

Case Report

A Rare Presentation of Left Ventricular Aneurysm and Dressler Syndrome in a Patient of Post Myocardial Infarction

Dr. Subrata Pramanik¹, Dr. Harpreet Singh Minhas², Dr. Manish Jawarkar³

¹Senior Resident, ²Professor, ³Senior Resident,
Department of Cardiothoracic Vascular Surgery, GB Pant Hospital (GIPMER), New Delhi, 110002

Corresponding Author: Dr. Subrata Pramanik

ABSTRACT

An aneurysm of the left ventricle is a complication of acute myocardial infarction. Ventricular aneurysms are circumscribed, thin walled fibrous, noncontractile outpouchings of the ventricle. The majority are apically located, true aneurysms of the left ventricle (LV) that occur as a consequence of transmural myocardial infarction (MI). Post acute myocardial infarction (AMI) pericarditis, pericardial effusion and low grade fever – known as Dressler syndrome, are the major complications following AMI. It is rare and estimated to be only about 0.1% in AMI patients. Dressler syndrome is rarely associated with left ventricular aneurysm and it is occurring 2 to 3 weeks after AMI. We report a 68-year-old male who had antero lateral wall myocardial infarction which was silent and complicated with left ventricular aneurysm and systolic heart failure. Patient was diagnosed to have Dressler syndrome. Pig tail catheter was introduced for draining the pericardial fluid. Patient underwent coronary angiography which revealed total occlusion of left anterior descending artery, and left ventricular angiogram shows left ventricular aneurysm. Patient received surgical repair and followed-up regularly.

Keywords: Acute myocardial infarction, Left ventricular aneurysm, Dressler syndrome

INTRODUCTION

Left ventricular aneurysm is a known complication following a myocardial infarction, now a day's its incidence has declined due to the treatment of a myocardial infarction with coronary angioplasty performed in the acute phase. Aneurysm can be classified as a true aneurysm when the aneurysm forms at the damaged wall of the myocardium and as a pseudo aneurysm when the cardiac rupture is contained by adherent pericardium or scar tissue. ^(1,2) Dressler syndrome is the early post acute myocardial infarction (AMI) pericarditis, pericardial effusion with or without cardiac tamponade, and late post-MI pericarditis are the major pericardial complications after AMI. It is a rare entity, which was estimated to be about 0.1% in

AMI patients. ⁽³⁾ The main surgical indications occurring in patients with a true aneurysm, intractable ventricular arrhythmias and heart failure unresponsive to drug treatment. ⁽⁴⁾ Surgical techniques currently in use for correction of a left ventricular aneurysm are based on reconstruction of the left ventricle or a reduction of its volume with the goal of restoring normal cardiac geometry. ⁽⁵⁾ We reports a case of a ventricular aneurysm and Dressler syndrome post myocardial infarction in a 68 year-old male patient and show an example of a positive outcome of surgical correction.

CASE REPORT

A 68-year-old male patient visited the emergency department of a local

hospital with a chief complaint of mild chest tightness and low grade intermittent fever for two weeks. Antibiotics were prescribed initially but symptoms were not relieved. Then patient was referred to our hospital in cardiac unit for further evaluation. On examination there were friction rub at apex, and muffled heart sound was found. Electrocardiogram (ECG) showed sinus rhythm with ST elevation at Lead I, AVL and precordial leads (V2 - V6). Chest X-ray revealed cardiomegaly with blunting of bilateral costophrenic angle. In 2D Echocardiography we found there were pericardial effusion, left ventricular aneurysm with low (30%) left ventricular ejection fraction (LVEF). Pig tail catheter was introduced to drain the pericardial collection. Daily pericardial fluid collection was around 200 to 300 ml. Coronary angiography was done via right femoral artery revealing proximal total occlusion of left anterior descending artery (LAD). A

Left ventricular aneurysm was noted during systolic phase by the image of cardiac left ventriculography. CECT of chest revealed there was left ventricular aneurysm (Figure 1a, 1b). Haemodynamically patient was stable and surgical intervention was suggested. Left ventricular aneurysm resected and repaired by Batista method (Figure 2a, 2b,2c). Coronary bypass could not be done due to LAD was non graftable. Gradually patient was weaning off the cardiopulmonary bypass. In immediate post operative period patient was supported by Intra aortic balloon pump (IABP) and inotropic support due to low cardiac output. IABP and inotropic support were tapered off in day 5 and patient was discharged from hospital in a stable condition. Mild chest discomfort without symptoms of heart failure was noted intermittently during first 6 month of post operative period.

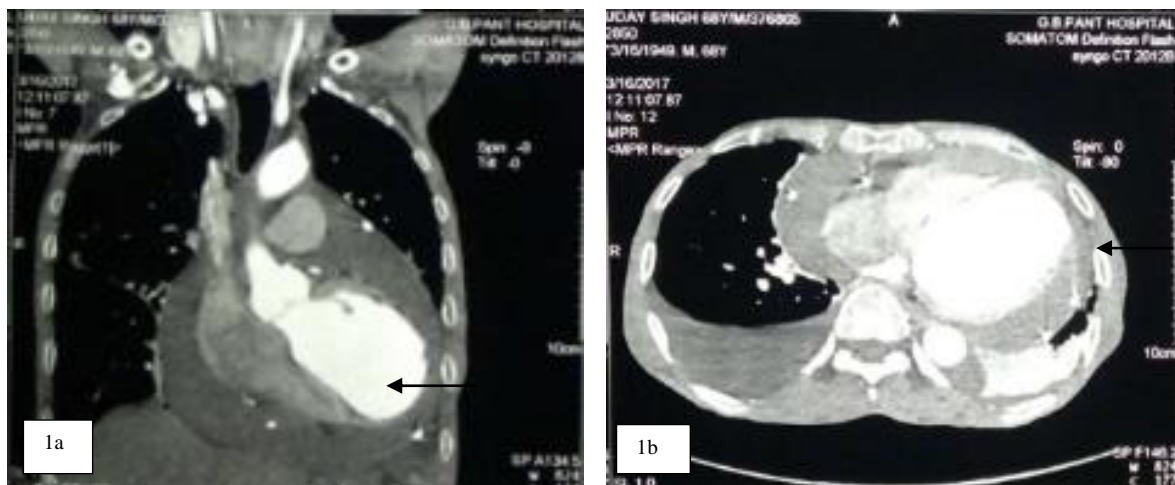


Figure 1a: Sagittal section of CECT chest: the arrow indicating the left ventricular aneurysm.
Figure 1b: Cross section of CECT chest: : the arrow indicating the left ventricular aneurysm

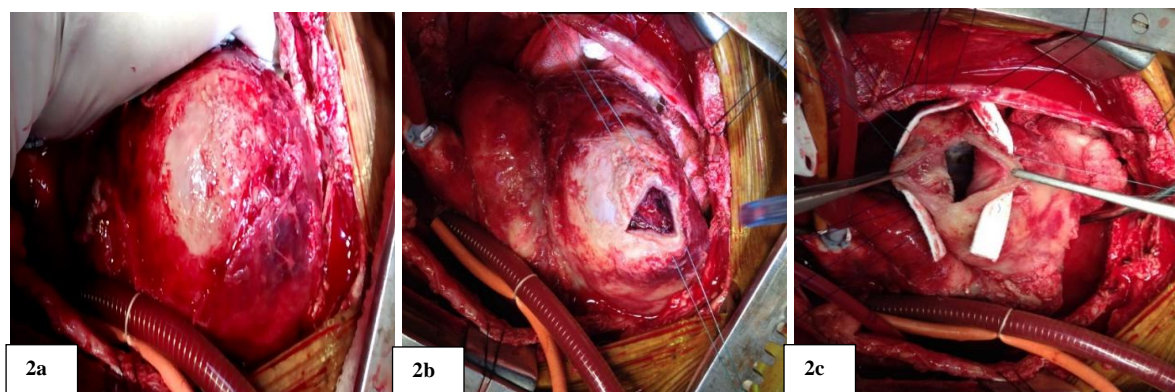


Figure 2a: intraoperative picture of left ventricular aneurysm. Figure 2b and Figure 2c: showing excision and repair of left ventricular aneurysm.

DISCUSSION

AMI can result in the development of a dyskinetic or akinetic LVA, which may in turn cause congestive heart failure, ventricular arrhythmias and the formation of mural thrombi. ⁽⁶⁾ Post-AMI syndrome was first described by Dressler in 1956. ⁽⁷⁾ Clinical features of this post-AMI syndrome include fever, chest pain, pericarditis and pleurisy occurring 2 to 3 weeks after AMI. Since its incidence is decreasing dramatically at the reperfusion era the main complications of a left ventricular aneurysm are heart failure, ventricular arrhythmias, systemic embolization, cerebrovascular accident, and ventricular rupture. The main surgical indications occur in patients with a true aneurysm; include intractable ventricular arrhythmias and heart failure not responsive to drug treatment. Other possible indications are refractory angina and systemic embolization in patients who cannot take oral anticoagulants. In cases of pseudoaneurysm, surgical treatment is the best option, given its high probability of symptom dissolution. ^(2,4) Silent MI is not an uncommon entity; patients with diabetes and heart failure are predictors of silent MI. ⁽⁸⁾ Surgical techniques currently in use for correction of a left ventricular aneurysm are based on reconstruction of the left ventricle or a reduction of its volume with the goal of restoring the normal cardiac geometry. ^(5,9,10)

CONCLUSION

This case exemplifies a positive outcome of surgical correction with the ventricular remodeling technique. When appropriate indications are present, the procedure can result in improved ejection fraction of the left ventricle and ventricular volume reduction. In conclusion, this article reports a rare case of large area silent anterior lateral MI complicated with LV aneurysm and Dressler Syndrome, which was rarely reported previously.

REFERENCES

1. Vijayvergiya R, Pattam J, Rana SS, Singh JD, Puri GD, Singhal M. Giant

- left ventricular pseudoaneurysm presenting with hemoptysis. *World J Cardiol.* 2012;4(6):218-20.
2. Inan MB, Yazicioglu L, Acikgoz B, Tasoş R, Ozyurda, U. Giant posterolateral left ventricular aneurysm diagnosed 6 weeks after incomplete surgical revascularization. *Ann Thoracic Surg.* 2012;93(3):980-2.
3. Imazio, M., Negro, A., Belli, R., Beqaraj, F., Forno, D., Giammaria, M., Trincherò, R., Adler, Y. and Spodick, D. (2009) Frequency and Prognostic Significance of Pericarditis Following Acute Myocardial Infarction Treated by Primary Percutaneous Coronary Intervention. *American Journal of Cardiology*, 103, 1525-1529.
4. Antman EM, Anbe DT, Armstrong PW, Bates ER, Green LA, Hand M, et al.; American College of Cardiology; American Heart Association Task Force on Practice Guidelines; Canadian Cardiovascular Society. ACC/AHA guidelines for the management of patients with ST-elevation myocardial infarction: a report of the American College of Cardiology/ American Heart Association Task Force on Practice Guidelines (Committee to Revise the 1999 Guidelines for the Management of Patients with Acute Myocardial Infarction). *Circulation.* 2004;110(9): e82-292.
5. Jatene AD. Left ventricular aneurysmectomy: resection or reconstruction. *J Thorac Cardiovasc Surg.* 1985;89(3):321-31.
6. Pasotti, M., Prati, F. and Arbustini, E. (2006) The Pathology of Myocardial Infarction in the Pre- and Post-Interventional Era. *Heart*, 92, 1552-1556.
7. Dressler, W.A. (1956) Post-Myocardial Infarction Syndrome: Preliminary Report of a Complication Resembling Idiopathic, Recurrent, Benign Pericarditis. *The Journal of the American Medical Association*, 160, 1379-1383.
8. Feringa, H.H., Karagiannis, S.E., Vidakovic, R., Elhendy, A., Folkert, J., Noordzij, P.G., et al. (2007) The Prevalence and Prognosis of Unrecognized Myocardial Infarction

- and Silent Myocardial Ischemia in Patients Undergoing Major Vascular Surgery. *Coronary Artery Disease*, 18, 571-576.
9. Dor V, Saab M, Coste P, Kornaszewska M, Montiglio F. Left ventricular aneurysm: a new surgical approach. *ThoracCardiovasc Surg*. 1989;37(1):11-9.
 10. SilveiraFilho LM, Petrucci O, Vilarinho KA, Baker RS, Garcia F, Oliveira PP, et al. A bovine pericardium rigid prosthesis for left ventricle restoration: 12 years of follow-up. *Rev Bras Cir Cardiovasc*. 2011;26(2):164-72.

How to cite this article: Pramanik S, Minhas HS, Jawarkar M. A rare presentation of left ventricular aneurysm and dressler syndrome in a patient of post myocardial infarction. *Int J Health Sci Res*. 2017; 7(9):311-314.
