

## Spontaneous Coronary Artery Dissection Associated with Myocardial Bridging as a Cause of Acute Myocardial Infarction

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## **Case Presentation**

A 44-year-old woman with no prior cardiovascular history presented with exertional angina, prompting her visit to the emergency department.



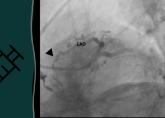
Initial Evaluation

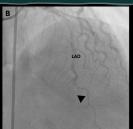
Upon admission, the patient was hemodynamically stable. However, the electrocardiogram (ECG) showed ST-segment elevation in the anterior and inferolateral leads, along with elevated cardiac troponin levels.

Diagnosis And Management A diagnosis of ST-segment elevation myocardial infarction (STEMI) was established, and the patient underwent fibrinolytic therapy. She remained free of electrical or mechanical complications thereafter.

Follow-up

As part of the diagnostic and therapeutic work-up, coronary angiography was performed. It revealed a myocardial bridge in the mid-segment of the left anterior descending (LAD) artery with a milking effect, along with a type IIA spontaneous coronary artery dissection (SCAD) in the distal segment of the same artery. The patient's clinical course post-procedure was favorable.





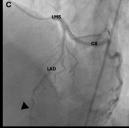


Figure 1. Angiographic projections showing evidence of type IIA spontaneous coronary artery dissection in the distal segment of the left anterior descending artery (arrowhead). CX: circumflex artery; LAD: left anterior descending artery; LMS: left main stem.

## Conclusions

SCAD accounts for 0.1–4% of all acute coronary syndrome (ACS) cases. Among women under 50 years of age presenting with ACS, SCAD is observed in approximately 35% of cases. While most SCAD presentations are non–ST-segment elevation myocardial infarctions (NSTEMIs), in cases like ours with ST-segment elevation, fibrinolysis is not recommended. However, in developing countries like ours, primary percutaneous coronary intervention (PCI) may not be readily available as a first-line reperfusion strategy for STEMI patients. Consequently, pharmacological reperfusion is often employed, which significantly increases the risk of dissection extension, vessel rupture, or intramural hematoma formation.



