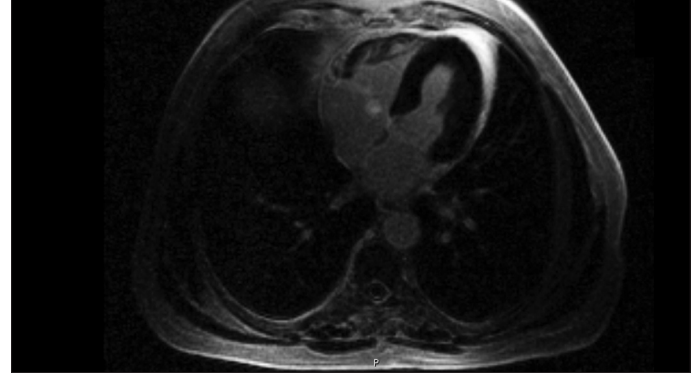


Resim 1. "True" FISP cine imajda triküspit kapak septal leaflet atriyal yüzüne hipointans noduler kitle lezyonu görülüyor

dan histolojik ve cerrahi uygulama yapılmamıştır. Yukarıdaki bulgular kardiyak MRI'in kalp içi kitlelerin gözlenmesinde faydalanılabilecek uygun bir yöntem olduğunu çok sık gözlenmeyen triküspit kapakta kitle imajının görüntülenmesiyle örneklemektedir.

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Resim 2. Kontrastlı T1 ağırlıklı imajda kitlenin homojen kontrast tutulumu gösterdiği saptandı

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Midterm survival following repair of a giant left ventricular true aneurysm ruptured during operation and associated with papillary muscle rupture

Papiller adele rüptürü ile birlikte görülen ve operasyon sırasında rüptüre olan dev sol ventrikül gerçek anevrizmasının onarımı sonrası orta dönem yaşam süresi

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Introduction

Left ventricular (LV) aneurysm is a common complication of myocardial infarction. The most common type of aneurysm is a true aneurysm, which forms after transmural infarction by gradual thinning and expanding of the scarred left ventricular wall (1). In an autopsy series of

patients of deaths from acute myocardial infarction (AMI), cardiac rupture was present in 30.7% patients, with LV rupture in 98% (anterior wall 45%, posterior wall 38%, lateral wall 9% and apex 6%) and right ventricular rupture in 2% (2). Also papillary muscle rupture (PMR) is usually seen 2-9 days after the infarction and causes serious hemodynamic instability, cardiogenic shock and pulmonary edema with mitral regurgitation (3).

True LV aneurysm and PMR following AMI is a rare but fatal clinical case. So, in addition to coronary artery bypass grafting (CABG), surgical resection of ventricular aneurysm must be performed for treatment (4).

We reported a case of a 62-year-old man who underwent emergency surgical repair of a giant LV aneurysm ruptured during operation and associated with PMR following AMI.

Case report

The patient was a 62-year-old man who was admitted to our hospital with chest pain and symptoms related to acute heart failure and pulmonary oedema. Coronary angiography revealed proximal lesions and a poor distal run-off of left anterior descending artery (LAD), circumflex artery (Cx) and right coronary artery (RCA). Left ventriculography could not be applied since the patient has pulmonary edema. Left ventricular dimensions were larger, basal and middle segments of posterior and lateral wall were akinetic and there was a giant (5.8 x 4.3 cm) LV aneurysm, which was localized posterolaterally with echocardiographic investigation (Fig. 1). Myocardial thickness of aneurysmatic area was thinner (0.5 cm). Also transthoracic echocardiography revealed, 3- 4^o mitral regurgitation, PMR and 14 mm of coaptation difference between anterior and posterior mitral leaflets. Effective regurgitant orifice area (EROA) was 0.41 cm² and regurgitant volume was 85 ml by echocardiographic evaluation.

After preoperative evaluation, intraaortic balloon pump inserted because of pulmonary edema and poor left ventricular functions. During operation a true aneurysm with a size of 5.8 x 4.3 cm was observed posterolaterally at the left ventricle. Aneurysm was ruptured during aorto-bicaval cannulation so emergency cardiopulmonary bypass was established. The rupture was then securely repaired by using an endoventricular circular patch plasty technique. Ventricle was then closed by using Teflon feld.

After this process, LAD-left internal mammarian artery-Aorta, Obtuse Marginal 1-Saphenous vein-Aorta, RCA-Saphenous vein-Aorta bypasses were performed. Then, left atrium was opened and mitral

valve was exposed. Since subvalvular apparatus remains in the repaired aneurysmatic area, mitral valve was not convenient for repair and mitral valve replacement (MVR) operation was applied by using bi-leaflet mechanical mitral valve (No: 27).

The patient tolerated the procedure uneventfully and was weaned from cardiopulmonary bypass easily with minimal inotropic support. He was discharged on the tenth postoperative day. The control echocardiography 1 month after the operation showed a satisfactory result (Fig. 2). At his 16th month follow up patient has no symptoms.

Discussion

Left ventricular aneurysm and PMR are serious complications of AMI. True LV aneurysm occurs months or years after AMI, infrequently undergoes progressive and rapid expansion or rupture and contains three layers of myocardium (5). In general, LV aneurysms are located anterolaterally near the apex. Few are confined to the lateral area and posterior, near the base of the heart. True LV aneurysm rupture is infrequent but has a high rate of mortality.

Surgical repair of the rupture site is the definitive treatment for cardiac rupture, although there are few data on operative mortality rates. Lopez-Sendon and colleagues reported an immediate operative mortality rate of 24% and a hospital mortality rate of 52% (6). Other reports listed the operative mortality rate as 24% to 35% (7). These mortality rates are high, but probably the true mortality is underestimated because numerous cases of attempted repair resulting in death are likely unreported. Long-term survival has been accomplished with surgical repair, and this may become more common as clinical predicting factors and early diagnosis are better established, allowing earlier attempts at surgical repair.

Papillary muscle rupture associated with giant LV aneurysm following AMI is rare according to the previous investigations. Killen et al. reported that 16 patients underwent MVR for PMR after AMI and one of these had resection of an associated LV aneurysm (8). Also, the combination of septal perforation, impending cardiac rupture of LV

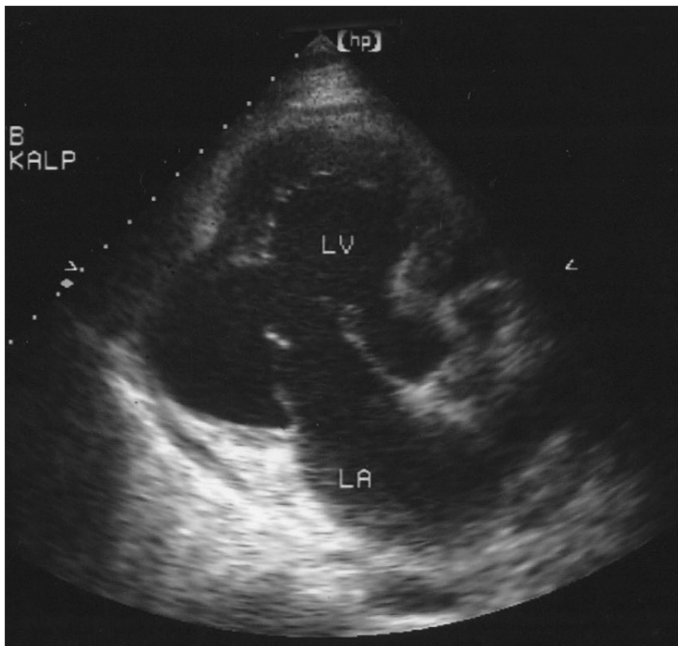


Figure 1. Preoperative echocardiographic image of giant left ventricle aneurysm

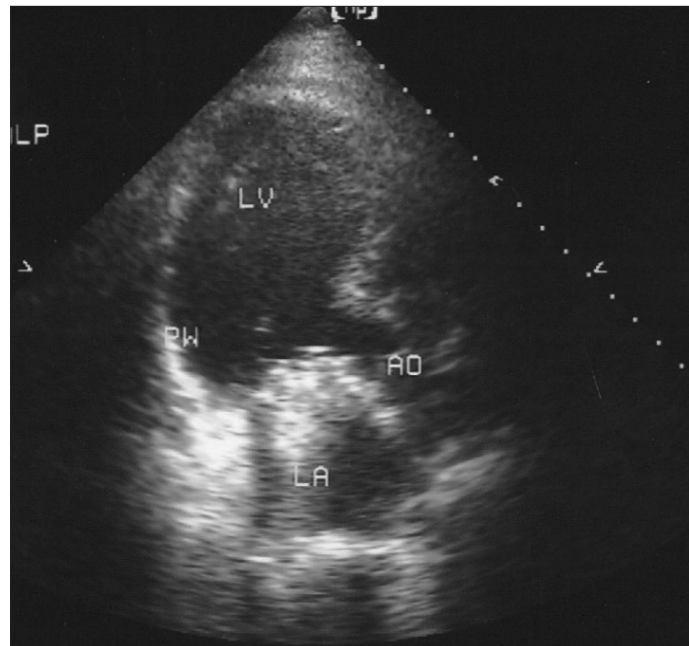


Figure 2. Postoperative 1. month echocardiographic image

aneurysm and PMR after AMI has been reported by Thalele et al. (9). Veinot et al reported a study of twenty-five consecutive patients with left ventricular free wall rupture between 1988 and 1992. Each patient died of tamponade or after surgery for tamponade. In 15 of 25 (60%) cases, free wall rupture occurred in the lateral wall between and at the level of the two papillary muscles. In further 5 of 25 (20%) cases, the rupture was besides one of the papillary muscles but in anterior or posterior walls. In 20 of 25 (80%) cases, the endocardial tear associated with the left ventricular free wall rupture was within 1 cm of the base of one of the papillary muscles as they inserted in left ventricular free wall. Asymmetric papillary muscle contraction forces in the area of the infarct may play a role in the genesis of left ventricular free wall rupture as most ruptures appear in close association to the papillary muscle insertions in the left ventricular free wall (10).

In conclusion, there are few case reports as a giant posterolateral LV aneurysm combined with PMR following AMI. Mortality of these cases is high after the procedure of coronary bypass surgery associated with MVR and aneurysmectomy. We present this case because of the midterm survival (16 months) after operation in spite of the rupture of giant aneurysm during operation.

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Kardiyopulmoner baypas gerektirmeyen pulmoner kapak implantasyonu: Yeni bir yöntem

Implantation of pulmonary valve without use of cardiopulmonary bypass: an innovative method

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Giriş

Fallot tetralojisi (TOF) tam düzeltme operasyonlarından sonra oluşan pulmoner yetmezlik (PY) hastanın postoperatif erken ve geç dönem morbidite ve mortalitesini etkilemektedir (1, 2). Sağ ventrikül çıkım yolu morfolojisi, pulmoner kapak ile ana pulmoner arter ve dallarının yapısı operasyon stratejisini etkilemektedir. Darlık nadiren görülmekle birlikte PY, ilerleyen zaman içerisinde girişim ihtiyacı doğuran bir patoloji olarak karşımıza çıkmaktadır. Yetmezlik nedeni pulmoner kapak replasmanı endikasyonları; PY varlığında egzersiz intoleransı ve konjestif kalp yetersizliği veya aritmidir. Semptomlar olmadan pulmoner kapak replasmanı endikasyonları tam olarak tanımlı olmasa da bunlar; zayıf ventriküler fonksiyon,

triküspit yetmezliği ya da ilerleyen sağ ventrikül dilatasyonu olarak sayılabilir. Burada TOF nedeni ile tam düzeltme yapılan hastanın uzun dönemde PY nedeni ile re-operasyona alınarak, son yıllarda geliştirilerek klinik kullanıma sunulmuş enjektabl pulmoner biyoprotez kapağın takılması olgu olarak sunulmuştur. Bu olgu ülkemizde ilk kez gerçekleştirilmiştir, dünyada da sayılı uygulaması mevcuttur.

Olgu sunumu

Fallot tetralojisi nedeniyle kliniğimize başvuran hastaya 1995 yılında, beş yaşında iken tam düzeltme operasyonu yapılmıştır. Bu ameliyatta pulmoner annulus krossannüler otojen perikard yama ile genişletilmiştir. Ope-