LEFT VENTRICULAR SACULAR ANEURYSM AFTER MYOCARDIAL INFARCTION WITH SEVERE MITRAL REGURGITATION

ŞIDDETLI MITRAL YETERSIZLIĞI OLAN MIYOKARD ENFARKTÜSÜ SONRASI SOL VENTRIKÜLER SAKÜLER ANEVRIZMA

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Received /Geliş Tarihi	Accepted/Kabul Tarihi	Published/Yayın Tarihi
26.01.2023	23.05.2023	31.08.2023

To cite this article / Bu makaleye atıfta bulunmak için:
Jalalzai I, Usta H, Sönmez E, Yıldız A, Çalık ES. Left ventricular sacular aneurysm after myocardial infarction with severe mitral regurgitation. Atatürk Üniversitesi Tıp Fakültesi Cerrahi Tıp Bilimleri Dergisi. 2023; 2(2):85-87

Abstract
Introduction: One significant consequence of acute transmural myocardial infarction(MI) is left ventricular aneurysm (LVA). It is commonly known that patients with LVA are more likely to experience problems such congestive heart failure, thromboembolic events, and arrhythmias. **Case report:** In this paper, we describe the case of diabetic man who was admitted to our cardiology department for severe mitral valve regurgitation. He had undergone percutaneous coronary angioplasty. A saccular aneurysm of the inferio-lateral left ventricular wall was observed along with Coronary artery stenosis. The decision to do surgery was made. The patient had mechanical mitral valve replacement, coronary artery bypass grafting. **Conclusion:** The care of the late mechanical consequence of myocardial infarction, left ventricular aneurysm, is challenging. Surgery is generally beneficial and is followed by a noticeable increase in function, although it comes with a high postoperative mortality rate.
Anahtar kelimeler: Venticular aneurysm, MI
Özet
Giriş: Akut transmural miyokard enfarktüsünün (MI) önemli sonuçlarından birisi sol ventrikül anevrizmasıdır (SVA). LVA'lı hastaların konjestif kalp yetmezliği, tromboembolik olaylar ve aritmiler gibi problemler yaşama ihtimalinin daha yüksek olduğu yaygın olarak bilinmektedir. **Olgu sunumu:** Bu yazıda, kardiyoloji bölümümüze şiddetli mitral kapak yetersizliği nedeniyle başvuran diyabetik bir erkek olgusu anlatılmıştır. Perkütan koroner anjiyoplasti geçirmişti. Koroner arter stenozu ile birlikte sol ventrikül alt yan duvarında sakküler anevrizma izlendi. Ameliyat kararı verildi. Hastaya mekanik mitral kapak replasmanı, koroner arter baypas greftleme uygulandı. **Sonuç:** Miyokard enfarktüsünün geç mekanik komplikasyonu olan sol ventrikül anevrizması gelişen hastalarda cerrahi yönetim zordur. Bizim sunduğumuz vakada sol ventirkül anevrizması cerrahi olarak başarılı bir şekilde tamir edildi ve ameliyat sonrası kardiyak fonksiyonlarında transtorasik ekokokardiyografide gözle görülür bir artış izlendi..
Keywords: Ventiküler anevrizma, MI

1. INTRODUCTION

One of the leading causes of mortality and morbidity in the globe is myocardial infarction. Coronary atherosclerosis is a chronic condition with phases of stability and instability. Patients may experience a myocardial infarction when there are unstable periods of activated inflammation in the arterial wall Myocardial infarction can be a little, undiscovered incident in a lifetime chronic condition, or it can be a huge catastrophe resulting in a sudden death or severe hemodynamic impairment. Myocardial infarctions can happen frequently in people with preexisting illness or they might be the initial sign of coronary artery disease.

Acute myocardial infarction is sometimes followed by acute mitral regurgitation (MR). It can happen when the papillary muscles rupture (primary MR), or it can happen when the infarcted portions reconstruct quickly, causing geometric alterations and tethering of the leaflets. (secondary or functional MR). When combined with pulmonary edema and refractory cardiogenic shock, the clinical picture might be disastrous.

One significant consequence of acute transmural myocardial infarction(MI) is left ventricular aneurysm (LVA). We now have a better

understanding of LVA's natural history. The increased use of noninvasive methods has enabled earlier identification and a greater understanding of the pathophysiology and etiology of LVA. More successful LVA surgery has been achieved as a consequence of advancements in surgical anesthetic and approaches. 7.6% of patients with coronary artery disease (CAD) who had been referred for coronary angiography reported LVA (1).

Figure 1: Ventricular aneurysm seen in angiography.

In this paper, we describe the case of a 53-year-old diabetic man who was admitted to our cardiology department for severe mitral valve regurgitation. He had undergone percutaneous coronary angioplasty with stenting of the mid segments of the left anterior descending artery (LAD) for myocardial infarction one year prior. On the ECG, there were abnormal Q waves in the inferolateral leads and sinus rhythm at 90 beats per minute. A sacular aneurysm of the infero-lateral left ventricular wall, significant mitral valve regurgitation, and fibrosis were all seen on transthoracic and transesophageal echocardiography, but no thrombus reported. A mildly decreased ejection fraction (EF) of 50% was seen along with LV hypertrophy and dilation. The ultrasound results and observable diffuse coronary stenosis at the ending point of the LAD stent application were verified by coronary angiography (figure1). Other coronary arteries did not show any noticeable stenosis. The decision to do surgery was made. Gaint aneurysm was seen in posteriolateral wall (figure 2). The patient had mechanical mitral valve replacement, coronary artery bypass grafting of the left anterior descending (LAD) with the left internal mammary artery (LIMA), and ventricular aneurysm repair (figure 3). In the early stages of his recovery in the intensive care unit after the surgery, he required an intra aortic balloon pump. A negligible MR and an improvement in LVEF to 55% were seen on the postoperative echocardiographic control.

Figure2: Intraoperative image of aneurysm.

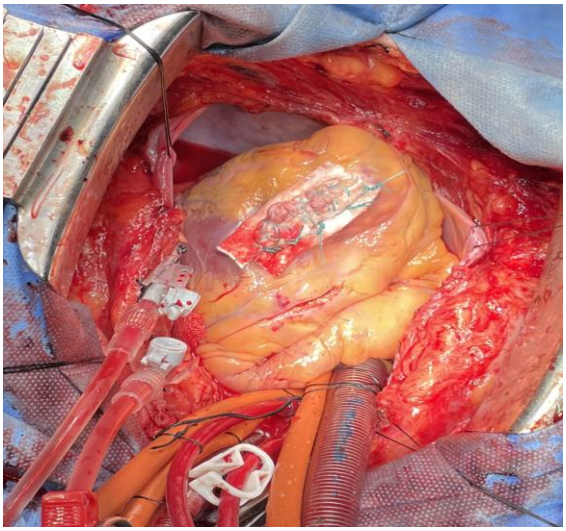
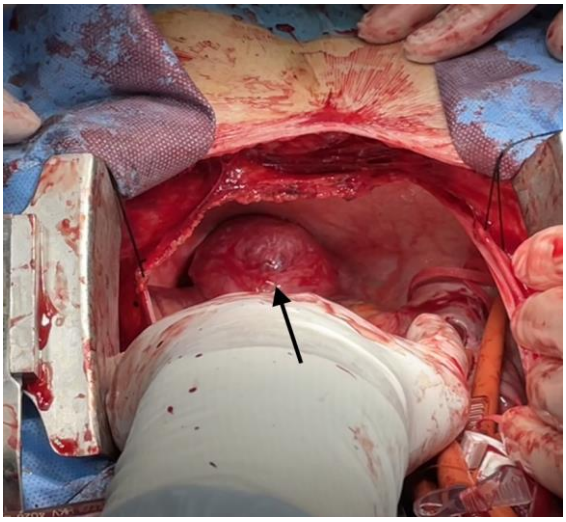


Figure3: post repair image of ventricular aneurysm.



2. DISCUSSION

After an acute MI, LV aneurysm and pseudoaneurysm development are recognized side effects, especially in cases of severe MI and late presentation (2), however because percutaneous reperfusion treatment is widely available, its prevalence has significantly decreased (3). Due to their increased propensity for progressive development and rupture, LV pseudoaneurysms require prompt surgical intervention in contrast to true aneurysms, which are frequently treated conservatively (3) as well as the need of early and

routine echocardiography reevaluation, particularly in patients who continue to show symptoms and have significant LV failure. Additionally, weeks after the index event, pseudoaneurysms and myocardial rupture may develop (4). It is difficult to treat the late mechanical complication of myocardial infarction, left ventricular aneurysm. Surgery has a high postoperative mortality rate but is often helpful and results in a considerable improvement in function.

Çıkar çatışması: Yazar bu çalışma için çıkar çatışması bildirmemişlerdir.

Mali Destek: Yok

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