

MİTRAL KAPAK YETMEZLİĞİ İLE SEYREDEN KARDİAK MİKSOMA: ÜÇ OLGUNUN SUNUMU

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ÖZET

Kardiak miksomalar, kalbin en sık görülen primer tümörleridir. Genellikle sol atriumda bulduklarından, çoğu kez mitral kapağa doğru prolabe olurlar ve çıkarıldıktan sonra bazen rezidüel mitral kapak yetmezliğine neden olabilirler. Bu makalede biz, rezeksiyon sonrası mitral kapak yetmezliği gelişen üç olguyu sunduk. Kliniğe halsizlik ve efor dispnesi ile gelen üç bayan hastada sol atrial miksoma tespit edildi. Hastalardan birisinde preoperatif dönemde, diğer ikisinde de rezeksiyondan hemen sonra mitral kapak yetmezliği belirlendi. Bu patoloji, rezeksiyon sonrasında mitral kapak replasmanı ve tamir yöntemleri ile tedavi edildi. Postoperatif doppler ekokardiografi takiplerinde herhangi bir rezidüel kapak probleminin olmadığı görüldü. Miksoma rezeksiyonları sonrasında mitral kapak yetmezliği olası bir problemdir. Bu nedenle, mitral kapak rezeksiyon sonrasında dikkatlice değerlendirilmelidir. Bu hastalarda yetmezlik primer bir kapak problemi olmadığından, replasmandan ziyade tamir daha kabul edilebilir bir tedavi yaklaşımıdır.

Anahtar sözcükler: Miksoma, mitral yetmezliği, cerrahi.

Cardiac Myxoma with Mitral Valve Insufficiency: Report of Three Cases

SUMMARY

Cardiac myxoma is the most common primary tumours of heart. Due to common location in left atrium, it may prolapse to various degrees into the mitral valve orifice and may cause mitral insufficiency after resection. In this report, we present three patients with cardiac myxoma having mitral valve disease. Left atrial myxoma was diagnosed in three women suffered from fatigue and exertional dyspnea. Mitral insufficiency was noticed in one patient preoperatively and in the two other during surgery after tumour excision. Mitral valve repair and replacement after excision were performed. During follow up period, neither recurrence nor valve problem was seen on patients by doppler echocardiography. Mitral insufficiency is a potential problem after myxoma excisions and mitral valve must be examined carefully after resection. Mitral valve repair have to be considered a reasonable alternative to replacement because insufficiency is not a primary valve lesion in these patients.

Key words: Myxoma, mitral insufficiency, surgery.

Benign cardiac myxoma is the most common primary tumors of heart. It is seen mostly in left atrium and may prolapse to various degrees into the mitral valve orifice. It mostly presented a clinic looks like a mitral stenosis¹⁻³. Although many authors reported about either its preoperative clinical feature or surgical resection, few ones revealed about its residual intraoperative feature of mitral insufficiency after resection^{4,6}. In this limited clinical series of three cases, we aimed to reveal our surgical experience.

CASES

Case 1.

A 58 year-old woman with a routine transthoracic echocardiogram showing a giant tumor in left atrium was referred. Telecardiography was normal. Two dimensional doppler echocardiography revealed a large echo-dense mass attached inferior side of left atrial septum which protrudes into left ventricle during diastole with severe mitral valve

regurgitation. (Figure 1). She had no other disorder. Her family members had no history of intracardiac tumors.

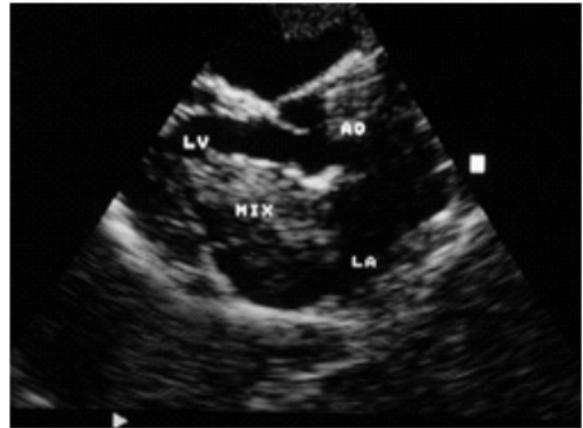


Figure 1. Two dimensional echocardiogram of myxoma: Note tumor plop to left ventricle during diastole and concomitant mitral insufficiency.

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Operation was performed through median sternotomy under extracorporeal circulation by using standard aortic and bicaval cannulation and moderate hypothermia with total cardiopulmonary bypass. Myocardial protection was achieved by means of intermittent ateri-grade blood cardioplegia. The tumor mass attached interatrial septum was removed via biatrial approach. Then we noticed residual evident mitral regurgitation when we examine mitral valve due to posterior annulus dilatation. We repaired it with lateral suture annuloplasty placed on each commissure. The septal incision defect and right atriotomy was closed primarily. After measurement, we observed that mass of myxoma had a diameter of 92 x 46 mm. Histologic examination revealed myxoma with no sign of malignancy (Figures 2 and 3). Postoperative transthoracic echocardiography revealed no sign of mitral insufficiency. She was followed up for 21 months and no complication was seen.

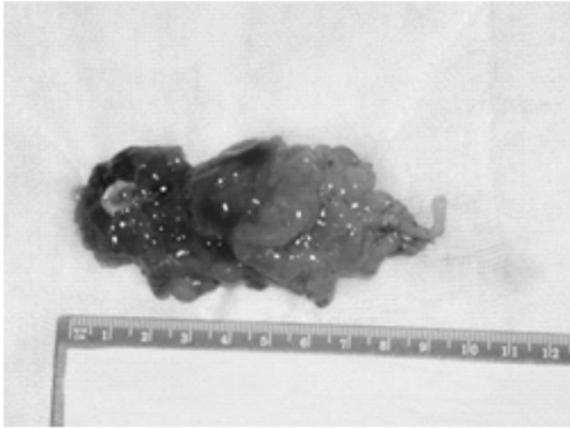


Figure 2. Macroscopic appearance of the tumor: Pathologic examination showed a gelatinous myxoma in size of 9.2 x 4.6 x 4.2 cm.

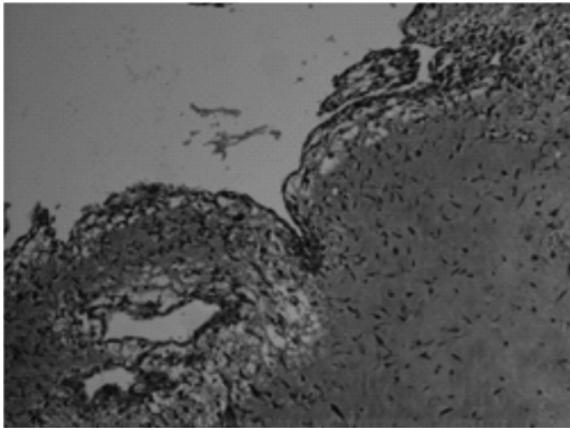


Figure 3. Microscopic examination of tumor shows disseminated fibrin depositions, blood extravasations and proliferations of capillaries (Hematoxylin and Eosin, x 150).

Case 2.

A 52 year-old woman suffered from fatigue and dyspnea on exertion lasting 5 months. On the laboratory examination, serum sedimentation rate was elevated. Doppler echocardiography revealed a large echo-dense mass attached middle side of left atrial septum which protrudes into left ventricle during diastole. She had no other disorder. Any of her family members had no history of intracardiac tumors. During the operation a giant encapsulated myxoma was resected in a same surgical protocol cited above. Mitral valve was evaluated as degenerative with third degree insufficiency preoperatively and it was replaced with a bileaflet mechanical valve (CarboMedics Inc, Austin-Tx, USA). We observed that mass of myxoma had a diameter of 65 x 43 mm. Histologic examination revealed benign myxoma. She had an uneventful recovery. She was followed up for 33 months and no morbidity was seen.

Case 3.

A 67 year-old female patient with fatigue and dyspnea on exertion was examined. Chest roentgenogram was normal. Two dimensional doppler echocardiography revealed a large echo-dense mass attached to left atrial septum which protrudes into left ventricle during diastole. She had also hypertension and dyslipidemia. But her previous coronary angiography showed no critical stenosis of coronary arteries. Her brother had been operated for cardiac myxoma six years ago. She underwent surgical removal of tumor in a similar fashion cited above. A large mass was resected in a diameter of 90x45 mm. Histologic examination also revealed similar findings as in cases above. After resection, we noticed moderate mitral insufficiency. We repaired it with lateral suture annuloplasty placed on each commissure as we done in first case. No residual regurgitation was noticed in transthoracic echocardiography postoperatively. Similar histological findings were noticed as in cases above. Her postoperative course was uncomplicated. We followed up her for 8 months and no complication was noticed.

DISCUSSION

Patients with cardiac myxomas may present various initial symptoms depending on size, location and functional derangements caused by tumor. Of them, size and location are most prominent factors to constitute symptoms¹⁻³. Our patients suffer from easy fatigability and exertional dyspnea. The cause of those symptoms may be due to mitral insufficiency in second case and obstruction of tumor or valvular regurgitation in remainders.

Physical findings generally reveal nonspecific findings in patients with cardiac myxoma. Although an audible murmur might be present, classically a tumor plop may be heard early in diastolic phase and is

attributed to the myxoma prolapsing into ventricle 1-3. None of our patients presented a finding like this except audible regurgitation murmur in one patient due to mitral insufficiency. It might be due to restricted movement of mass of myxoma during cardiac cycles in other two patients.

Preoperative routine laboratory investigations in myxoma patients showed elevated levels of C-reactive protein (CRP) in 57.1% and an acceleration of the erythrocyte blood sedimentation (BSR) in 86.1% of the patients. Beside of those, many other immunologic features might be studied in patients such as complement activation, cellular activation, OKT4/8 ratio, serum levels of immunoglobulins¹. We studied these parameters in none of our patients except an elevated sedimentation rates in the second case. Considering other laboratory diagnosis, two dimensional transthoracic echocardiography seems the best method owing to its noninvasive nature and accuracy^{2,3}. Our patients having suspected symptoms were diagnosed clearly with echocardiographical examination. They also have to be screened on coronary angiography because of their advanced age in case of concomitant coronary stenosis. But none of them present coronary lesion requiring aortocoronary bypass or percutaneous coronary intervention. Cardiac catheterization must be indicated in selected patients because of its risk of tumor embolisation^{2,3}. Also intraoperative diagnosis of tumor mass and mitral valve competence with transeusophageal echocardiography (TEE) is essential for all those patients. It easily reveals success of mitral valve repair and whether any leakage of prosthetic valve intraoperatively². But unfortunately we might not use it because of unavailability of it in the operating room. Thus, we had to examine valves after resection and repair with quick infusion of saline through mitral valve with bull syringe. We didn't notice any leakage after this infusion in either of patients having mitral valve repair while they had showed considerable insufficiency after resection. Postoperative transthoracic echocardiographic examination of them also correlated competence of mitral valve of them. We thought that intraoperative bull syringe examination of repaired valve might be satisfactory for an experienced surgeon in patients who has a definitive repair if TEE is not available.

Various surgical methods have been reported on myxoma resection to date. Of them, biatrial approach and atrial transseptal approach are the most popular methods when excising large tumors^{1,3,4,7}. Keeling et al.¹ reported that they resected their patients having large myxomas via inspecting both atrias although they also used uniatrial approach in other patients having smaller ones. We also resected tumors biatrial approach in patients with huge myxomas. This route also enable us more visible evaluation of mitral valve competence after resection.

Concomitant mitral valve insufficiency due to

cardiac myxoma has been a considerably rare pathology when comparing mitral stenosis^{1,5-8}. Selkane et al.⁶ reported that six ones of their 40 myxomatous patients had concomitant mitral valve procedures. They also revealed that three another had secondary mitral valve replacement. Similar mitral lesions also reported by many others⁵⁻⁸. Mitral valve repair have to be considered a reasonable alternative to replacement because insufficiency is not a primary valve lesion in those patients. For this purpose, a few method has been applied to mitral valve. Among them, ring annuloplasty and sture plasty are reasonable procedures to secure dilated posterior annulus after primary leaflet repair⁷⁻⁹. We noticed mitral insufficiency in two of our patients during operations except second case having mitral insufficiency previously. We treated these two cases surgically in the same session using lateral sture plasty. In our cases, we had to used this latter technique because of surgical rings were not available at this time for us. But we noticed reliable competence with sture annuloplasty. As a result, we thought that mitral insufficiency might be a potential problem after giant myxoma excisions and surgeon must examine mitral valve competence after resection carefully.

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