



## CHRONIC ASYMPTOMATIC LEFT VENTRICULAR PSEUDOANEURYSM A CASE REPORT

**MURALIDHARAN A**

Department of Cardiology,  
MADRAS MEDICAL COLLEGE AND GOVERNMENT GENERAL HOSPITAL

### **Abstract :**

Acquired pseudoaneurysm of the left ventricle is a very rare disorder and mostly occurs after large transmural myocardial infarction (MI). Patients developing left ventricular (LV) pseudoaneurysm usually present with angina or heart failure symptoms. Surgery is the treatment of choice for LV pseudoaneurysm detected in the first months after MI. Here we report the case of a 35-year-old man who presented with chronic asymptomatic LV pseudoaneurysm.

**Keyword :** Left ventricular pseudoaneurysm, myocardial infarction

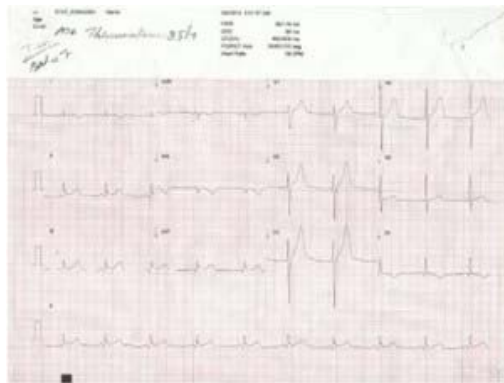
### **INTRODUCTION:**

Left ventricular (LV) pseudoaneurysm is defined as an incomplete rupture of the left ventricle, contained by pericardium, organizing thrombus, and haematoma.<sup>1</sup> Unlike a true LV aneurysm, there is a lack of endocardial or myocardial elements in the pseudoaneurysm sac. Most of them result from complications of the acute myocardial infarction<sup>1,2</sup>.

We present a case of chronic asymptomatic LV Pseudoaneurysm.

### **CASE REPORT:**

35 yr old male with a history of pain right lower limbs/intermittent claudication for past 6 months and rest pain left great toe with non healing ulcers both great toe for past 2 months was admitted in vascular surgery department and Referred for cardiac evaluation. He had no chest pain, palpitation, syncope or breathlessness. On Clinical examination CVS: S1 S2 heard, No Murmur. RS: Normal vesicular breath sounds. BP: 110/70, PR- 82 bpm. ECG (fig.1) revealed Normal Sinus rhythm, ST depression and T wave Inversion in leads 1, AVL and V6.



### ECG

His CXR (fig.2) showed cardiomegaly.



### CXR

Echocardiogram (fig.3-6) revealed Mild hypokinesia of anterolateral segments of LV. Rent in the lateral wall of LV, Contained myocardial rupture communicating with LV extending from LV apex to LA. Normal LV systolic Function-EF 60%.



**ECHO-FIG.3**

**ECHO-FIG.4**

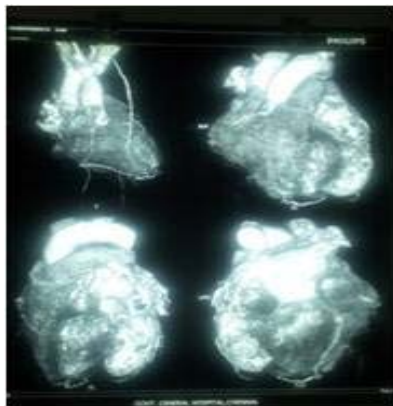
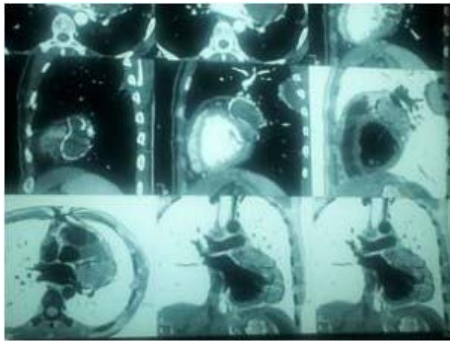


**ECHO-FIG.5**



**ECHO-FIG.6**

Coronary angiogram revealed normal coronaries.64 slice CT angiogram (fig.7&8) revealed Contained rupture of posterolateral wall of left ventricle with Psuedoaneurysm with organized,calcified pericardial haematoma.



**CTANGIO-FIG.7**  
**CTANGIO-FIG.8**

Patient was managed conservatively with anti-platelets and anticoagulants. Patient remained asymptomatic throughout his course of stay in the hospital.

#### **DISCUSSION:**

The most common cause of LV pseudoaneurysm is a mechanical complication after a transmural acute myocardial infarction<sup>1,2</sup>. Other less frequent causes include: manipulation of the heart cavities after cardiac surgical procedure; penetrating or closed chest trauma; endocarditis; and more rarely, after suppurative pericarditis or due to tumor infiltration<sup>2-4</sup>. None of these conditions were present in this case, who was asymptomatic. Our patient could have had a silent Myocardial infarction with contained rupture. The patients with LV pseudoaneurysms can be completely asymptomatic or present symptomatology that is similar to that of true aneurysms:

dyspnea, arrhythmias, angina or consequences of the systemic embolism<sup>1,2</sup>. Imaging assessments such as the echocardiogram with or without contrast, computed tomography, nuclear magnetic resonance and angiography can help define the diagnosis, differentiating it from the true aneurysm, pericardial cyst and localized pericardial effusion<sup>1,5</sup>. In the present case, it was necessary to use several modalities of imaging diagnosis, given the exceptionality of the absence of coronary artery disease at coronary angiography. In echocardiogram LV Pseudoaneurysm protrudes during both systole and diastole, has a mouth that is considerably smaller than the maximal diameter of the aneurysm and represents a myocardial rupture site, with a wall made up of parietal pericardium. The LV pseudoaneurysm presents a high risk of rupture, with progression to hemopericardium and death, and therefore, it has an indication of emergency surgical resection<sup>2,6</sup>. However, similarly to the present case, there are many reports of patients with chronic pseudoaneurysms with high survival and no rupture-related mortality<sup>7,8</sup>. Moreno et al reported a cumulative survival of 74.1% at 4 years with conservative management of patients with chronic LV pseudoaneurysm.<sup>9</sup>

#### **CONCLUSION:**

Management of chronic LV pseudoaneurysms is controversial, and risk of rupture and embolism should be weighed against the estimated risk of surgery.

## REFERENCES:

1. Dachman AH, Spindola-Franco H, Solomon N. Left ventricular pseudoaneurysm. Its recognition and significance. JAMA 1981;246:1951–1953
- 2 Csapo K, Voith L, Szuk T, Edes I, Kereiakes DJ. Postinfarction left ventricular pseudoaneurysm. Clin Cardiol 1997;20:898–903.
3. Lee PJ, Spencer KT. Pseudoaneurysm of the left ventricular free wall caused by tumor. J Am Soc Echocardiogr. 1999; 12: 876-8.
- 4 De Boer HD, Elzenga NJ, de Boer WJ, Meuzelaar JJ. Pseudoaneurysm of the left ventricle after isolated pericarditis and Staphylococcus aureus septicemia. Eur J Cardiothorac Surg. 1999; 15: 97-9.
- 5 Yeo TC, Malouf Jf, Reeder GS, Oh JK, Seward JB. Clinical profile and outcome in 52 patients with pseudoaneurysm. Ann Intern Med. 1998; 128: 299-305.
6. Hurst CO, Fine G, Keyes JW. Pseudoaneurysm of the heart: report of a case and review of literature. Circulation. 1963; 28: 427-36.
- 7 Katoh S, Okano A, Nagata K, Kawasaki T, Okamoto A, Yoneiyama S, et al. Calcified pseudoaneurysm of the left ventricle. Can J Cardiol. 1998; 14: 527-31.
- 8 Blackman D, Sprigings DC, Lever N, Bashir Y. Left ventricular pseudoaneurysm Lancet. 2000;356: 1642.
9. Moreno R, Gordillo E, Zamorano J, et al. Long term outcome of patients with postinfarction left ventricular pseudoaneurysm. Heart 2003;89:1144–1146