Poster Session

P1482

Surviving free wall rupture

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Introduction

Free wall cardiac rupture (CR) is a rare event accounting for 0.1–0.3% of the patients suffering acute myocardial infarction. Its outcome is very poor and it is the third most common cause of early mortality after hospitalization for ST Elevation Myocardial Infarction (STEMI).

Purpose

We report a case of a 63 years-old woman surviving a free wall rupture after ST Elevation

Myocardial Infarction.

Methods

The patient was referred to our cath-lab to undergo primary PCI in ST elevation myocardial infarction.

Results

Coronary angiography showed long thrombotic occlusion of left anterior descendent (LAD) artery and critical stenosis of posterior descending artery. The CULPRIT lesion on the anterior descending artery was treated with angioplasty and implantation of three drug eluting stents (3.0x31 mm; 2.75x15 mm; 2.5x30 mm).

Twenty four hours later the patient developed a double cardiac arrest with pulseless electrical activity, which were immediately managed with ALS protocol. The patient recovered both time within a couple of minutes and point-of-care transthoracic echocardiogram (TTE) showed a newly developed circumferential pericardial effusion (maximum diastolic diameter 9 mm), associated to a significant thinning of the anterior interventricular septum. A fibrin clot was tamponating a suspected free wall rupture. Emergent coronary angiography showed an in-stent thrombosis but failed to restore adequate blood flow in the LAD artery.

In the following days, the patients developed cardiogenic shock handled with i.v. dobutamine and intra-aortic balloon pump (IABP). Only after day 10 hemodynamic parameters started to improve gradually, allowing IABP removal and finally discharge on day 30.

A second TTE, performed on day 7, confirmed massive necrosis of the anterior wall with severely reduced ejection fraction (EF 22%), pericardial thrombus and aneurismatic evolution of the apex and the mid-anterior septum. To support our finding we performed a cardiac magnetic resonance which confirmed missing ventricular wall at the anterior apex. It also showed transmural late gadolinium enhancement (LGE) of the anterior mid-apical septum and of the apex and a huge pericardial thrombus encompassing the whole mid-anterior septum (Figure 1, a-f).

Before discharge the patient underwent two cardiac surgery visits which contraindicated surgical treatment in the acute phase. Therefore she was sent to cardiac rehabilitation program.

Six months later, the patient finally underwent cardiac surgery and the covered free wall rupture was confirmed in the operating theatre.

Conclusion: This is a very rare case of covered free wall rupture, treated 6 months after the acute event. Multimodality imaging was essential to confirm the diagnosis and to guide the following management.

Abstract P1482 Figure 1