More than one way to treat the culprit vessel during STEMI

Dr Arash Hashemi MD
Interventinoal cardiologist
Erfan General Hospital
Tehran Iran

- I do not have any potential conflict of interest.

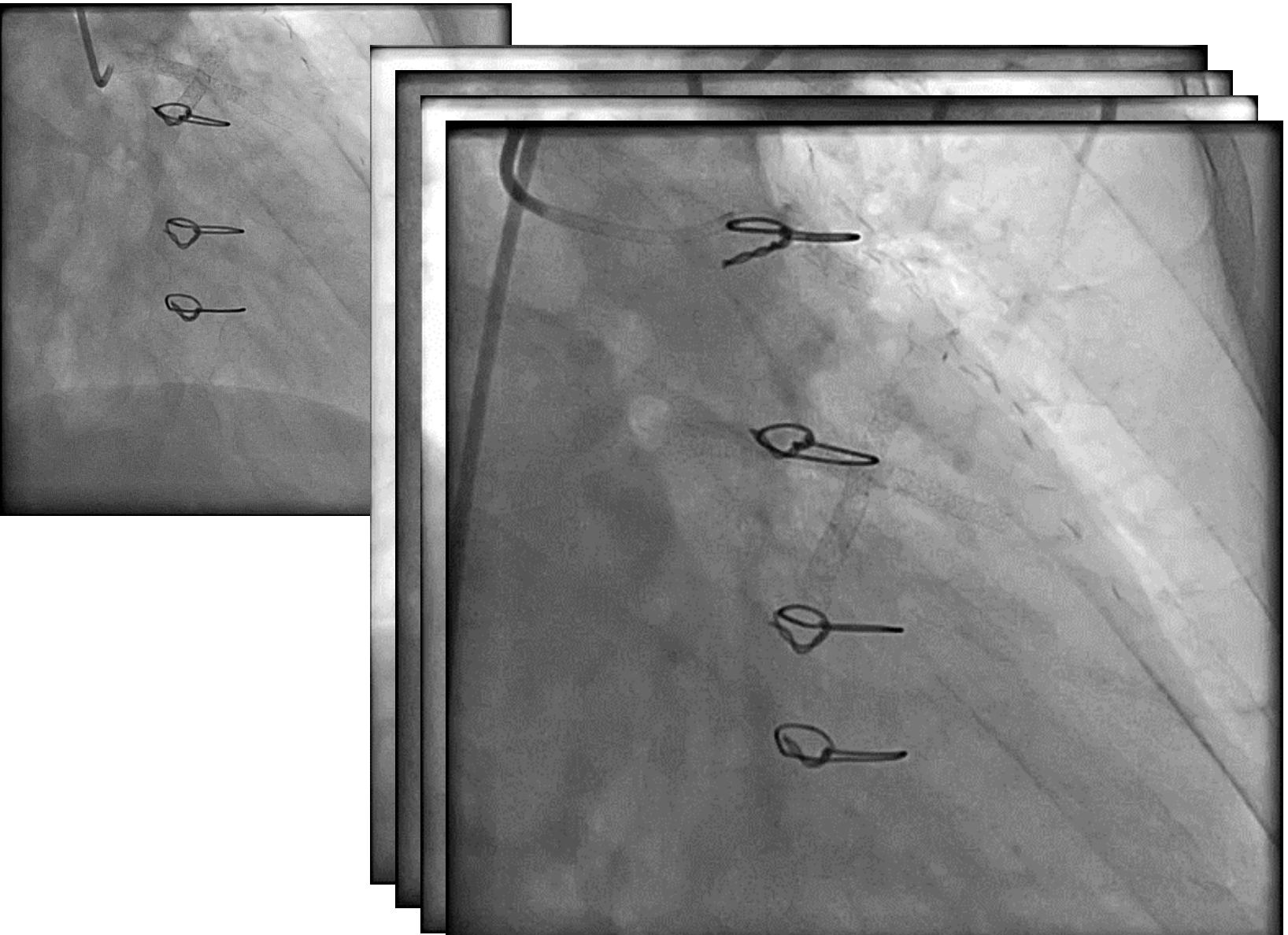
- 74 years old male
- Post CABG since 2007
- Occluded SVG on Diagonal and LIMA on LAD
- History of PCI on SVG on OM
- Post multivessel PCI (on native coronary arteries including left main and LAD and jailing of LCX and SVG grafts)
- Presented with acute lateral STEMI within golden time (very fast transfer to the hospital with only under 10 minutes of chest pain initiation)

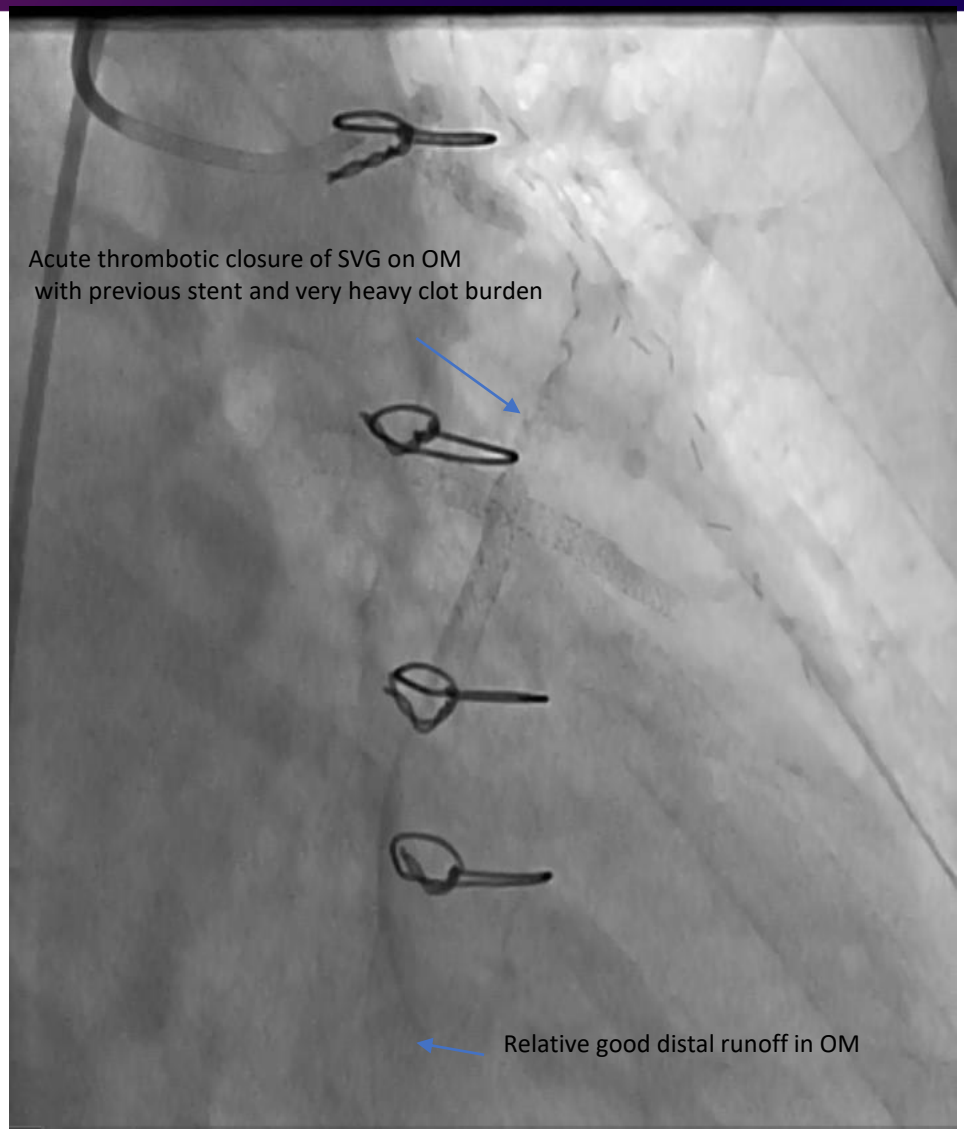
- Angiography revealed:
- patent Native coronary stents

- Patent SVG on RCA

- CTO in Large OM with no visible cap

- Acute thrombotic occlusion of SVG on this OM which had a stent

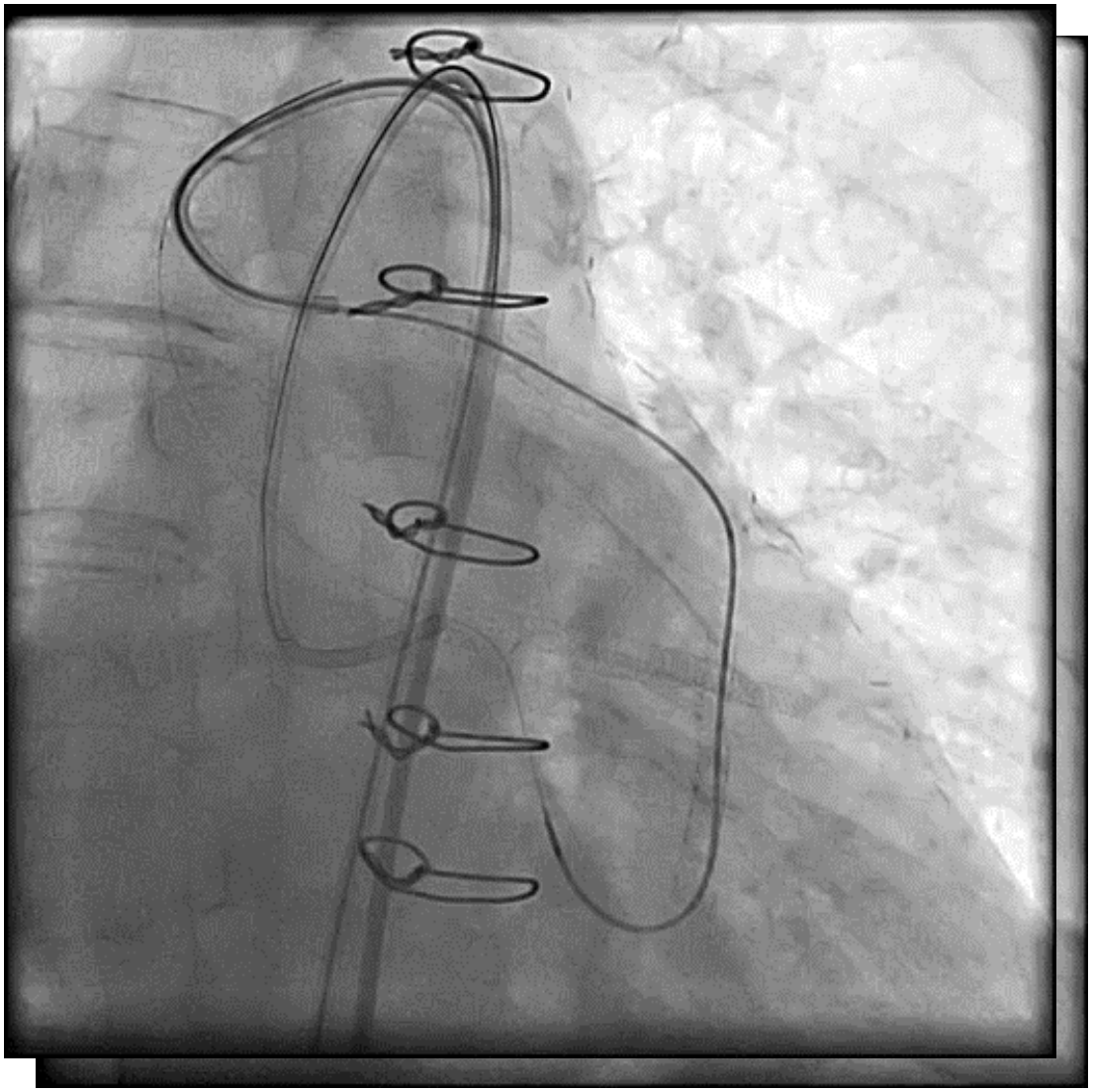



Acute thrombotic closure of SVG on OM
with previous stent and very heavy clot burden
Relative good distal runoff in OM

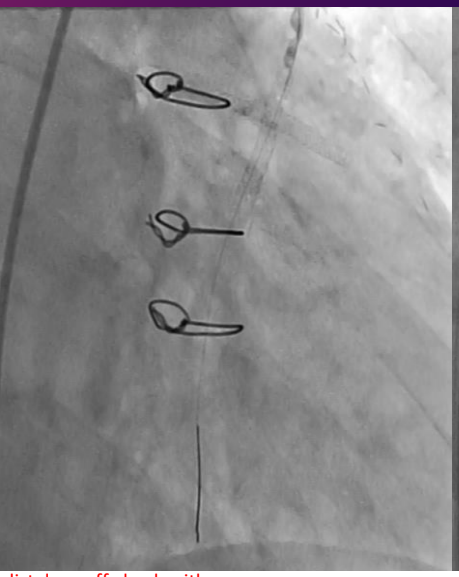
What is the best treatment option for this patient?

- 1-Only medical treatment and consideration of thrombolysis (systemic or intracoronary)??
- 2-PCI on SVG with heavy clot burden and consideration of thrombusuction ??
- 3-deffered PCI on SVG after initial period of anticoagulation and possibly 2b/3a inhibitors??
- 4-PCI on native vessel CTO??

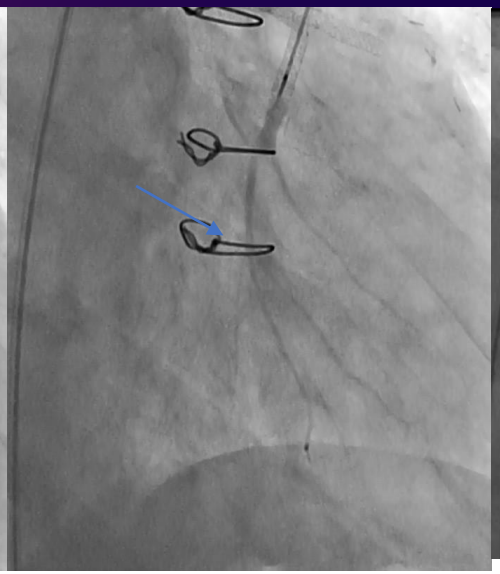
- After some brief discussion due to acute STEMI setting and based knowledge of previous vessels anatomy and very heavy clot burden and chance of no reflow and with consideration of poor short and long term result of SVG Re-intervention.
- We decided to go for native OM CTO PCI



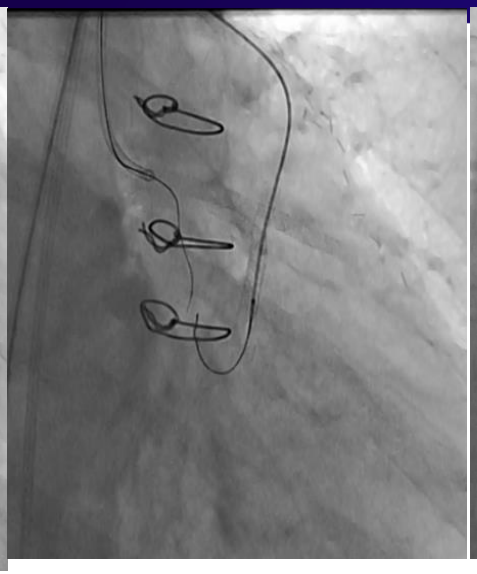
The procedure step by step

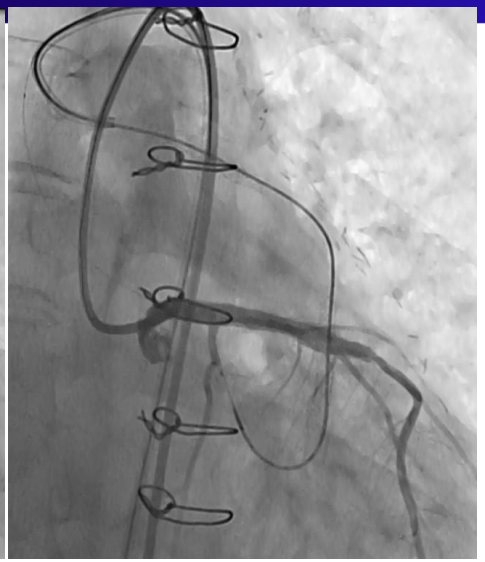


distal runoff check with
injection micro catheter through microcatehter

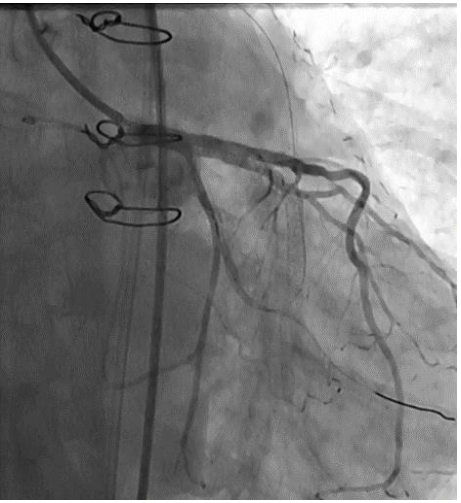


Good distal runoff in OM



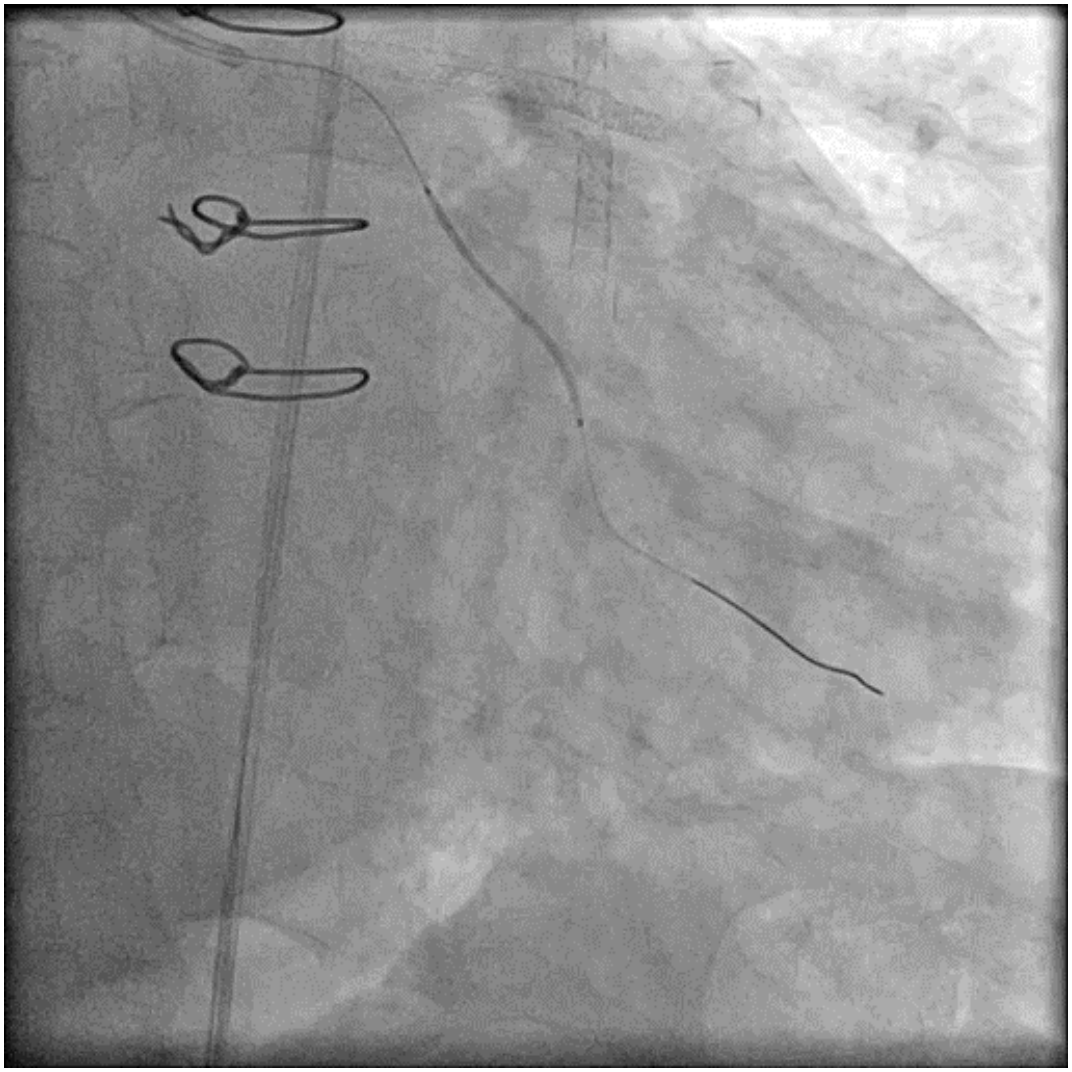


Retrograde wiring through left main stent
struts and loop formation

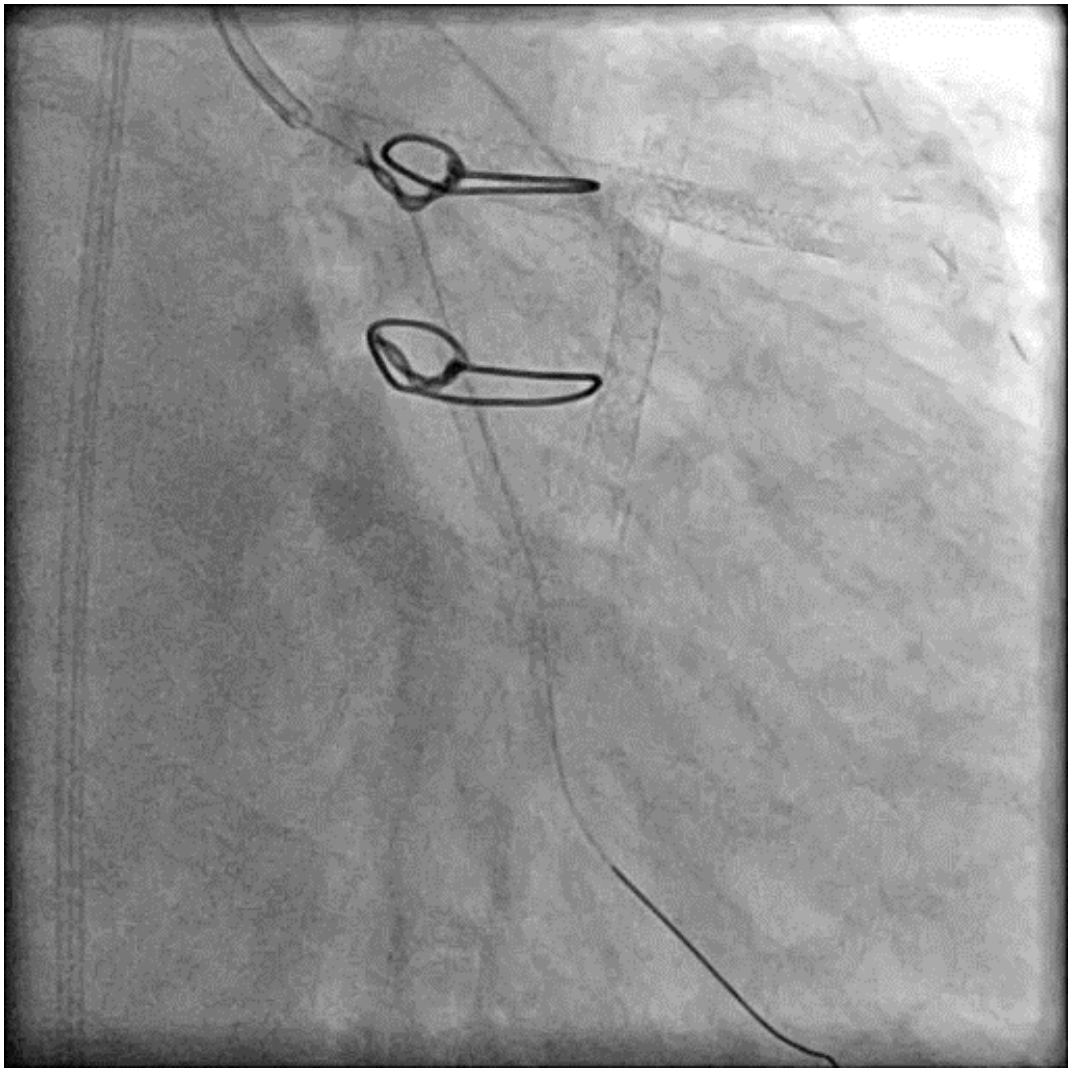


After loop formation , predilation
and antegrade wiring

stenting



Final result



Take home massage

- CTO PCI in acute STEMI setting can and sometimes should be done and in special circumstances is the first and superior treatment option
- Sometimes its too risky to perform primary PCI on a degenerative SVG with very heavy clot burden and one must consider risk of no reflow and also log term result of such intervention
- Before attempting for this kind of complex interventions the operator must be an expert on CTO PCI and knowing self limitations is a must also golden time for flow restoration should be considered.
- Long term patency of CTO vessel PCI is better than SVG PCI
- Long term result of native CTO PCI is far superior to PCI on SVG
- Occlusion of the donor SVG after successful opening the CTO should be considered if TIMI flow in the SVG is above 2 due to the fact that the competitive flow in the distal bed will have a negative affect on long term patency of the newly opened CTO.