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Rapidly Growing Left Atrial Huge Myxoma in an Asymptomatic Patient: A Case Report

Asemptomatik Bir Hastada Hızla Büyüyen Dev Sol Atriyal Miksoma: Vaka Sunumu

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Abstract

Myxomas are the most common primary cardiac tumours, they are usually benign and have variable presentation. An asymptomatic giant myxoma presentation is extremely rare. The growth rate of myxoma is controversial. The major differential diagnosis of myxoma is thrombus, which often has a rapid growth rate. Contrary to common belief, myxoma may grow rapidly and may not cause any symptom. Tumor blood supply from the coronary artery may completely alter the strategy of surgery. Therefore, routine preoperative coronary angiography in patients with myxoma is controversial. 39-year-old asemptomatic male patient with history of coronary stenting after percutaneus coronary intervention was admitted to our clinic for routine follow up. A giant, hyperechogenic, mobile (5.8x3.1cm diameter) mass in the left atrium with regular contours originating from interatrial septum, attached with a thick pedicule to posterior wall of aorta was detected on transtorasic echocardiography. He had gone to surgery . This case contributes to growth rate of myxoma and necessity of coronary angiography before operation.

Keywords: Myxoma; Coronary Angiography

Özet

Miksomalar en sık görülen primer kardiyak tümörlerdir, genellikle benignlerdir ve çeşitli klinik tablo ile ortaya çıkarlar. Asemptomatik dev sol atrial miksoma oldukça nadir görülmektedir. Miksomaların büyüme hızı tartışmalıdır. Miksoma ile trombüs arasındaki en önemli farklardan birisi büyüme hızıdır. Ortak görüşün aksine miksoma beklenenden hızlı büyüyebilir ve semptom oluşturmayabilir. Koroner arter ile beslenen miksomalar operasyon stratejisini değiştirebilir. Dolayısıyla operasyon öncesi miksomalı hastalara rutin koroner anjiografi uygulanıp uygulanmayacağı tartışmalıdır. Öncesinde bilinen koroner stent öyküsü bulunan 39 yaşında erkek hasta rutin kontrol amacıyla kliniğimize başvurdu. Transtorasik ekokardiyografide sol atriumda interatrial septumdan kaynaklanan dev (5.8x3.1cm) ,hiperekojenik, hareketli ve kalın bir pedikül ile aort arka duvarına uzanan düzgün konturlu kitle tespit edildi. Hasta operasyona gönderildi. Bu vaka miksomaların büyüme hızı ve operasyon öncesi koroner anjiografi ile ilgili katkı sağlamaktadır.

Anahtar kelimeler: Miksoma; Koroner anjiyografi

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Introduction

Atrial myxoma is the most common primary cardiac tumor. Reports with documented growth rate are therefore very rare and the actual growth rate is controversial . The reported growth rates of LA myxomas from previous case reports vary and is estimated to between 1.3 to 6.9 mm/month in diameter of the myxoma (1,2). These estimated growth rates are primarily assumed to be based on linear growth and have been calculated using original and follow up echocardiography images in case reports of patients with established LA myxomas, in patients who either refused or were unsuitable for cardiac surgery. An asymptomatic presentation is extremely rare (3). Tumor blood supply from the coronary artery may completely alter the strategy of surgery (4). Here we report rapidly growth of a huge left atrial myxoma in an asymptomatic 39-year-old patient with several years of follow up for coronary artery disease.

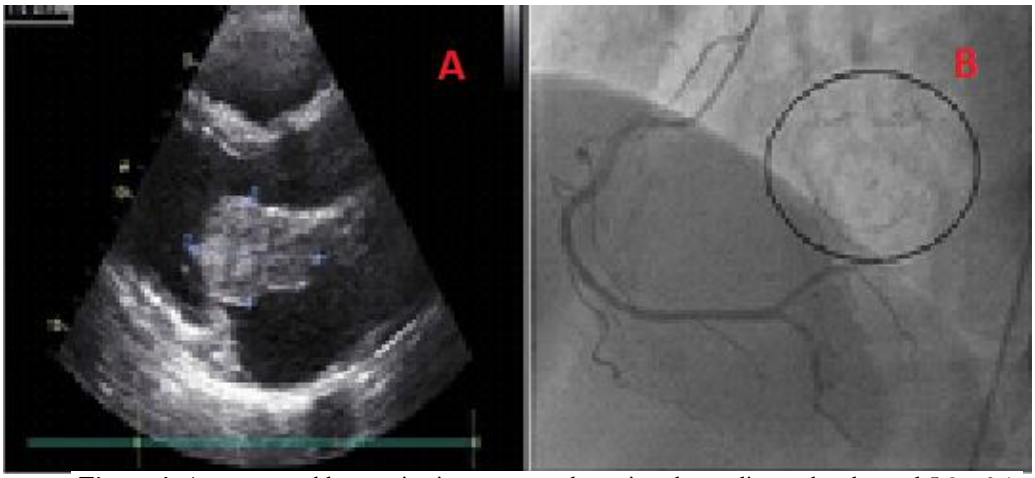

Figure 1. A:parasternal long axis view on transthoracic echocardiography showed 5,8 x 3,1 cm myxoma ; B: Coronary angiography showed several feeding vessels from posterolateral branch of the right coronary artery.

Case Report

39-year-old asymptomatic male patient with history of coronary stenting after percutaneous coronary intervention in 2008 was admitted to our clinic in august 2011 for routine follow up. He has no symptom such as syncope, shortness of breath. Tension arteriel and heart rate was 120/70 mmHg, 72/bpm, respectively. Physical examination was normal except diastolic murmur. Cardiac auscultation revealed a 3/6 diastolic murmur that was best heard over the midcardiac region. In his history an echocardiography was performed two years ago and left atrium was clear. Electrocardiography showed nonspesific ST-T changes in lead V1-V4. Echocardiography was performed because of the diastolic murmur in the cardiac auscultation. A giant, hyperechogenic, mobile (5.8x3.1cm diameter) mass in the left atrium with regular contours originating from interatrial septum, attached with a thick pedicule to posterior wall of aorta was detected on transtorasic echocardiography.(Figure A) Myxoma was protruding through the mitral valve and significant MV obstruction (peak diastolic gradient of 17 mmHg, mean diastolic gradient of 9 mmHg) was detected by doppler. Prior to surgery, coronary angiography was planned. The stent in the middle of the LAD was clear and there were no critical stenosis in other vessels. Coronary angiography showed several feeding vessels from posterolateral branch of the right coronary artery.(Figure B) The patient was operated with the diagnosis of myxoma and postoperative histopathology was compatible with the diagnosis of cardiac myxoma.

Discussion

The majority of myxomas are found in the left atrium. Most patients with myxoma present with symptoms of obstructive mitral valvular disease (mitral stenosis), congestive heart failure, signs of embolisation, systemic or constitutional symptoms of fever, weight loss or fatigue, and immunological manifestations of myalgia, weakness, and arthralgia (5). An asymptomatic presentation is extremely rare (6). In a series of 75 cases of cardiac myxoma reported by Meng and colleagues, 4% were asymptomatic (11). Screening for myxomas should involve a thorough history and physical examination and a transthoracic echocardiogram. Echocardiography is currently the most important diagnostic tool for imaging cardiac myxomas. The decision for surgery is generally based on echocardiographic evidence of the disease (6). In our case the patient was referred to cardiac evaluation due to new onset diastolic murmur on routine follow up. Transtorasic echocardiography showed a giant left atrial myxoma (peak diastolic gradient of 17 mmHg, mean diastolic gradient of 9 mmHg). Although myxoma was reached large size and mean gradient was 9 mmHg on mitral inflow, interestingly he did not describe effort dispne or any symptoms probably due to its mobility that we did not see before.

Left atrial myxomas and thrombi can be differentiated on the basis of size, origin, shape, mobility, and prolapse. Myxomas are pedunculated, mobile, and frequently found in the left atrium, usually originating from the fossa ovalis. In contrast, thrombi that mostly originate from the appendage, have a broad base, and are normally immobile. On echocardiography, cardiac

myxoma typically appears as a mobile mass attached to the endocardial surface by a stalk (7). In our case, the mass in the left atrium with regular contours originating from interatrial septum, attached with a thick pedicule and mobile was compatible with myxoma. But the growth rate was consistent with thrombus. The definitive diagnosis was made by histopathology. The reported growth rates of left atrial myxomas from several published case reports appears to vary and is estimated between 1.3 to 6.9 mm/month in diameter within patients with established myxoma who have not undergone surgery (1,2). We have not seen a large-scale research in the literature about growth rate of myxoma, our information is based on just in case reports. The growth rate of our case was approximately 4.2 mm /month. The rapid growth of the tumor may be due to supply from vascularization in the given patient. Myxoma blood supply from the coronary artery is not uncommon, approximately %40 of it is detected with angiographically (8). Myxomas are most commonly supplied by RCA. In addition, tumor blood supply from the coronary artery may completely alter the strategy of surgery (3). Myxoma related artery ligation is very important during operation, if the ligation can not be performed correctly, remaining free of branches may drain into the left atrium, may occur steal syndrome and coronary ischemia (8). Once the diagnosis of cardiac myxoma is established, resection should be carried out promptly due to high risk of embolization or other complications, including sudden cardiac death (9,10). Although the visualization of feeding vessels has several clinical and therapeutic implications, there is still no consensus on the indication of preoperative coronary angiography to assess tumor vascularity except in patients with angina or those older than 40 years to rule out coronary artery disease (12). Coronary angiography could not be performed due to the absence of angina and our patient was under the age of 40. But it was performed to our patient due to previous coronary stenting after percutaneous coronary intervention. Angiography was very useful for changing operation strategy. Mxyoma is supplied by posterolateral branch of the right coronary artery and we planned surgery priorly. It was removed successfully and the related artery was ligated. The postoperative period was uneventful and the patient is doing well, with no recurrence of myxoma after a 1 year follow up. In Conclusion, to the best of our knowledge, we have not seen before such a large size myxoma that is asymptomatic. Our aim to present this case is contributed to the growth rate of mxyoma because there is no large-scale research in the literature. Angiography should be performed all patients who has gone to surgery because myxoma blood supply from the coronary artery is not uncommon.

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