CARDIOVASCULAR INNOVATIONS DIGITAL 2020

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Definite very late in-stent thrombosis causing STEMI in previously widely patent LAD artery stent not very long after STEMI in the RCA

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Authors have no disclosures

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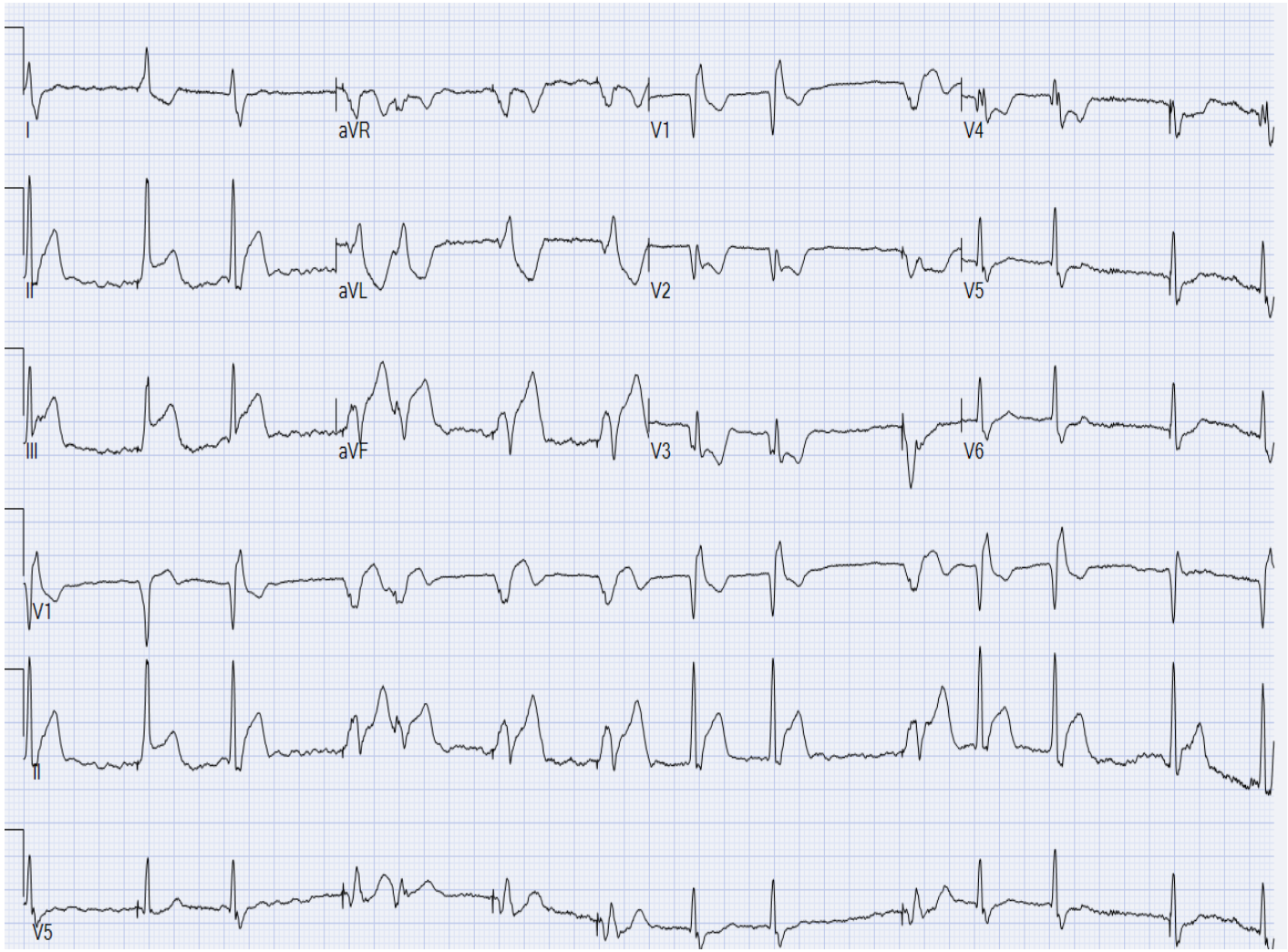
Clinical presentation

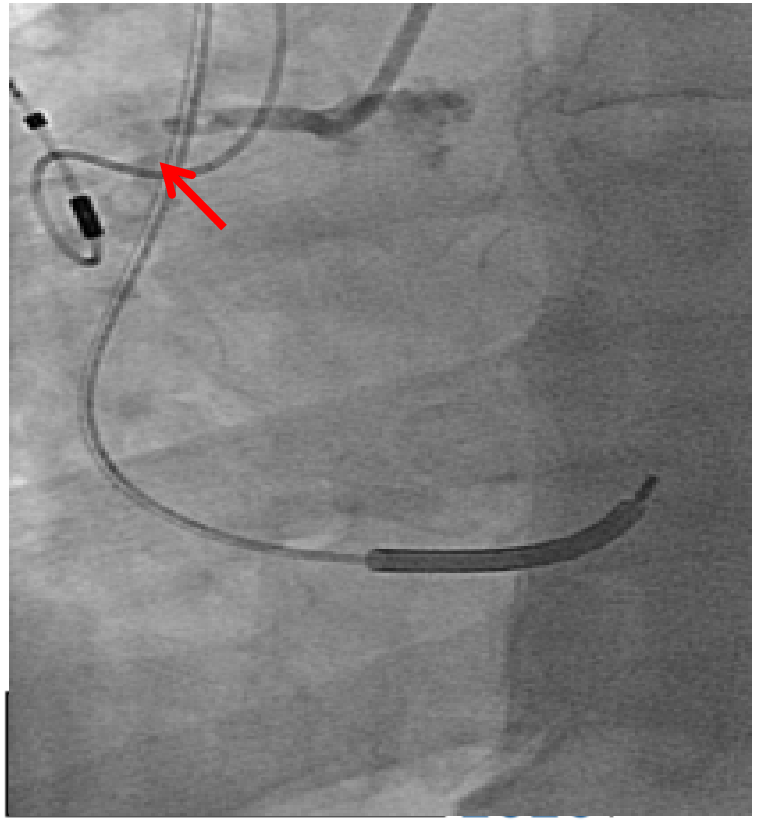
- 51-year-old male with left anterior descending (LAD) stent 10 years prior and chronic controlled atrial fibrillation on therapeutic anti-coagulation with warfarin presented with typical chest pain (CP).

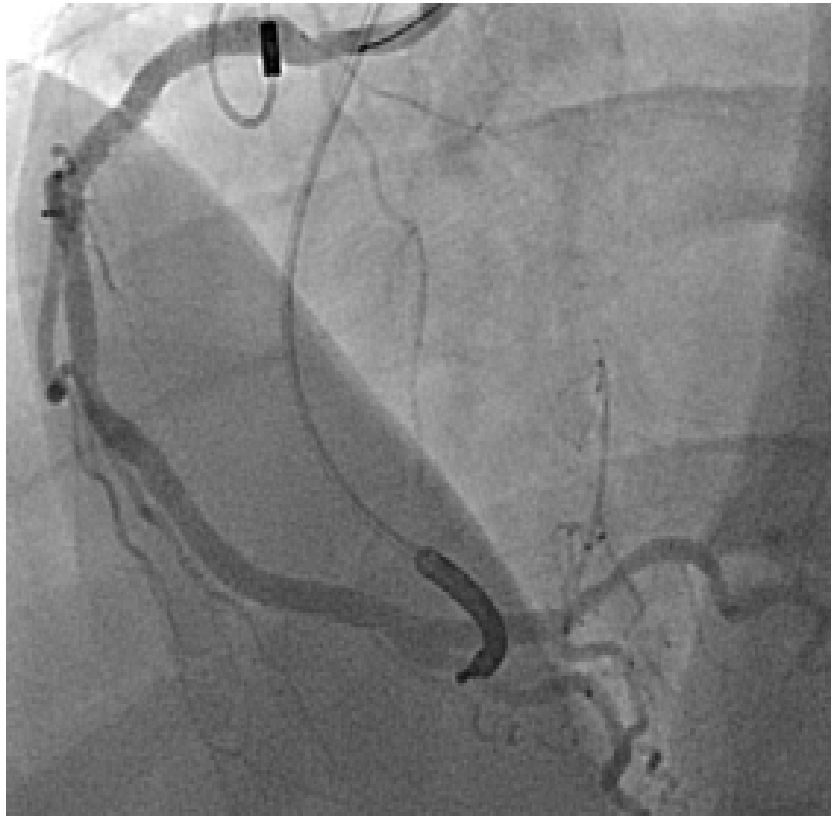
- Initial EKG showed acute infero-posterior ST elevation myocardial infarction (STEMI)

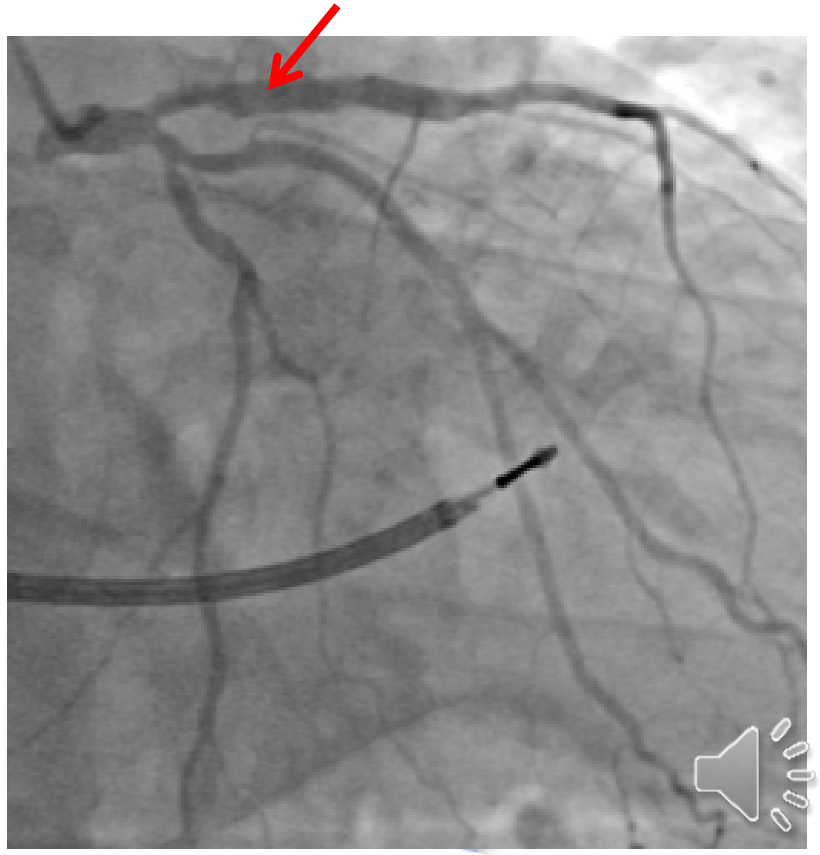


Catheterization Findings

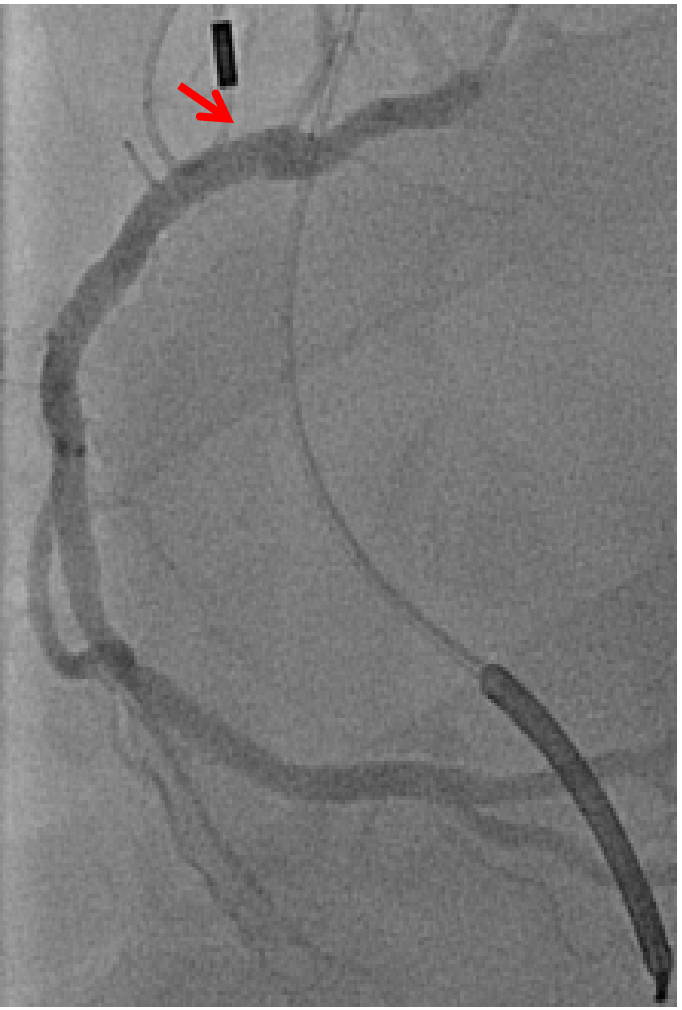
- Proximal RCA was the culprit lesion and primary PCI with a 3.5x28mm drug eluting stent (DES) was performed with excellent results.
- RAO caudal angiogram during index presentation revealing widely patent LAD stent.



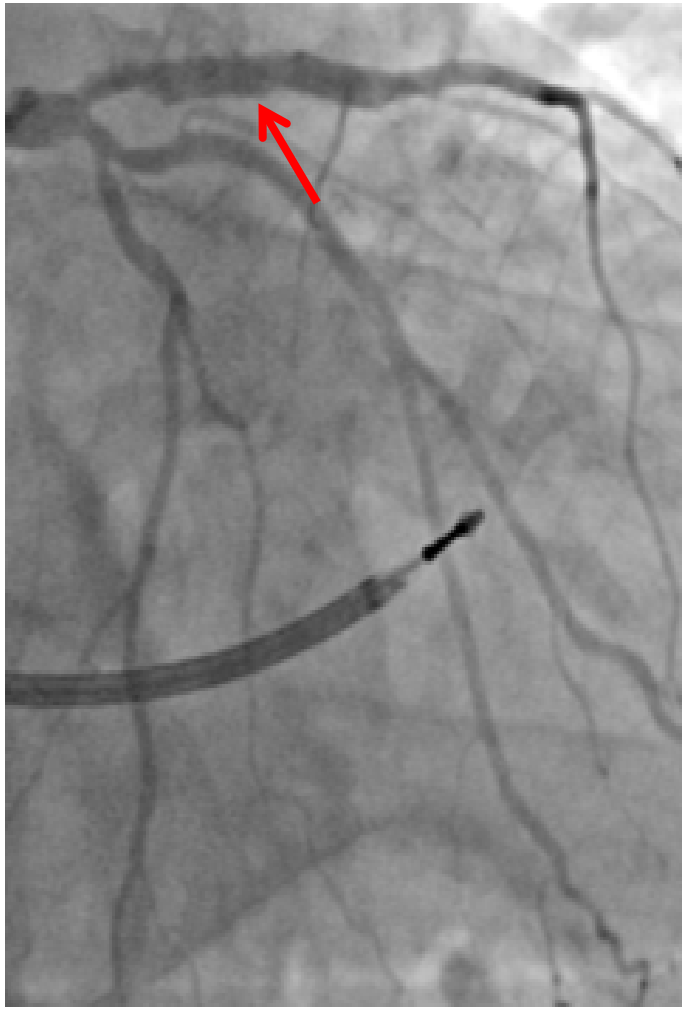




Clinical course

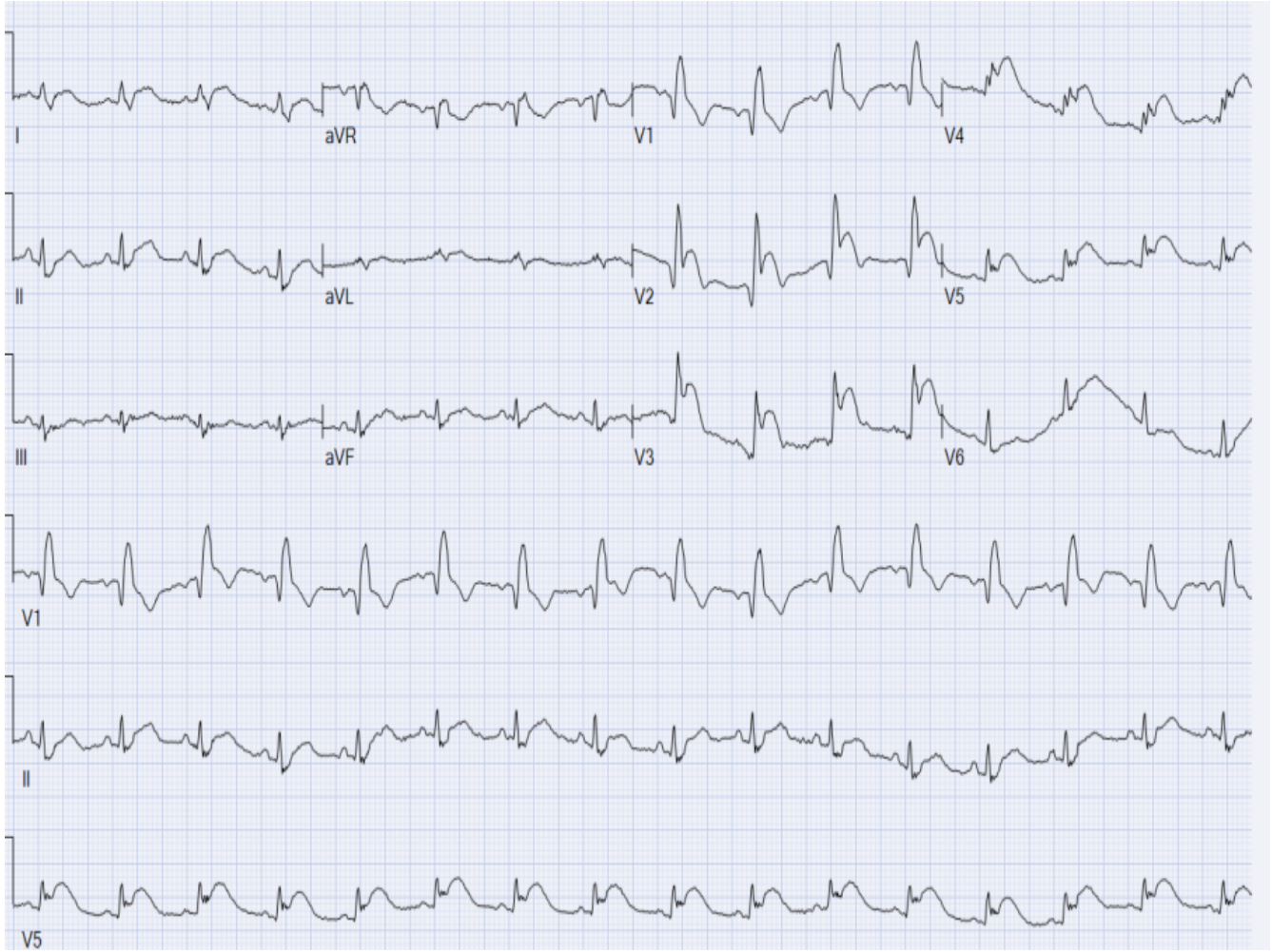


- Dual anti platelet (DAPT) regimen of Aspirin 81 mg and Plavix 75 mg daily after loading dose of 600 mg pre-PCI was continued.
- Echocardiogram showed LVEF of 30%.
- Because of recurrent chest pain 2 days later, repeat coronary angiography was performed showing patent RCA and LAD stents.

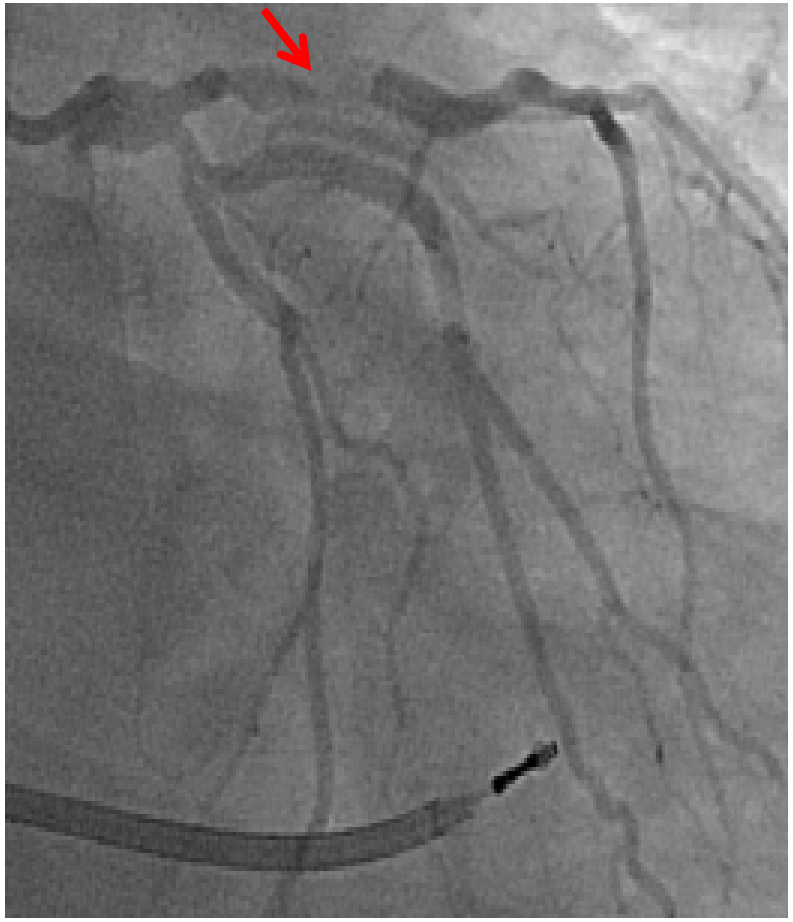


Clinical course

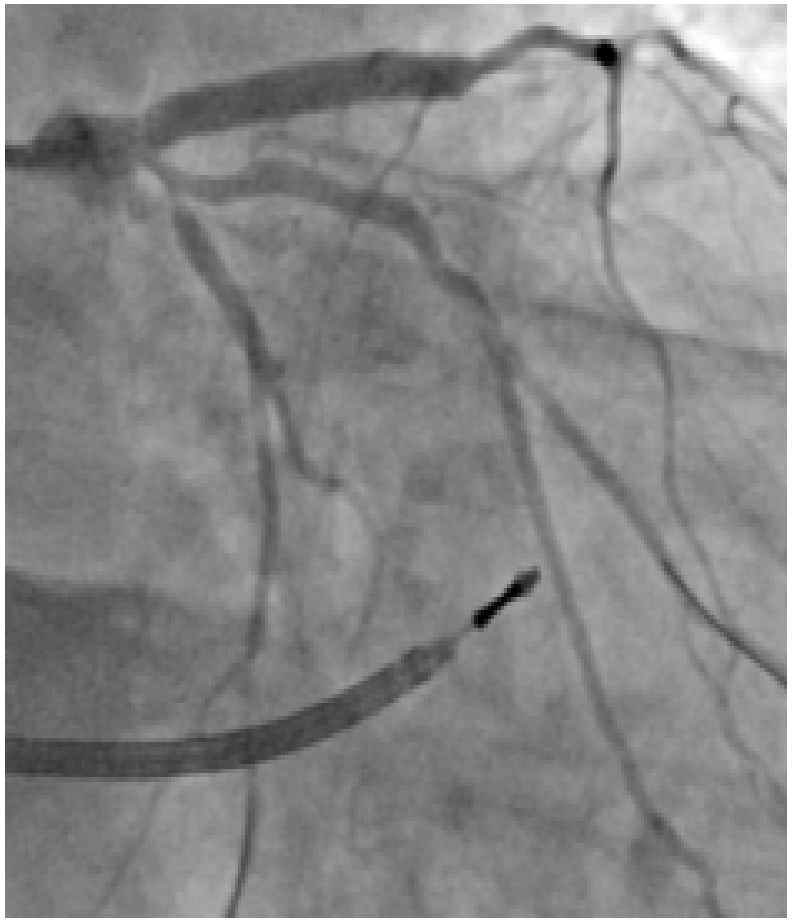
- Patient had an episode of hematemesis, with no hemodynamic compromise and stable hemoglobin, so DAPT and warfarin were continued.
  - Emergent EGD showed gastritis and no intervention was required
- Four days later, chest pain recurred EKG showed acute anteroseptal STEMI.



Emergent repeat angiogram



RAO caudal angiogram on day 6 revealing definite very late in-stent thrombosis of LAD.



LAD after Primary PCI with 3.5x26mm DES of in-stent thrombosis.

Clinical course

- Clopidogrel response assay indicated normal P2Y12 receptor platelet blockade and hypercoagulable work up was negative.
- Triple therapy was modified to include aspirin 81 mg, ticagrelor 90 mg BID and apixaban 5 mg BID upon discharge.
- Smoking cessation counselling was successful, and patient has remained tobacco free.

Teaching point

- Very late stent thrombosis (ST) following DES (drug eluting stent) is very rare, 5 events per 1000 DES.
- Gastrointestinal bleed, acute coronary syndrome, smoking and low ejection fraction (EF) are known risk factors of ST.

Conclusion

"If it is supposed to happen, it will happen" is probably true. Prevailing risk factors predisposed the patient for this very unusual sequence of events.