

Kronik sol ventrikül psödoanevrizmasının başarılı cerrahi tedavisi

Successful surgical treatment of a chronic pseudoaneurysm of the left ventricle

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Özet

İnferiyör miyokard infarktüsünden 2 yıl sonra tanısı konulan ve cerrahi olarak başarıyla tedavi edilen, kronik sol ventrikül psödoanevrizmalı, 39 yaşındaki erkek hasta olgusunu sunmaktayız. Hasta efor anginası şikayeti ile kalp ve damar cerrahisi kliniğine başvurdu. Koroner anjiyografide, sol ventrikül alt duvarında yaklaşık 5x5 cm çapında psödoanevrizma ve sağ koroner arterin tamamen tıkalı olduğu görüldü. Psödoanevrizmalara yüksek rüptür riskinden dolayı erken cerrahi müdahale tavsiye edilir. Hastaya cerrahi olarak sol ventrikül anevrizmektomi ve sağ koroner artere bypass problemsiz uygulandı. Hasta komplikasyonsuz olarak iyileşti ve ameliyat sonrası sekizinci gün taburcu edildi. İki yıldır problemsiz olarak takip ediliyor.

Anahtar Kelimeler: Torasik cerrahi, Kalp anevrizması, Anevrizma, Yalancı

Türkçe Kısa Makale Başlığı: Sol ventrikül psödoanevrizması

Abstract

We report the case of an 39 year-old male patient, with chronic left ventricular pseudoaneurysm who is diagnosed two years after inferior myocardial infarction and treated successfully with surgery. The patient was admitted to the cardiovascular surgery unit for exertional angina. Coronary angiography showed that a pseudoaneurysm on the inferior wall of the left ventricle which is approximately 5x5 cm in diameters and total occlusion of right coronary artery. Surgical intervention is recommended because of higher the risk of rupture. Resection of pseudoaneurysm followed by a dacron patch suture and right coronary artery bypass graft were performed without complications. Early postoperative recovery was uneventful. He was discharged from hospital eight days after the intervention. Currently, two years after surgery, the patient remains asymptomatic.

Key words: Thoracic surgery, Heart aneurysm, Aneurysm, False

İngilizce Kısa Makale Başlığı: Pseudoaneurysm of the left ventricle

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Introduction

Rupture of the left ventricle (LV) is one of the most lethal complications of myocardial infarction (1-2). Left ventricular pseudoaneurysm is a rare condition that results from myocardial rupture and is attached by pericardial adhesions to the ruptured area. It contains no endocardium or myocardium (3). Differently from the true aneurysm, the pseudoaneurysm present a high risk of rupture, with progression to catastrophic complications, and therefore, it has an indications of emergency surgical resection (4). We report a case pseudoaneurysm of the LV, which surgical resection was performed successfully and diagnosed two years after myocardial infarction.

Case report

A 39-year-old male was admitted to the hospital with exertional angina. The history of the patient revealed an uncomplicated inferior myocardial infarction two years ago. He had a thromboembolic event resulting in temporary blindness recovered very well one year after myocardial infarction. The temporary blindness had not been documented clearly and was an unexplained symptom. He had diabetes mellitus and familial mediterranean fever. Angiography revealed a pseudoaneurysm of the LV with total occlusion of right coronary (Figure 1).

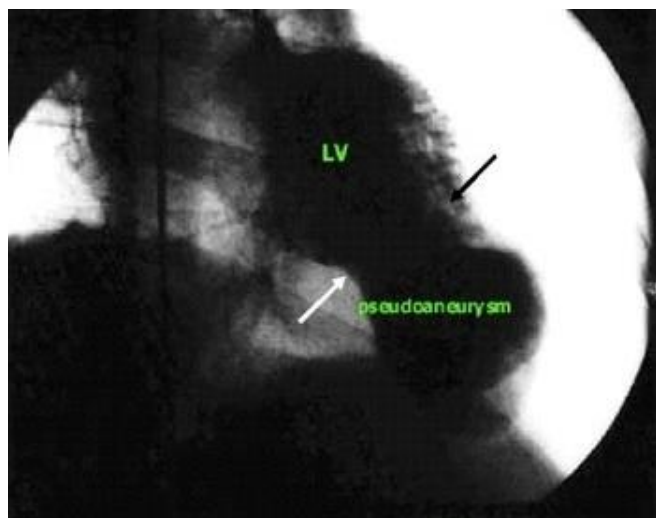


Figure 1. Left ventriculogram showing a pseudoaneurysm communicating with the left ventricle through a neck (the arrows).

The rest of the coronary system were normal. His rhytm was sinusal and carotid duplex sonography was also normal. The prompt decision for surgery was made. The patient was taken to the operating room. Pericardial cavity was found to be totally obliterated by adhesions following median sternotomy. The patient was heparinized and cardiopulmonary bypass was instituted with careful dissection of the aorta and right atrium. The aorta was crossclamped and the heart was arrested by antegrad tepid blood cardioplegia. The careful sharp dissections revealed the sac of the pseudonaeurysm, which was located on the inferior wall of the LV and approximately 5x5 cm in diameters. The sac was opened longitudinally. A large amount of clotted blood was removed from the pseudoaneurysm, and the neck of the pseudoaneurysm was exposed. The neck was closed with a dacron patch and the sac of the pseudoaneurysm was oversewn. The right coronary artery was explored but there was no suitable lumen for bypass grafting. Open and long segment endarterectomy was performed and the right coronary artery was grafted with saphenous vein graft. The postoperative course was uneventful and the patient was discharged on the 8th postoperative day in satisfactory condition. His follow-up results are excellent two years after the operation.

Discussion

Myocardial infarction is the most common cause of pseudoaneurysms of the left ventricle, followed by cardiac surgery, trauma, and infection (1,2). Pseudoaneurysms have been reported to orginate usually at the posterior basal and rarely at the apical segment of the left ventricle after occlusion of the right coronary or left anterior descending artery (5). Anterior wall rupture tends to be characterized by a more acute hemodynamic effect and catastrophic outcome, whereas rupture of the inferior or posterior wall tends to be more silent. Rarely, a pseudoaneurysm may develop after rupture of a true aneurysm (3). Unlike true aneurysms, which rupture rarely, pseudoaneurysms have a great

propensity to rupture and as soon as pseudoaneurysm is diagnosed, it should be surgically repaired to avoid spontaneous rupture (6).

Because of its rarity, the natural history of pseudoaneurysm of the left ventricle is not well established (4). The condition is believed to have a poor prognosis because of a high probability of rupture; however, in some patients the diagnosis is made many years after myocardial infarction (6), as we also diagnosed in our case. Congestive heart failure is the most common presentation, followed by angina, ventricular arrhythmias, and embolization (4,6). Our patient with post-infarction chronic left ventricular pseudoaneurysm was symptomatic and had coronary artery disease. On the other hand, he had neurological event showing temporary bilateral blindness but it had not been investigated enough. When the patient was admitted to our hospital, he had no neurological problem. This thromboembolic pathology may originated from LV pseudoaneurysm or not. We do not know it exactly. The diagnosis of the LV pseudoaneurysm might missed one year ago. The problem of missed diagnosis usually depends on the insufficient use of contrast agent and the wrong view during ventriculography. Left ventricular pseudoneurysms are often asymptomatic and are discovered incidentally upon investigation of some other condition, most commonly angina pectoris or congestive heart failure (7). Diagnosis can be made preoperatively by several imaging techniques. Imaging

assessments such as computed tomography, echocardiography with or without contrast, magnetic resonance imaging and angiography can help define the diagnosis, differentiating it from the true aneurysm, from the pericardial cyst and the localized pericardial effusion. Contrast ventriculography and coronary angiography seem to be necessary in evaluating to location and anatomy of the aneurysm and the state of the coronary arteries (8,9). The prolonged survival of the patient after developing pseudoaneurysm is rare. Our case was still alive for two years following myocardial infarction.

Surgical treatment of pseudoaneurysm consist of preferable patch closure of the defect and aneurysmorrhaphy with appropriate myocardial revascularization. Medically treated or untreated pseudoaneurysm have an approximately 30 to 45 % risk of rupture (5). We believe that surgical treatment is mandatory for LV pseudoaneurysm even with a surgical mortality changing between 10 to 15 %. Most investigators have supported the surgery was the appropriate treatment because of high risk of rupture (10).

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