A Case of Left Ventricular Pseudoaneurysm

Mahmoud Abdelnaby¹*, Abdallah Almaghraby¹, Yehia Saleh¹, Basma Hammad², Ashraf El-Amin¹, Sara El-Fawal³ and Mohamed Sanhoury¹

¹Department of Cardiology, University of Alexandria, Egypt

²Massachusetts General Hospital, Boston, USA

³Department of Radiology, University of Alexandria, Egypt

Introduction:

Pseudoaneurysm of the left ventricle is a rare devastating complication of acute myocardial infarction. It is caused by contained myocardial free wall rupture within the pericardium. We were confronted with a case of thrombus-containing ventricular pseudoaneurysm which was incidentally discovered several months after an attack of acute chest pain. The diagnosis was obtained using transthoracic echocardiography (TTE) and confirmed using cardiac magnetic resonance imaging (CMR). Unfortunately, the patient passed away before surgical intervention. This case demonstrates the importance of prompt diagnosis and management of such lethal complication. Keywords: pseudoaneurysm; pericardium; ventriculography; coronary artery

Objectives:

Left ventricular (LV) pseudoaneurysm is a catastrophic complication of acute myocardial infarction that is reported in less than 0.1% of patients. It is caused by myocardial rupture contained within the pericardium and is characterized by the absence of true myocardial tissue in its wall unlike, a true aneurysm which involves the full myocardial wall thickness. The non-specific clinical presentation of such condition is what makes its diagnosis a clinical challenge . Early diagnosis is mandatory using noninvasive modalities such as TTE and CMR or less commonly used nowadays invasive modalities such as coronary arteriography and left ventriculography. Due its high liability for fatal rupture urgent surgical intervention is of paramount importance in management of this pathology.

Results:

Our case represents the dilemma of anticoagulation in patients with cardiac pseudoaneurysm, the decision should weigh the benefit of reduced thromboembolism against the risk of bleeding or pseudoaneurysm rupture. Although triple therapy was initiated, that did not prevent the patient from developing a massive stroke and hence ending his life.

Conclusions: Cardiac pseudoaneurysm is a devastating disease that rarely complicates myocardial infarctions. High clinical suspicion and the use of non-invasive imaging techniques allow early diagnosis thus reduce the risk of its fatal complications

Recent Publications

Alapati L, Chitwood WR, Cahill J, Mehra S, Movahed A (2014) Left ventricular pseudoaneurysm: A case report and review of the literatureWJCC 2:90-93.

Contuzzi R, Gatto L, Patti G, Goffredo C, D'Ambrosio A, et al. (2009) Giant left ventricular pseudoaneurysm complicating an acute myocardial infarction in patient with previous cardiac surgery: A case report. J Cardiovasc Med (Hagerstown)10:81–84.

Frances C, Romero A, Grady D (1998) Left ventricular pseudoaneurysm. J Am Coll Cardiol 32:557-561.

Yeo TC, Malouf JF, Reeder GS, Oh JK (1999) Clinical characteristics and outcome in postinfarctionpseudoaneurysm. Am J Cardiol 84:592-95.

Gatewood RP, Nanda NC (1980) Differentiation of left ventricular pseudoaneurysm from true aneurysm with two dimensional echocardiography. Am J Cardiol 46:869-878.

Sutherland GR, Smyllie JH, Roelandt JR (1989) Advantages of colour flow imaging in the diagnosis of left ventricular pseudoaneurysm. Br Heart J 61:59-64.

Gill S, Rakhit DJ, Ohri SK, Harden SP (2011) Left ventricular true and false aneurysms identified by cardiovascular magnetic resonance. Br J Radiol 84:35-7.