

Young Women with STEMI - Case Report

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Abstract

Acute myocardial infarction is not common in young age. In this article, a case of 28 year old female, who was admitted with ST segment elevation myocardial infarction, is described. The patient reported two previous spontaneous abortions. Antiphospholipid syndrome (APS) is a multisystem autoimmune disease, most commonly associated with hypercoagulable state (that can be a cause of MI in younger patients) and fetal loss. Coronarography was made and a thrombus in proximal LAD was detected. After that, thrombus aspiration and a subsequent stenting of LAD was performed. No complications were developed and the patient was discharged after observation.

Keywords: *Acute Myocardial Infarction; Antiphospholipid Syndrome; Hypercoagulable State; Thrombus Aspiration*

Abbreviations

APS: Antiphospholipid Syndrome; MI: Myocardial Infarction; LAD: Left Anterior Descendent Artery; RCA: Right Coronary Artery; Cx: Circumflex Artery; ACS: Acute Coronary Syndrome; STEMI: ST Segment Elevation Myocardial Infarction; SES: Sirolimus Eluting Stent; PTCA: Percutaneous Transluminal Coronary Angioplasty

Introduction

The causes of MI among patients aged less than 45 can be divided into four groups:

- Atheromatous coronary artery disease
- Non-atheromatous coronary artery disease
- Hypercoagulable states
- MI related to substance misuse [1].

There is a considerable overlap between all the groups. Antiphospholipid syndrome (APS) is a multisystem autoimmune disease most commonly associated with hypercoagulable state that causes recurrent arterial and venous thromboembolism and fetal loss [2]. Its incidence is estimated around 5 per 100,000 per year, with a median age of diagnosis of 34 years. In rare occasions acute coronary syndrome (ACS) can occur in patients with APS [3]. There are clinical criteria (Vascular thrombosis and pregnancy morbidity) and laboratory criteria (Lupus anticoagulant antibody, Anticardiolipin antibody, Anti-B2-glycoprotein I antibody) [4].

Case Report

A 28 year old female presented to our Hospital with chest pain that started 1 hour prior to admission. Past medical history was not significant for cardiovascular diseases, though she reported two previous spontaneous abortions and one normal pregnancy.

Investigations: HR = 61/min, BP = 120/70 mmHg. Auscultation of the lungs was unremarkable, with vesicular breathing. Laboratory findings: Le 8.8, Se 9, CRP 1, Er 4.25, PLT 362, Hb 9.8, HCT 31.5. ECG showed a 2 mm ST elevation in the anterolateral leads (D1, aVL, V2-V4).

The patient was initially treated with: Heparin 100 IU/Kg, ASA 300 mg, Clopidogrel 600 mg, Rosuvastatin 40 mg. Coronary angiography was made, showing thrombus in the proximal LAD (Figure 1). There was no significant stenosis of Cx and RCA.



Figure 1: Coronary angio: Thrombus in proximal LAD.

We used a 6F EBU 3.5 guiding catheter for the intervention and advanced a BMW wire in the LAD. We also wired the Cx for protection. A 6F Aspiration catheter was used for thrombus extraction (Figure 2 and 3).

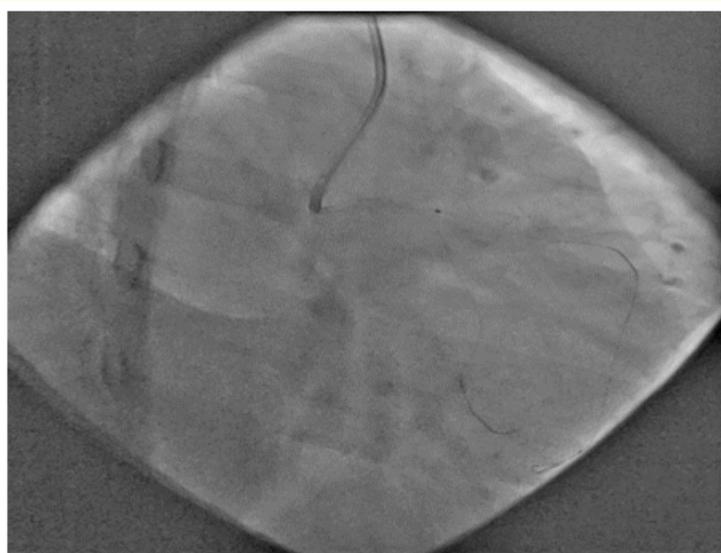


Figure 2: Coronary angio: Thromb aspiration with 6F Export aspiration catheter.

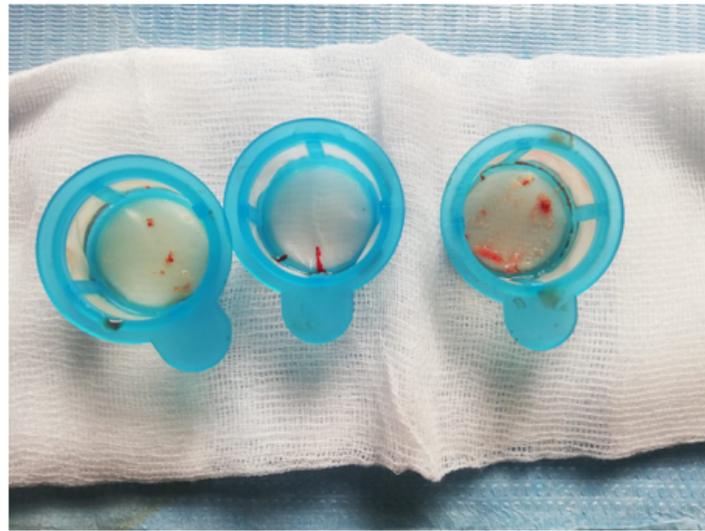


Figure 3: *Extracted thrombi from LAD.*

After the thromb aspiration we stented proximal LAD with 3.5 x 15 mm SES. The result was a TIMI 3 flow with no residual stenosis (Figure 4 and 5). No complications were developed and the patient was discharged after observation.

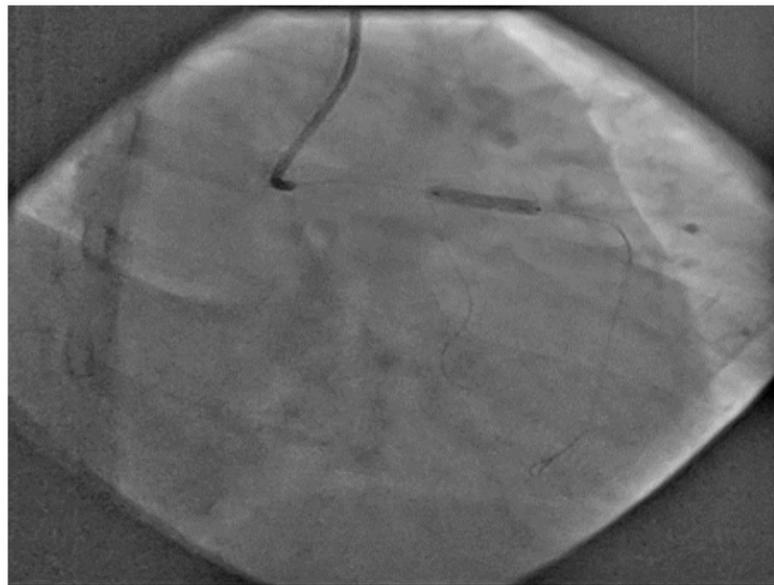


Figure 4: *LAD stenting with 3.5 x 15 mm SES.*

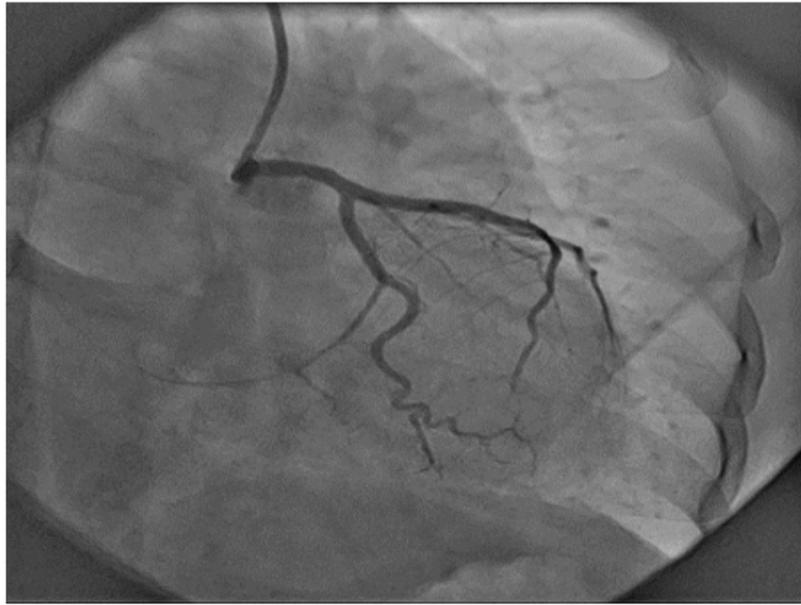


Figure 5: Result: TIMI 3 flow with no residual stenosis.

Discussion and Conclusion

APS should be suspected in young individuals with unexplained thrombotic events, including ACS. Proper immunological work-up should be performed promptly, as an early diagnosis can decrease disease burden. Careful history taking should be undertaken with emphasis on prior thrombotic events or pregnancy morbidity. PTCA/Stenting is the treatment of choice for APS patients who present with STEMI. This strategy has resulted in satisfactory long-term results with low complication rates. Once APS is confirmed, long-term anticoagulation should be considered in addition to standard therapy for ACS. Secondary preventive measures for coronary artery disease should be provided in order to decrease morbidity and mortality in these patients [3].

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