimetric valve area was measured 0,9 cm2 and the transmitral diastolic gradient was found 18 mmHg by Doppler. 5.5-6 cm in size were measured in the left atrium. A superficial calcified wall, associated with the mitral valve at the left atrium was determined (Figure 1). A thrombus material located inside the left atrium appendix, with a dimension of 2x3 cm was also displayed. Colored Doppler study indicated a 2° inadequate regurgitation at the tricuspid valve.

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TPAB was 80 mmHg and ejection fraction was measured 55%. Coronary angiography of this patient and carotid Doppler USG were normal.

Fig. 1. Image of calcified thrombus next to the mitral valve.

The mediastinum was opened by standard median sternotomy. Cardiopulmonary by-pass was started after arterial and bicaval cannulation. After entering the both two cava syneria, the left atrium was accessed by the inter-arterial septum route after a right atriotomy was carried out. After several explorations and palpation, a massive material was palpated inside the left atrium which was considered as a solid and hardened mass calcified at an advance degree, covering the base of the left atrium and the entire surface area and the mitral valve. Current fresh thrombosis inside the left atrial appendixes were also removed.

A cleavage was opened at the incision region of the inter-atrial septum where the present calcified structure was located and by a careful dissection that extends to the both two regions, the anterior and posterior, and including the mitral valve, and resembling a procedure to remove an endarterectomy material as two fragments similar to an endoatriectomy process (Figure 2).

After the internal side of the left atrium was thoroughly cleaned, a 29 St. Jude artificial mitral valve was implanted by single plegited sutures instead of the resected mitral valve (Figure 3).

A De Vega Annuloplasty technique was applied to the tricuspid valve due to failure of the mentioned valve. Cardiopulmonary by-pass was exited by a low dose inotropic support. The patient displayed no any post-operative problems during his stay at the intensive care unit and then was referred to the normal service.

Fig. 2. Excision of the calcified thrombus material as endoatriectomy.

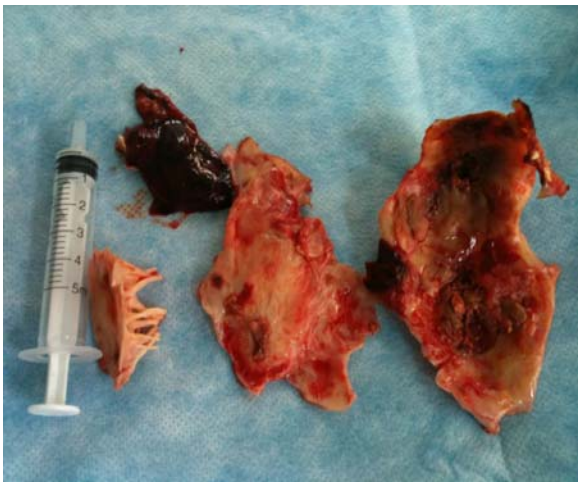

Fig. 3. Excised mitral valve, calcified materials and fresh thrombus.

Neurological examination of the patient indicated no any past events additional to a past cerebral condition. Post-operative investigation of the patient revealed no any signs of back pain and the patient continued to lie at a supine position in the service till he was discharged from the hospital. However, a calcified thrombus diagnosis was also confirmed by histopathological study.

3. Discussion

Rheumatismal mitral valve diseases are still a serious concern in our country (Turkey) and is still a major cardiac problem in developing countries. The most important criteria of symptoms emerging in patients is the decrease in

the plavimetric mitral valve area and a chronic increase in the left atrial blood pressure. In the literature, a thrombus located at the left atrium was determined in approximately 7-15% of the patients with a rheumatismal mitral valve cases (2). However, calcifications at the left atrial surface is rare. The literature also indicates certain terms used to describe the condition, such as *porcelain* for left atrial calcifications and coconut for left atrium calcifications (3,4).

In a vast study carried out by Vallejo et al. (5) which is considered as the most comprehensive study in the literature 971 patients with valve disorders were operated and 21 of these patients demonstrated a large calcification at their left atrium while 8 of these patients demonstrated a massive calcification at the left atrium surface area. Total endoatriectomy procedure was applied to the mentioned calcifications. These patients did not experience any post-operative problems at the early term. Unfortunately, one patient passed away due to multi-organ failure during the post-operative term.

In a case presentation submitted by Santini et al. (6), the massive calcified left atrium of the patient was completely resected and a T-shape chamber was formed instead of the left atrium by the aid of a vascular greft and the pulmoner veins were implanted into the mitral valve.

Yet symptoms related with mitral stenosis may vary, however common symptoms may include shortness of breath, palpitation, orthopnea, paroxysmal nocturnal dyspnea, effort dyspnea, tiredness and fatigue while symptoms of right heart failure may occur during the advanced term of the condition and the most worse condition can be a rise in a systemic emboli risk and pulmonary edema. Additionally, shortness of breath can be a very disturbing state for both the patient and caretakers. The case we are presenting in this article is suffering from a back pain due to an irritated posterior region where the calcified tissue affiliated with the calcified tissue of the left atrium as a result of an advanced degree of mitral stenosis. Nevertheless, as back pain is vanished during the post-operative term we assume that the reality of this estimation is supported.

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