JCR Joint meeting of Coronary Revascularization

Unexpected acute coronary occlusion with unexplained etiology

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8/12/2018

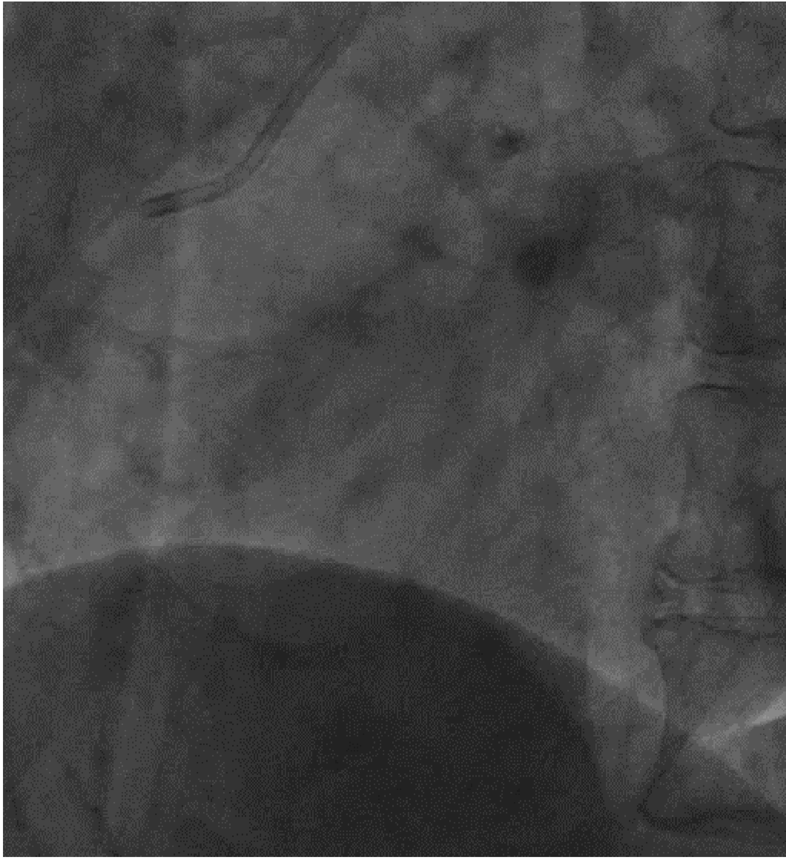
- 47 years old gentleman.
- HTN , current smoker
- came to ER 1 month before by chest pain and diagnosed as NSTEMI (patient refused admission)
- Came back to OPD by the same complain.

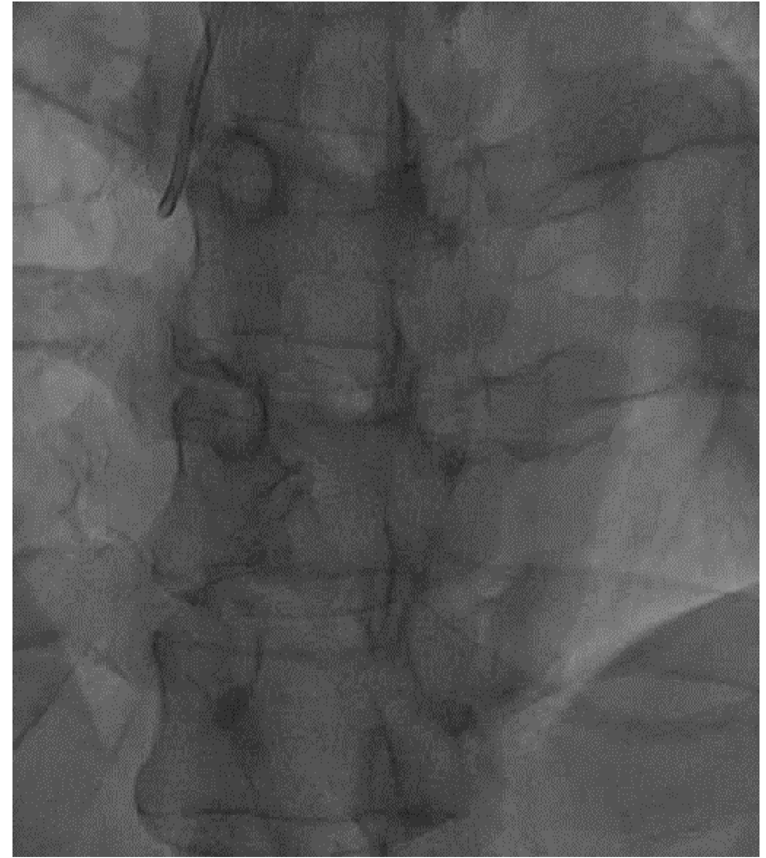
- BP 130/70
- Pulse 80bpm
- ECG : T wave inversion in precordial leads.
- Echo: Apical and anterior hypokinesia EF 50%
- Lab: creatinine 1.3

CA was decided

Preloaded by clopidogrel 600 mg

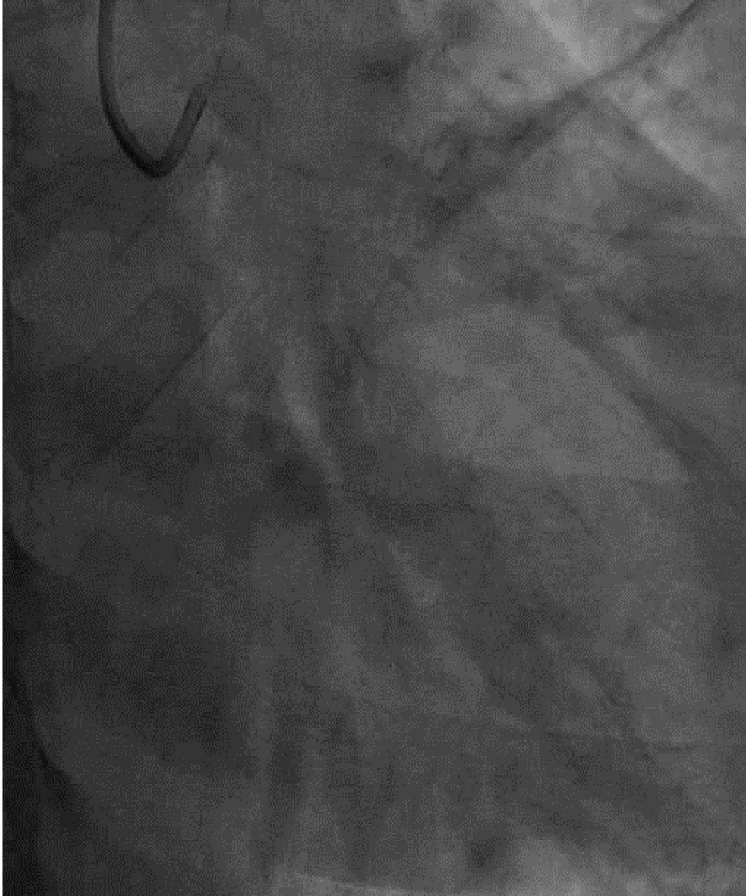
6F Kimny via RT radial 6F sheath

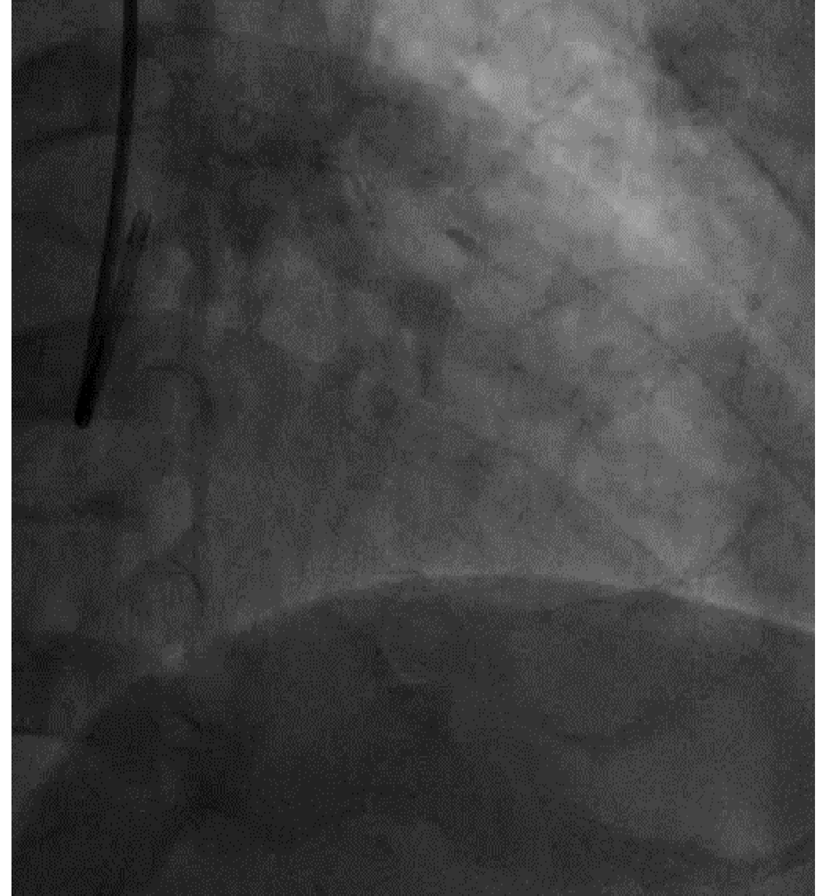




Cocktail given : NTG 200 mic and heparin 5000 IU
RCA :dominant ; distal segment to PDA 75% diffuse stenosis
PLB ostial segment was CTO

LCA





LM : mid shaft 30%
LAD : mid segment 75% stenosis with filling defect after D1 , distal segment had 50% stenosis , **D2** : was totally occluded
LCX : mid segment eccentric 70% stenosis

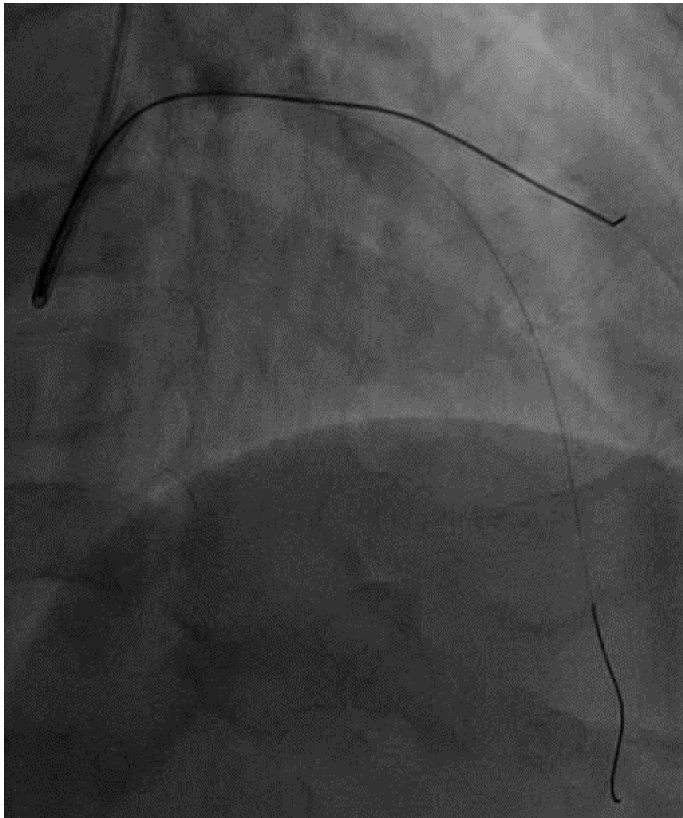
PCI strategy

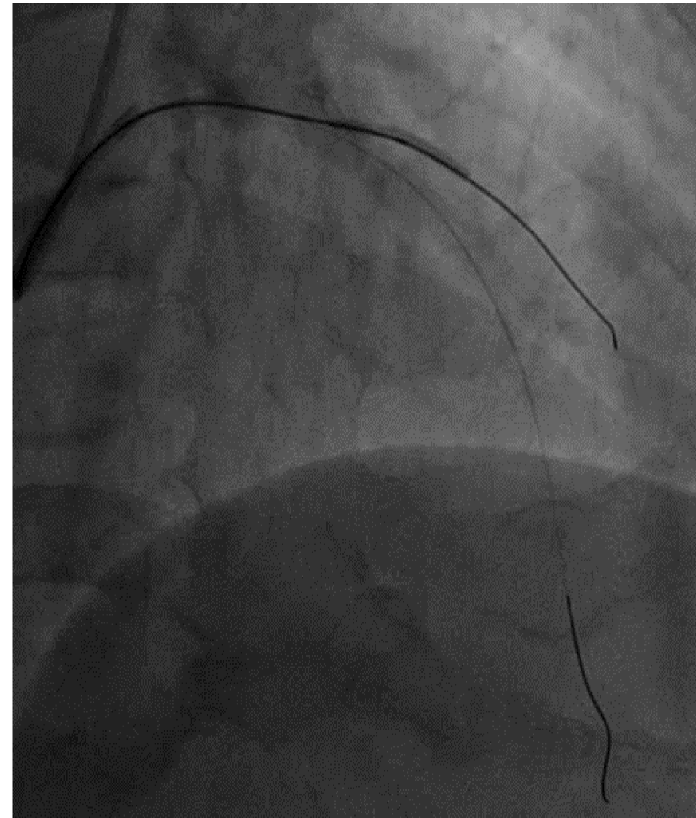
- Low thrombus burden.
- Open D2 occlusion then PCI to LAD.
- PCI to LCX.
- Open PLB occlusion then PCI to RCA.
- Go home .

Triple vessel PCI
So easy

Additional 5000 IU heparin was given (total 10.000 IU)

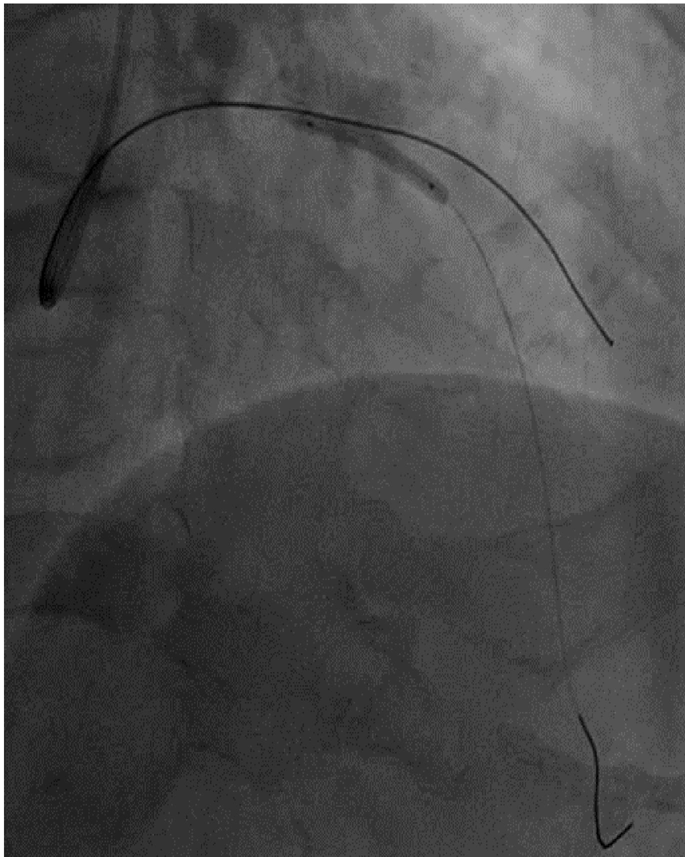
Runthrough wire to distal LAD
Antegrade wire escalation D2 (UB3)

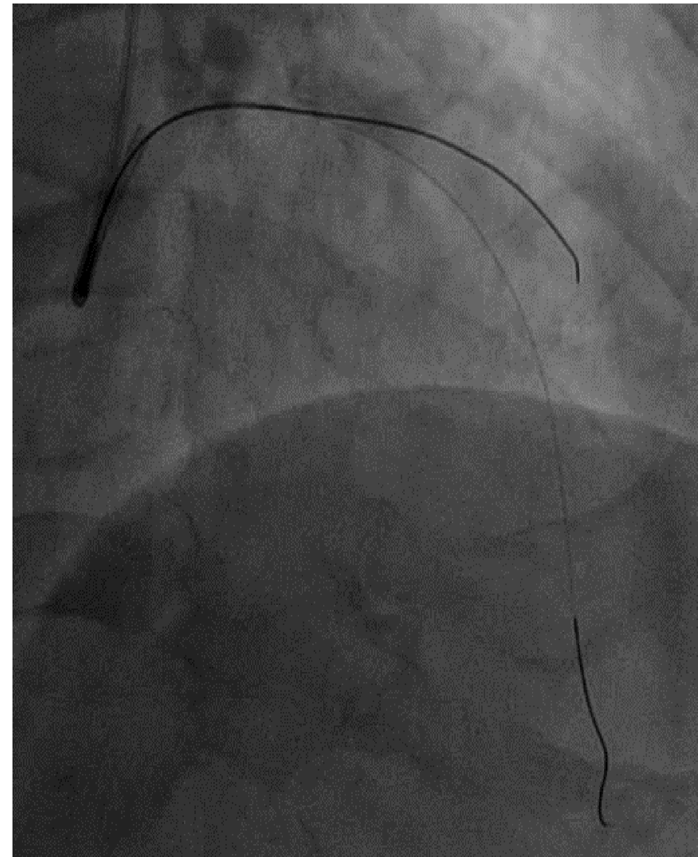




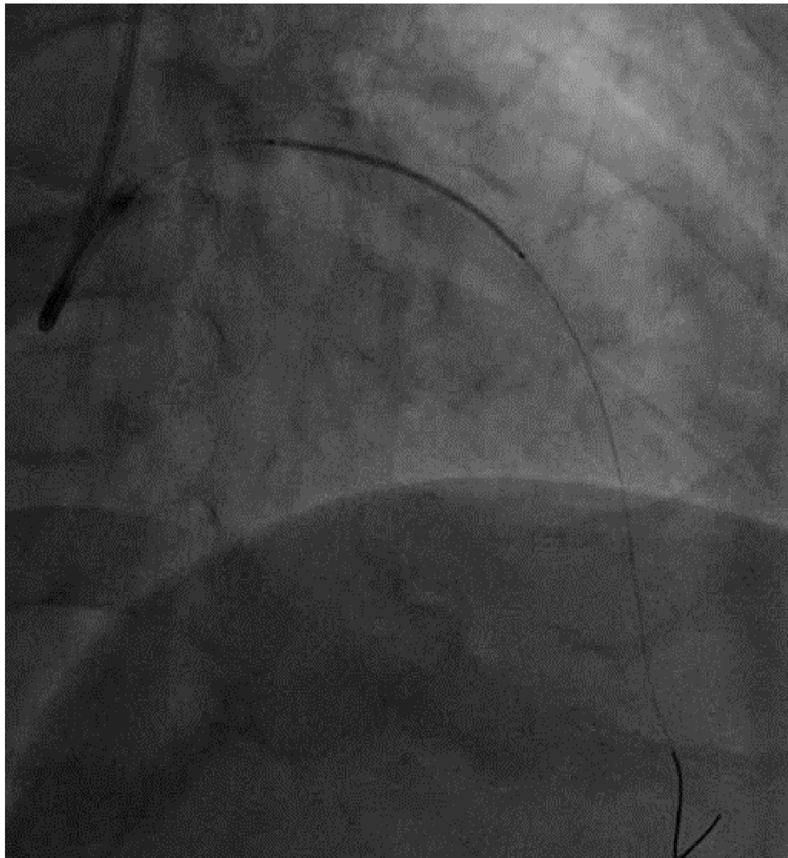
The stenotic lesion dilated by **Sapphire 1.5**x20 upto 14atm

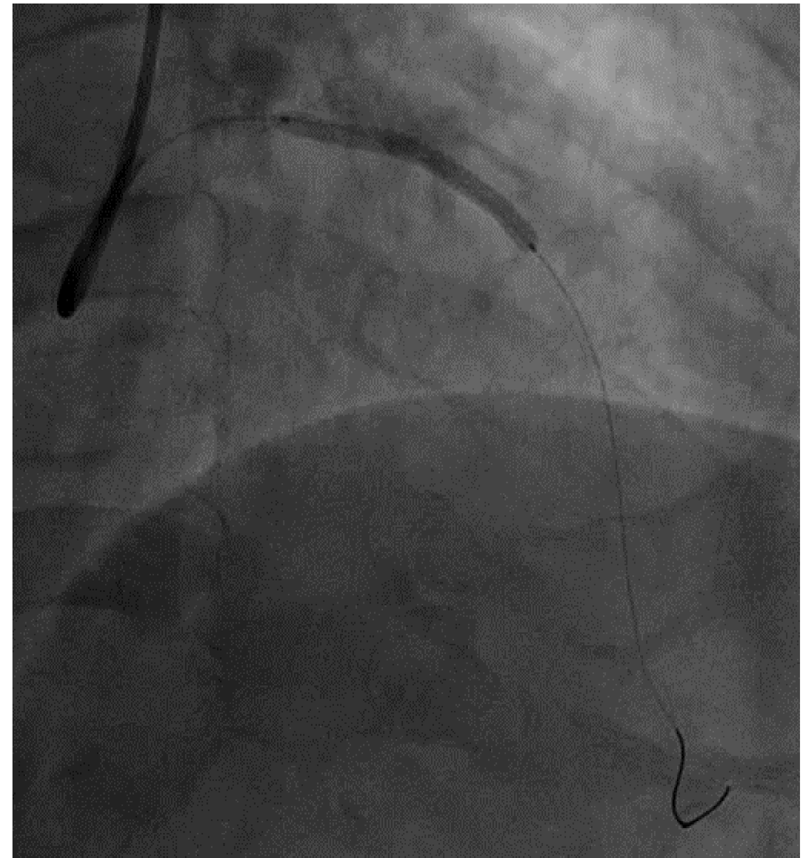
Predilatation by Sprinter 2.0x20 and NC Euphora 2.75x15

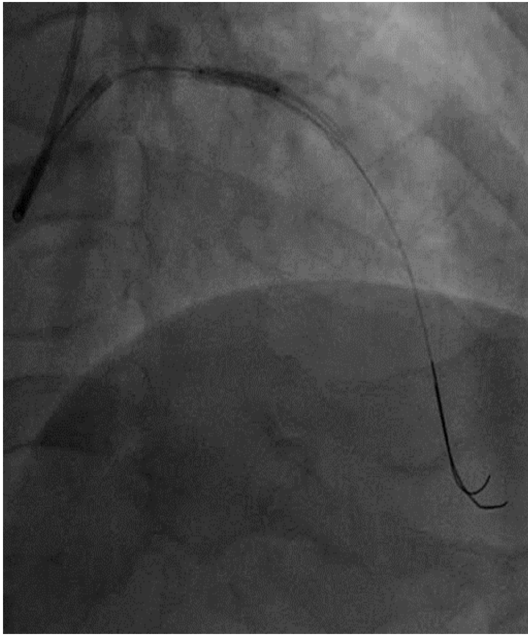




Resolute Onyx 2.75x34



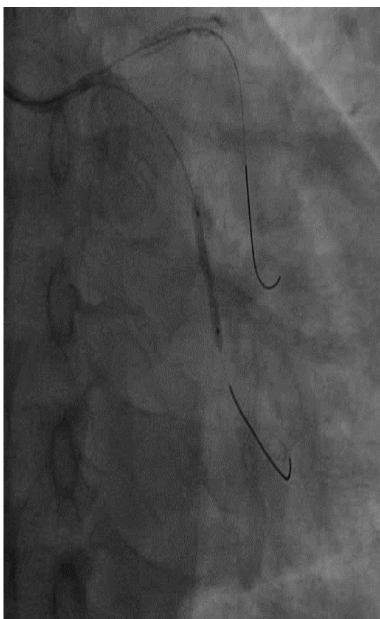




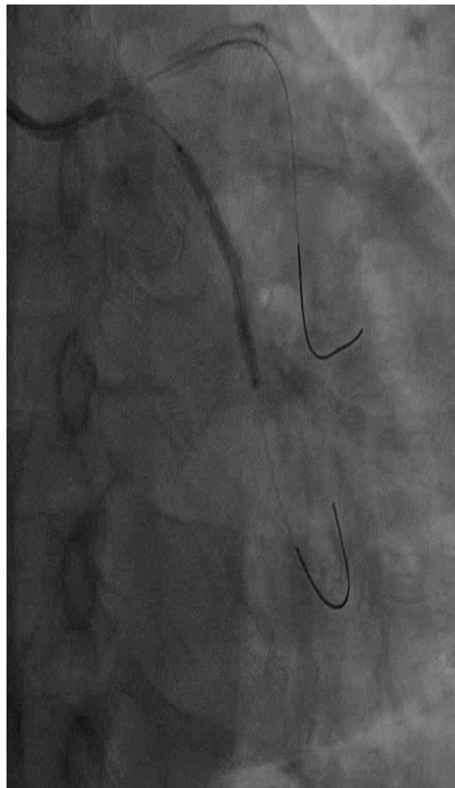
Postdilatation by NC Euphora 2.75x15 upto 20 atm

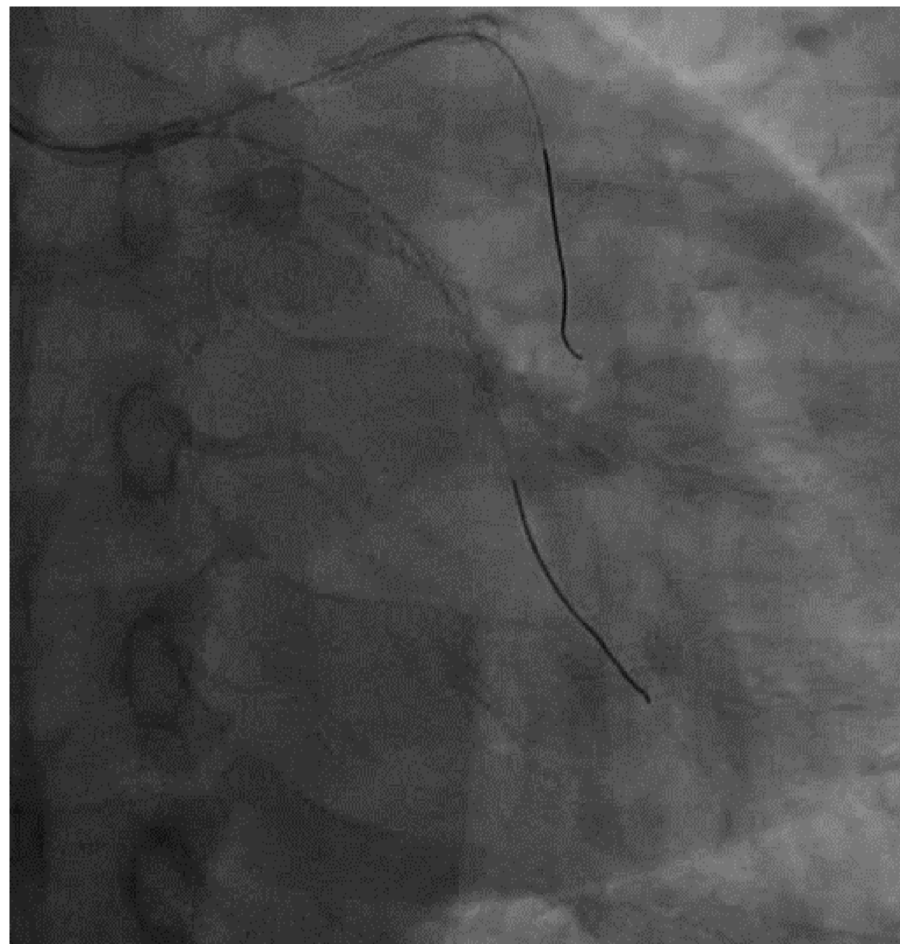
PCI to LCX

Stenting by Resolute Onyx 2.75x23

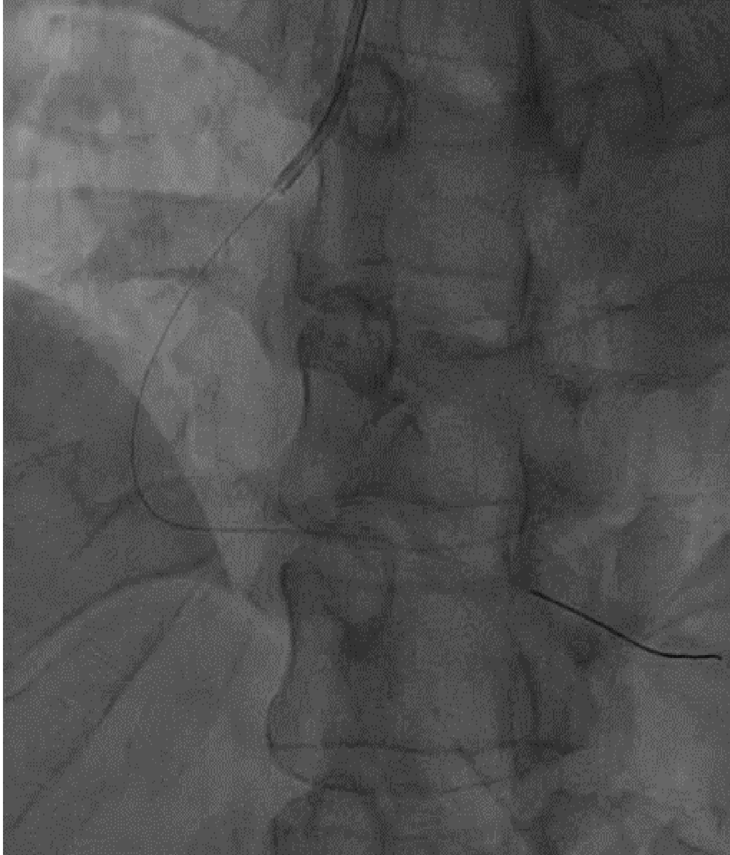


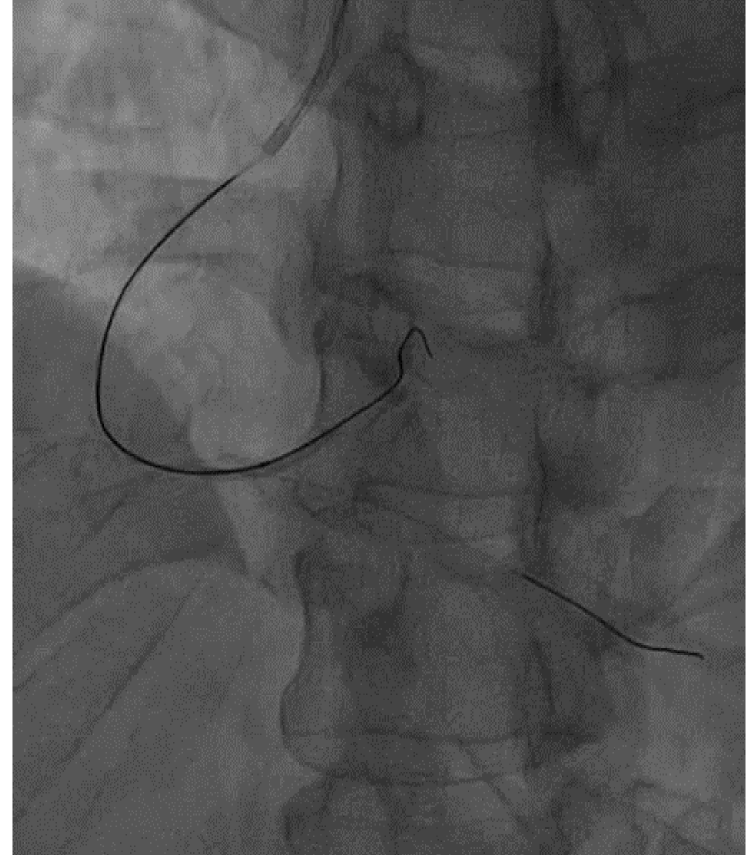
Predilatation NC Euphora 2.75x15





RCA





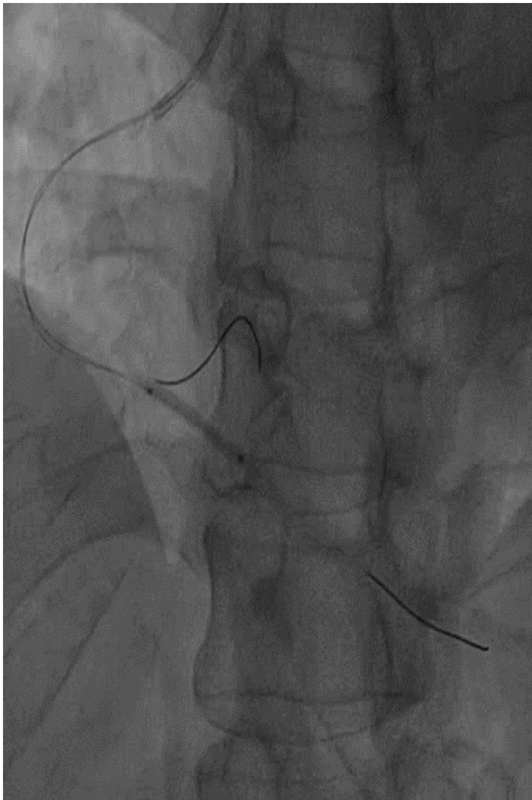
Runthrough wire to distal PDA

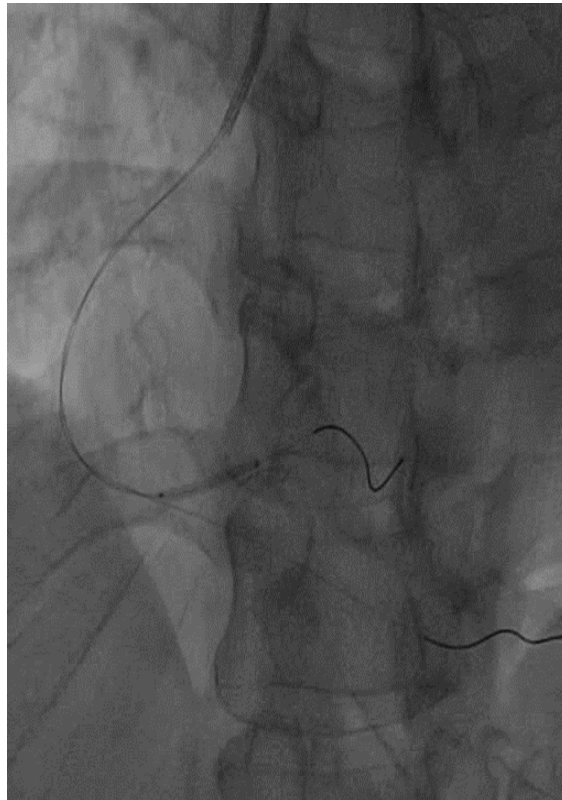
Antegrade wire escalation PLB (UB3)

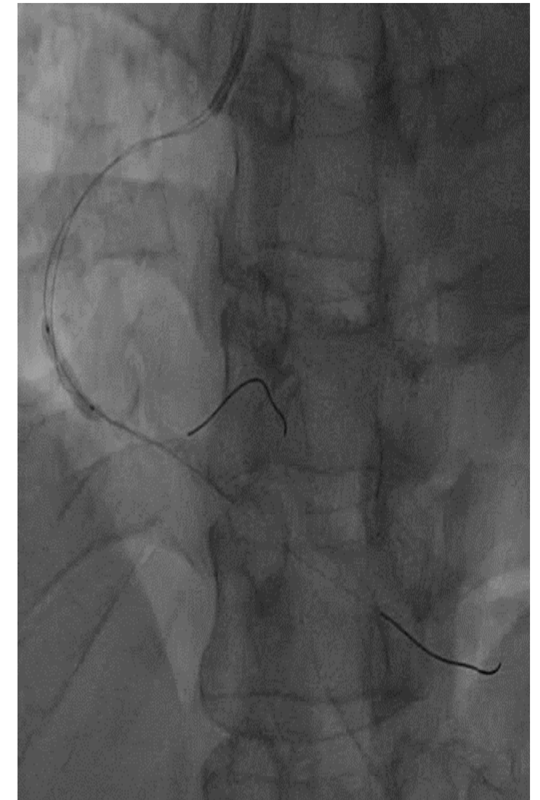
Predilatation with sapphire 1.5x20

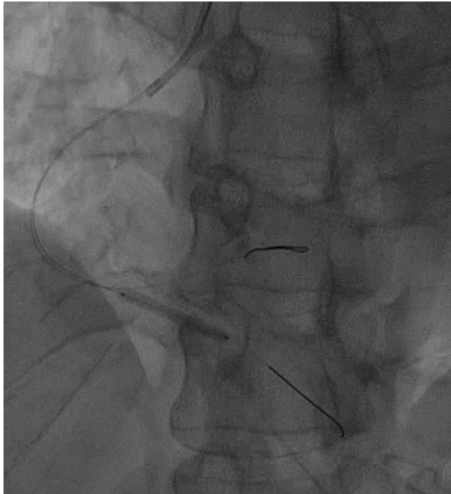
Tazuna 2.5x20 at PDA

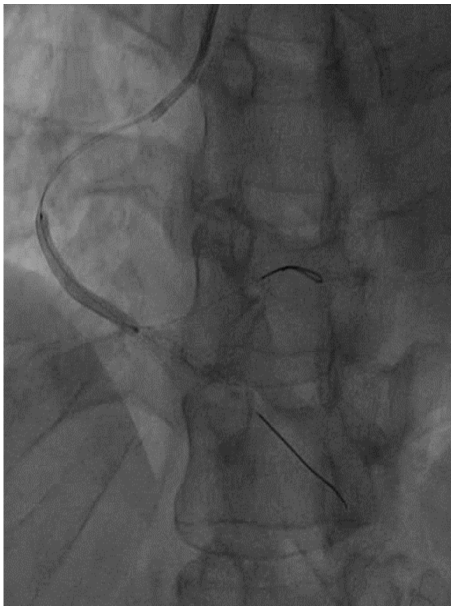
Sprinter 2.0x20 at PLB

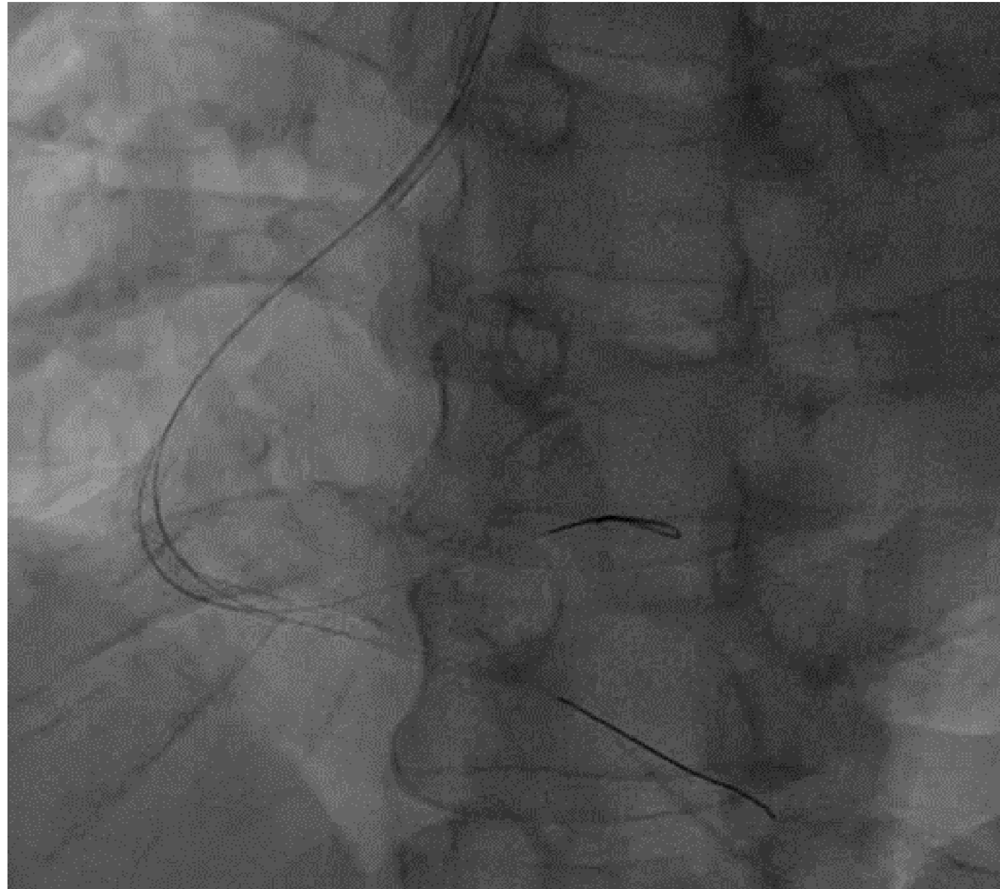






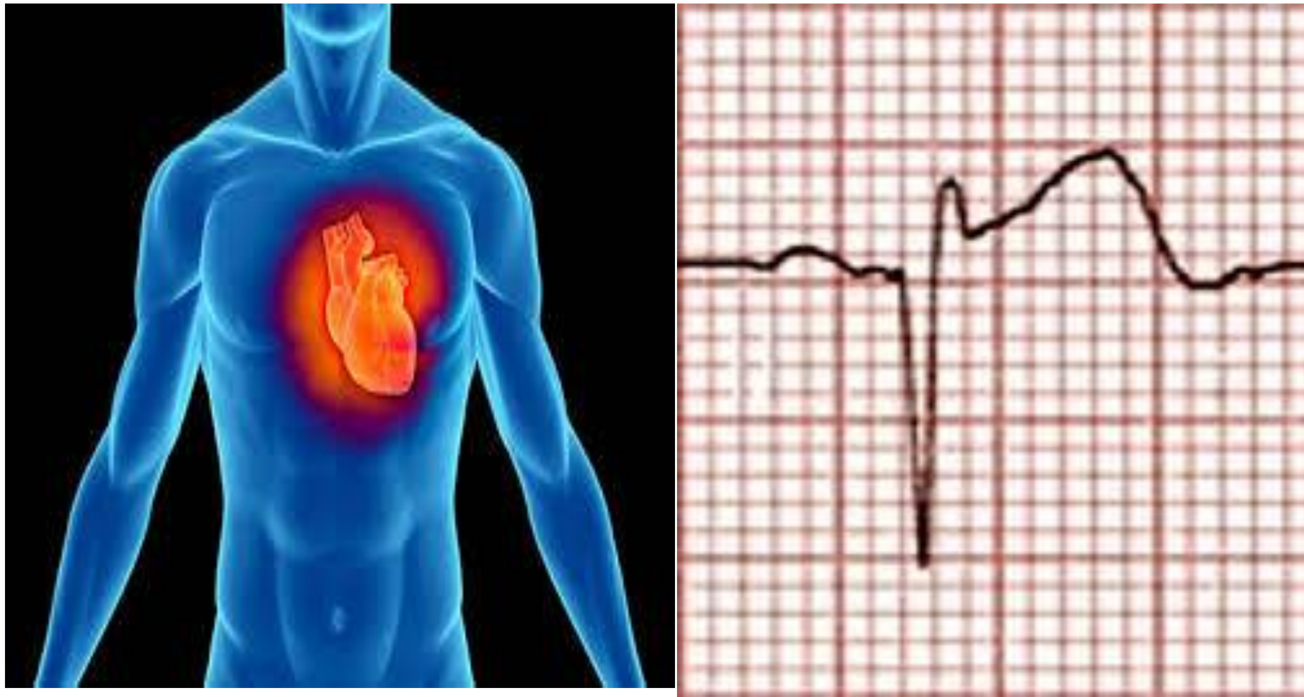






NC Euphora
3.0x15

Onyx 2.5x22 d- RCA
Onyx 3.0x38 at m-RCA

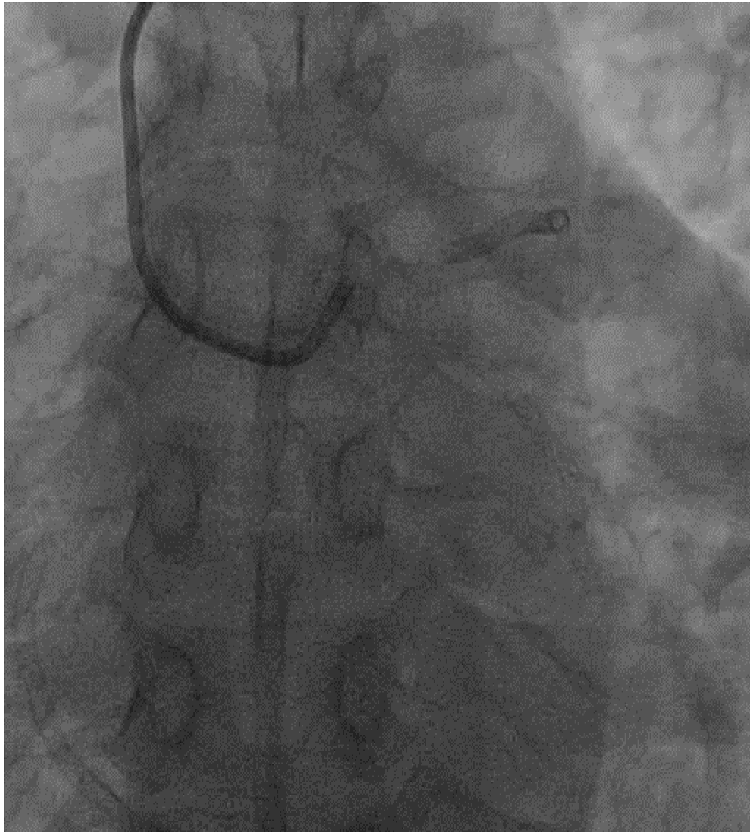


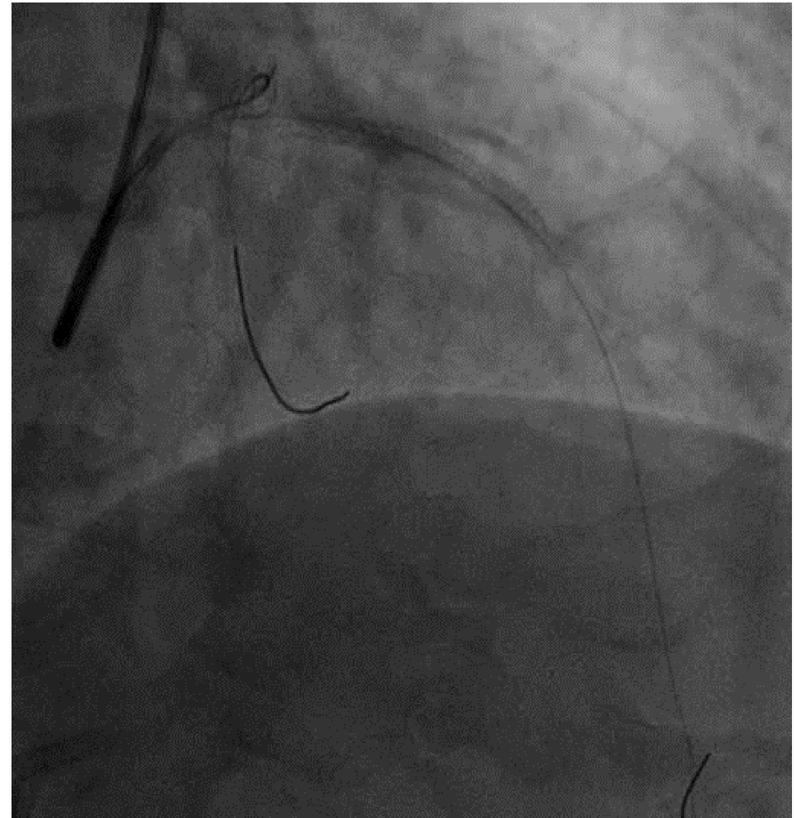
Patient developed chest pain
ST elevation noted in the ECG monitor

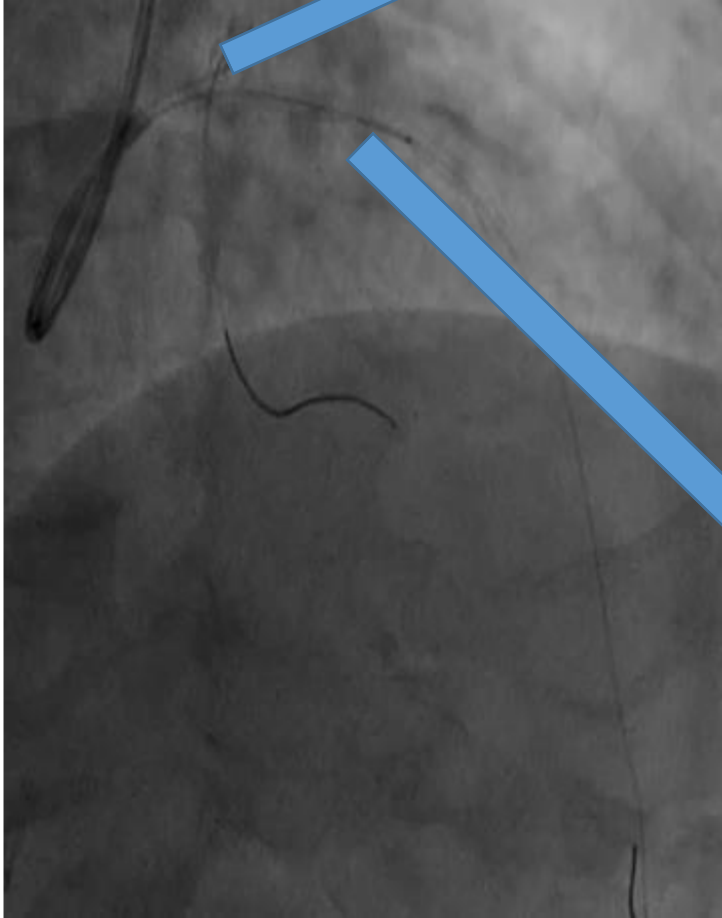
Acute in-stent thrombosis

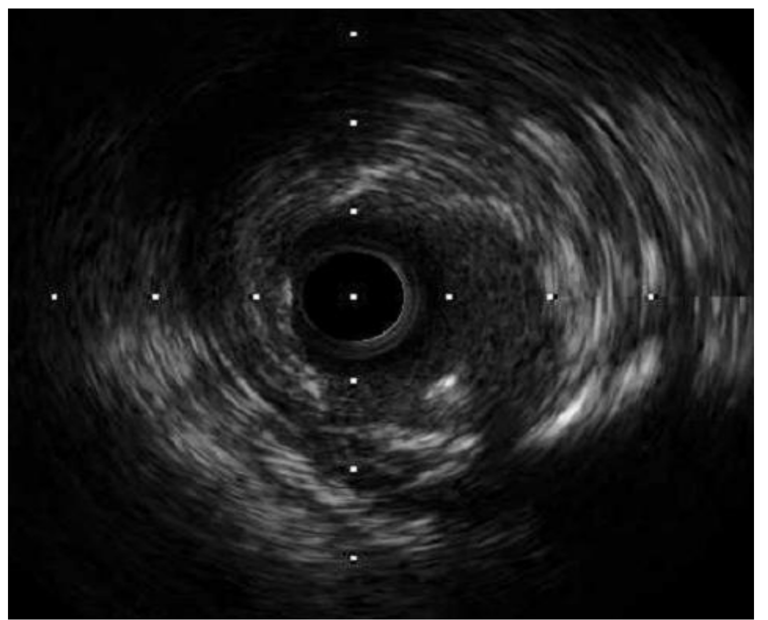
What is your explanation?
What will we do?

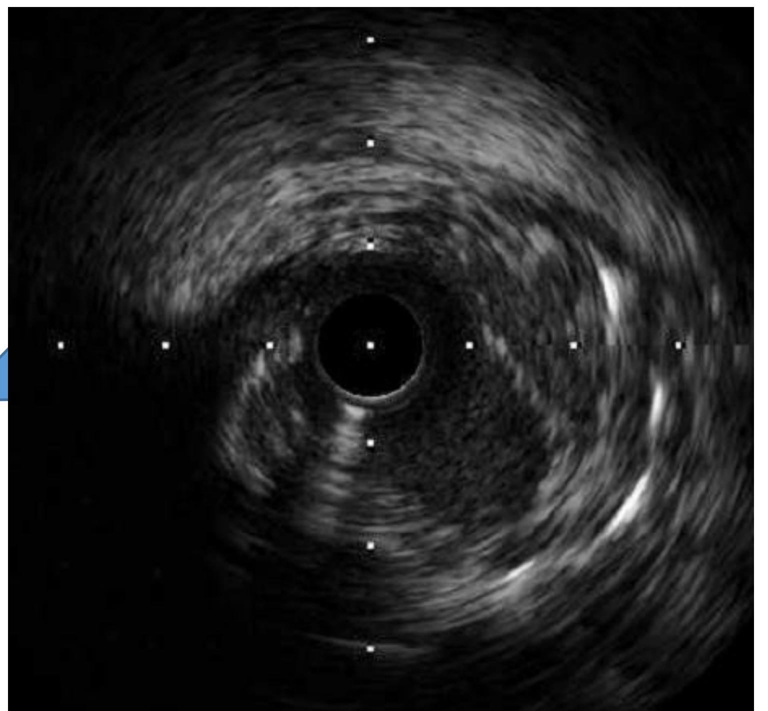
Wiring + Heparin + Ticagrlor



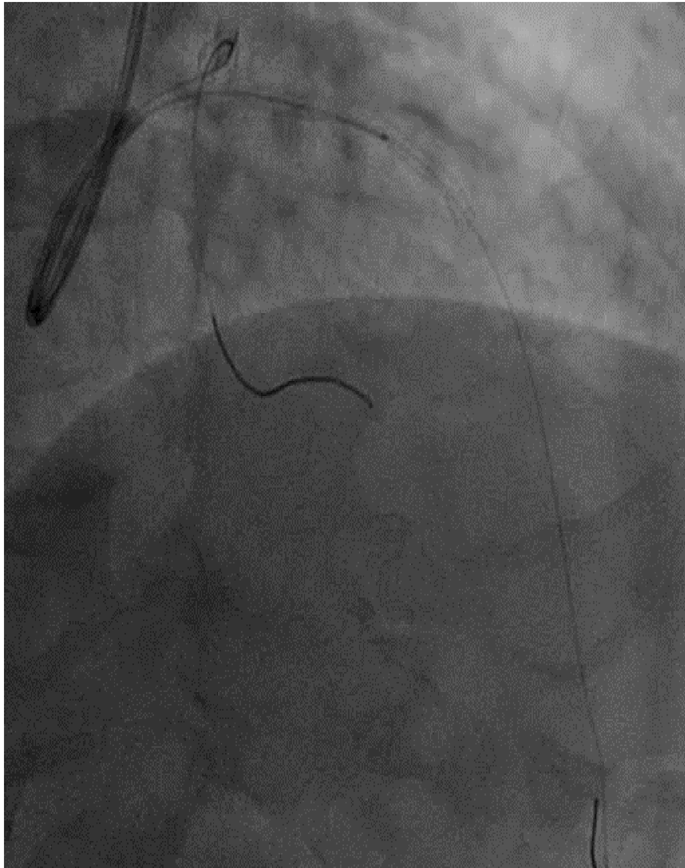


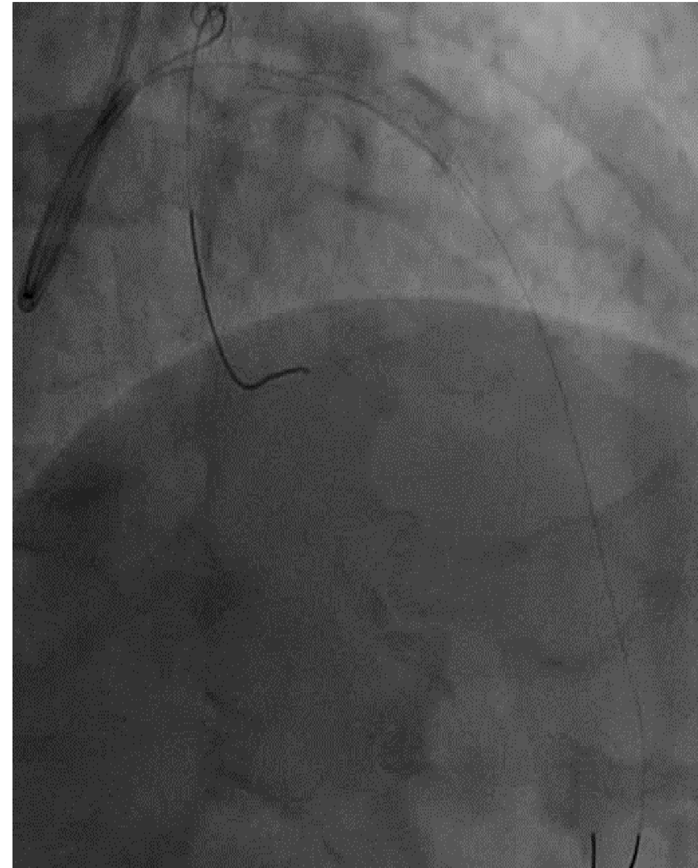




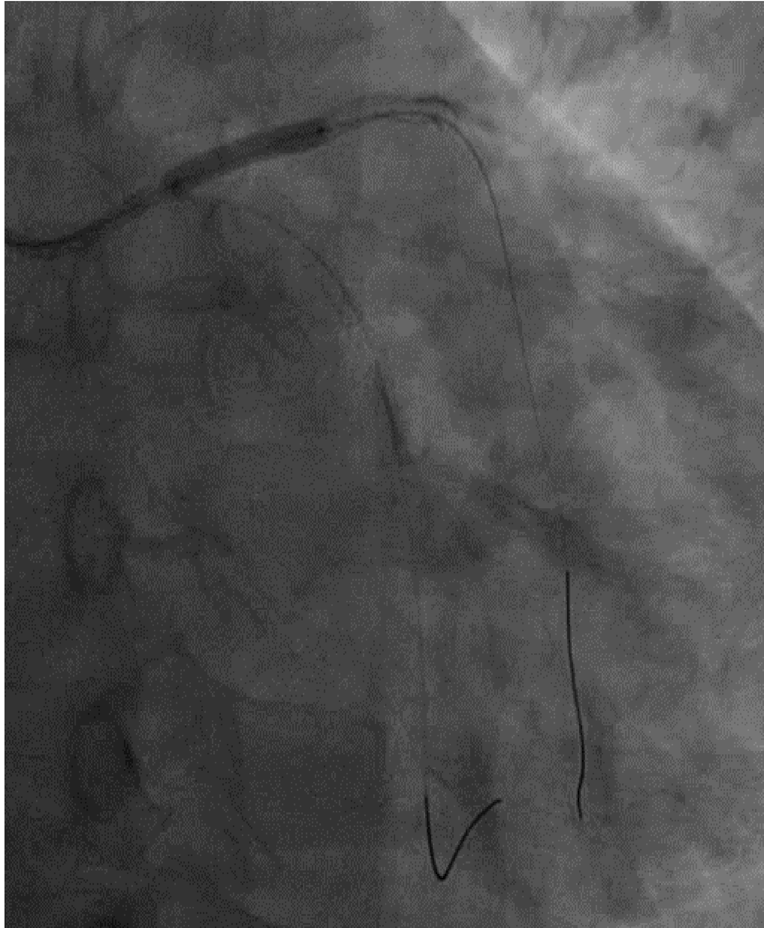


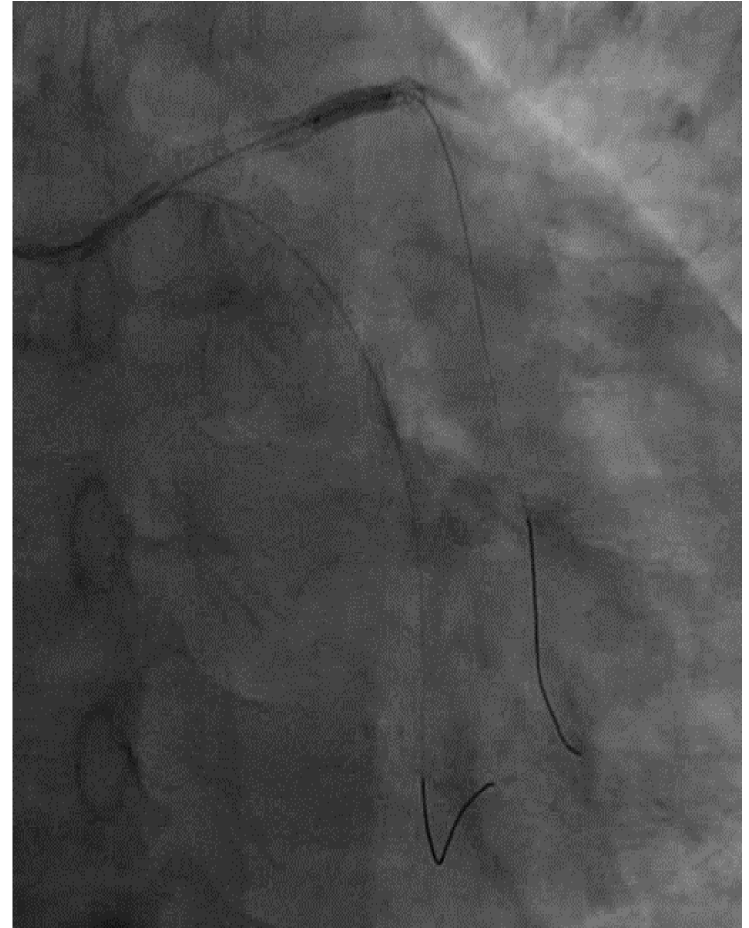
Thormbectomy to LAD with Pronto suction catheter



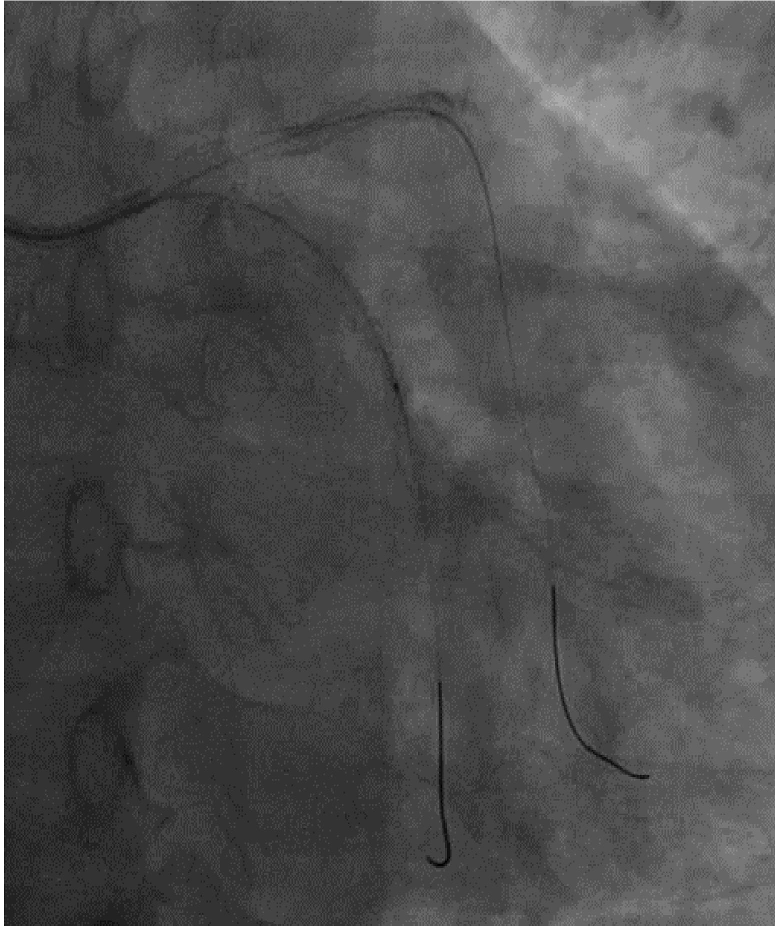


Multiple white thrombi





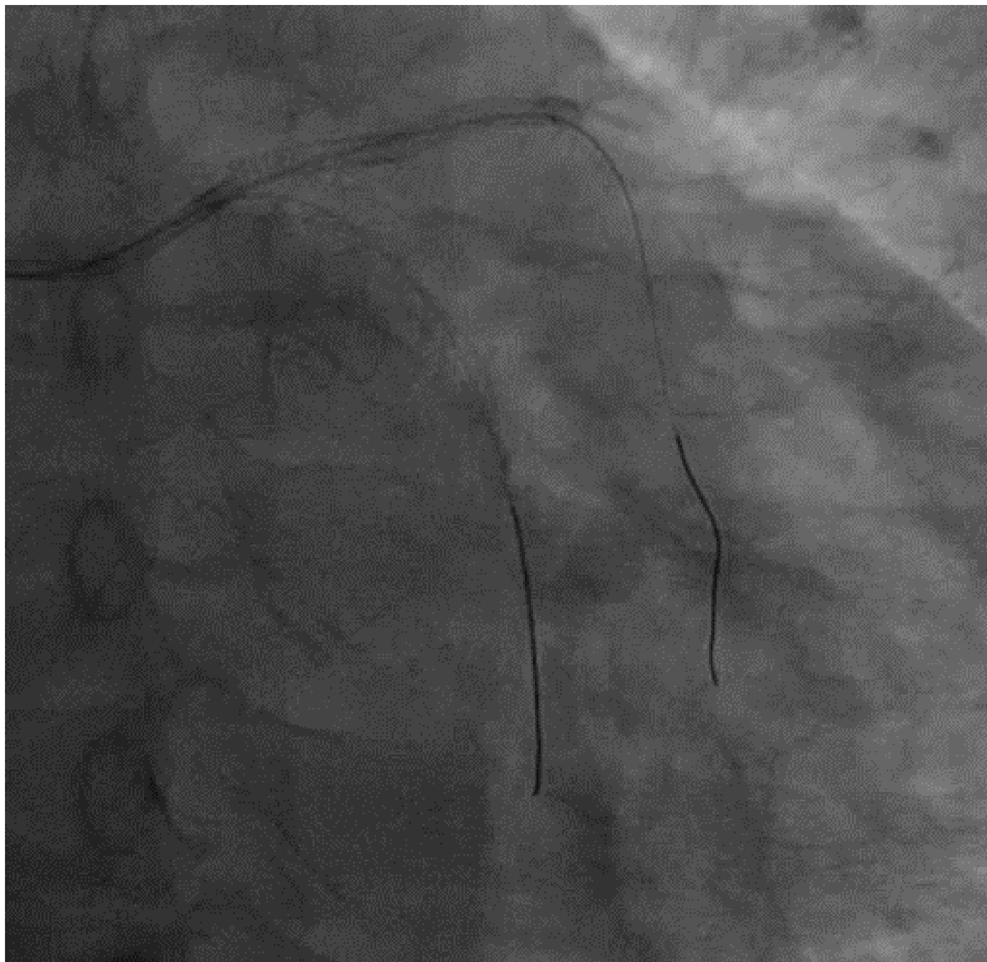
Stenting to os-p LAD Onyx 3.0x24 then high pressure balloon inflation

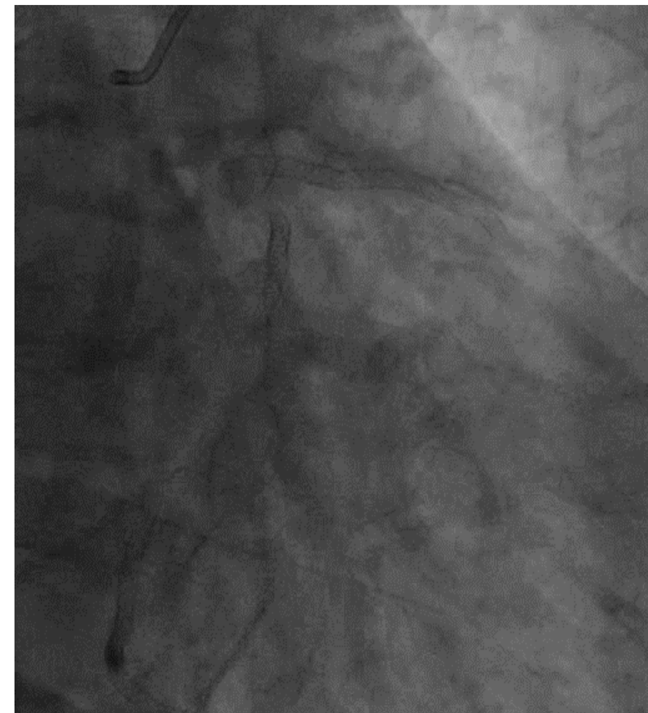


Thrombectomy to **LCX**

Repeated balloon dilatation

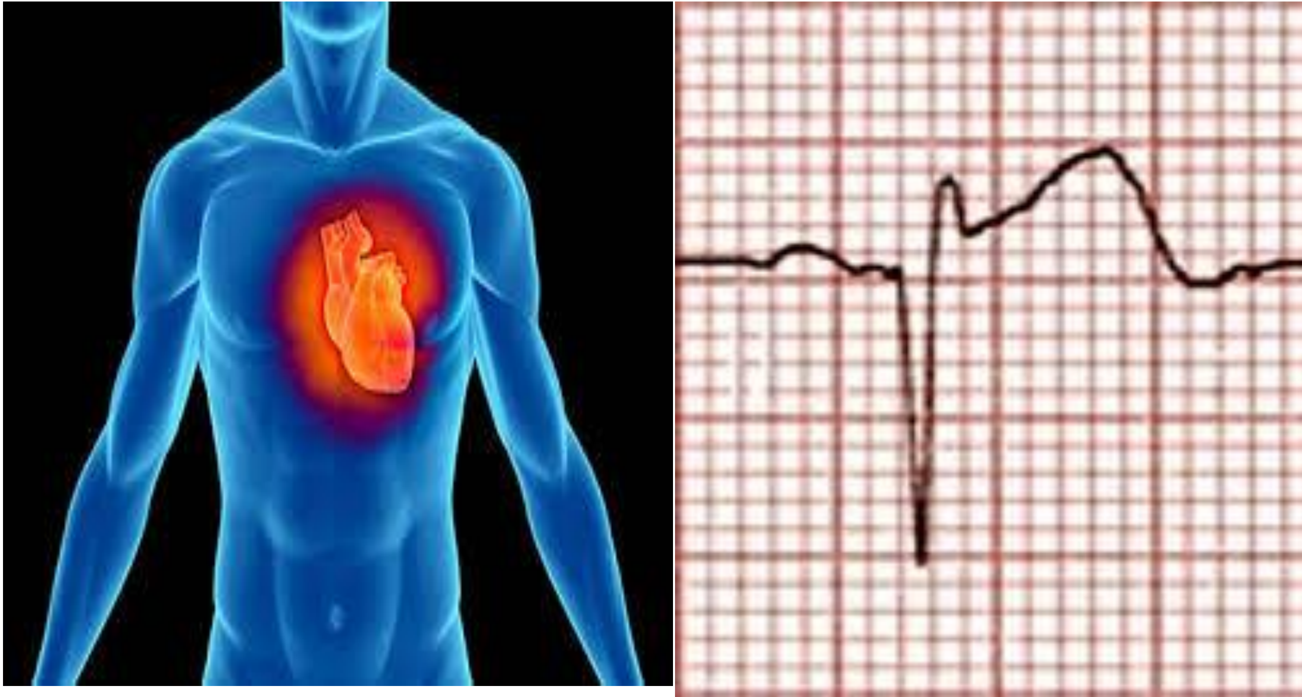
Accepted result





Every thing removed

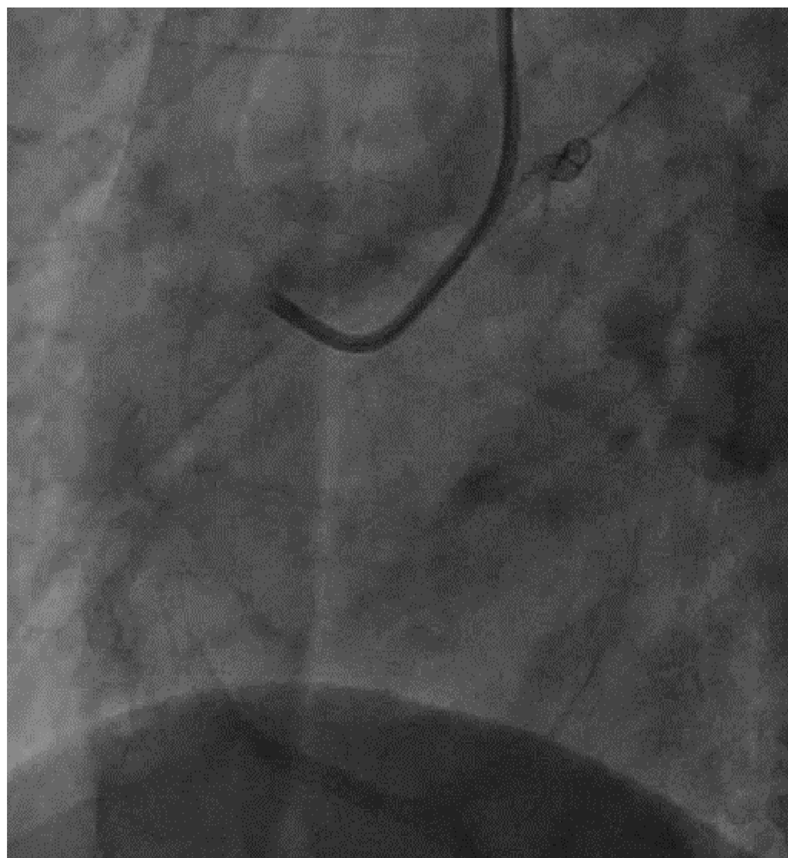
Chest pain , dizziness and hypotension

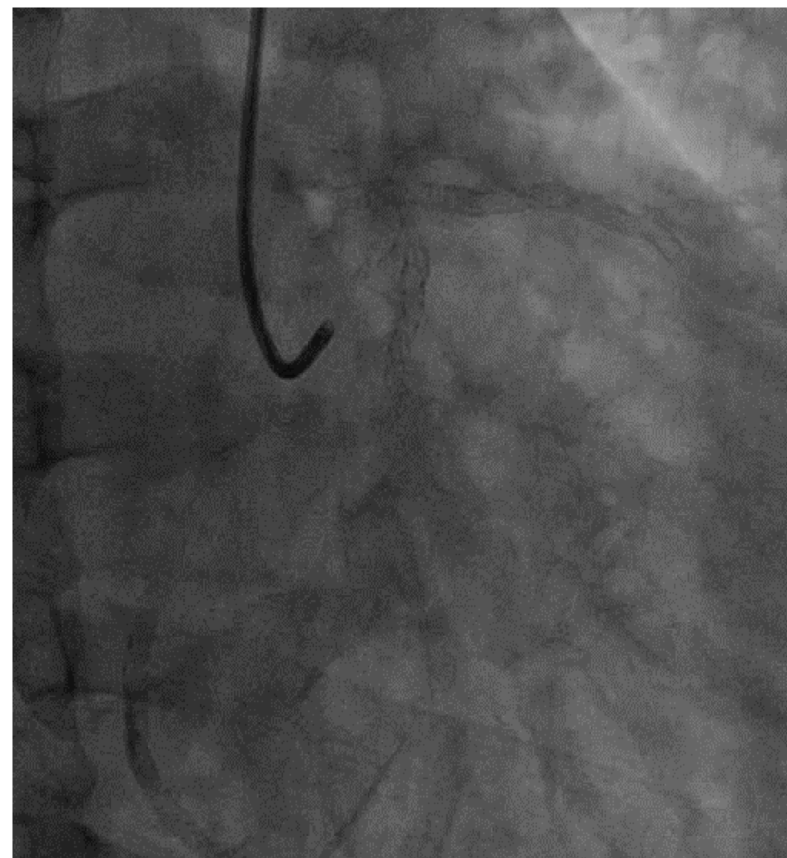


ECG monitor : ST elevation , complete AV block

Damping of blood pressure

We think about RCA

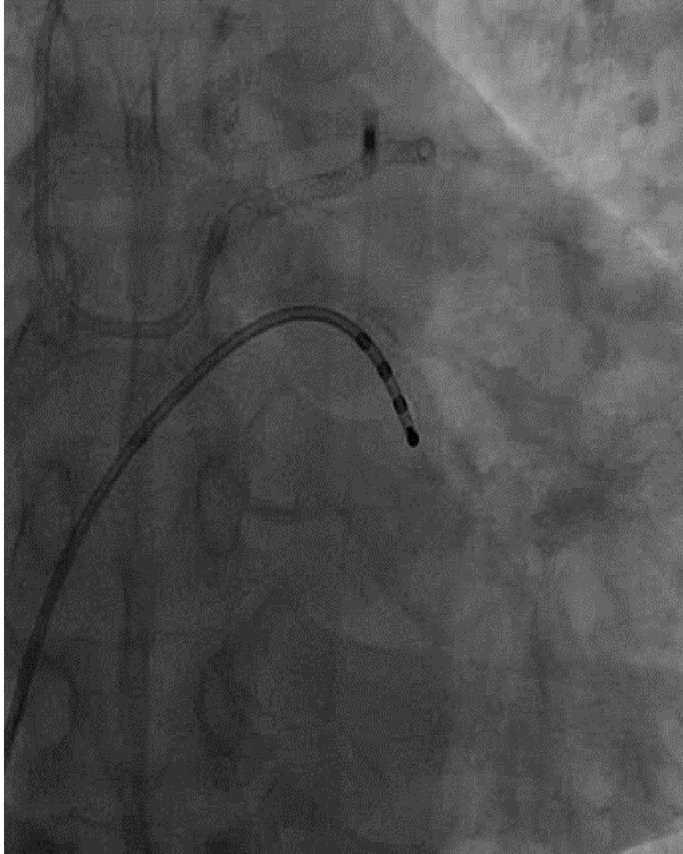


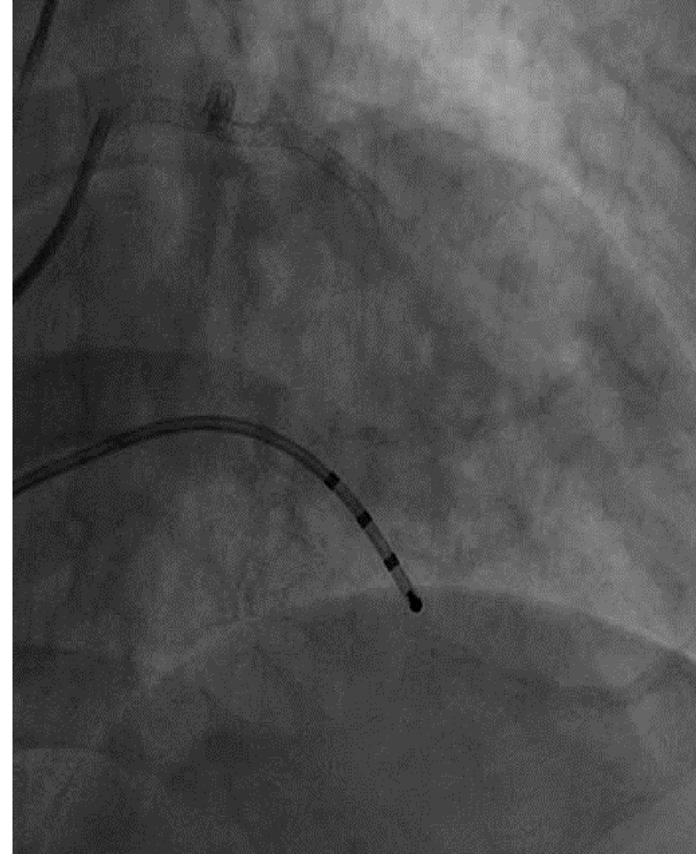


What is your explanation?
What will we do?

- TPM through Rt femoral vein.
- IABP through Rt femoral artery.
- Fondaparinux 2.5 sc STAT.
- Have look to the left system .

Thrombus developed again in LCA



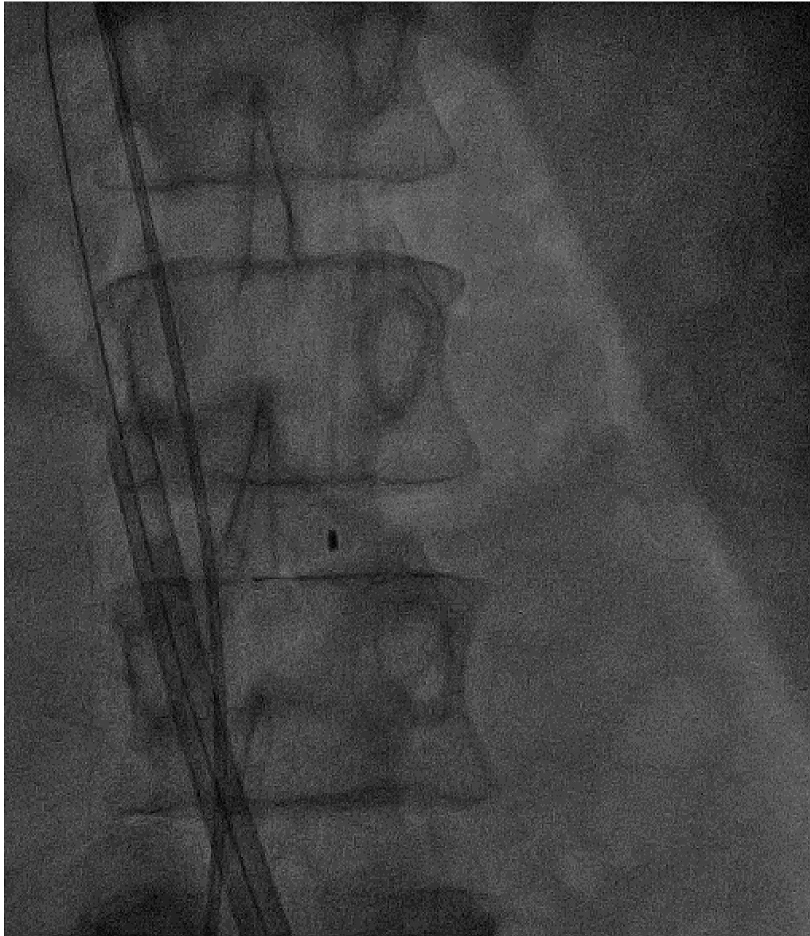


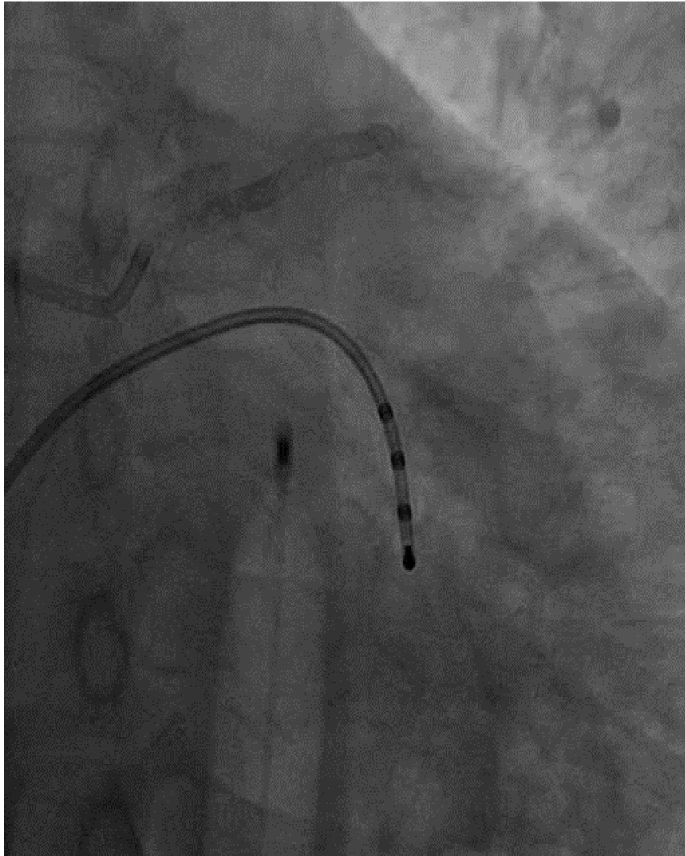
Despite the previous , Patient still not doing well

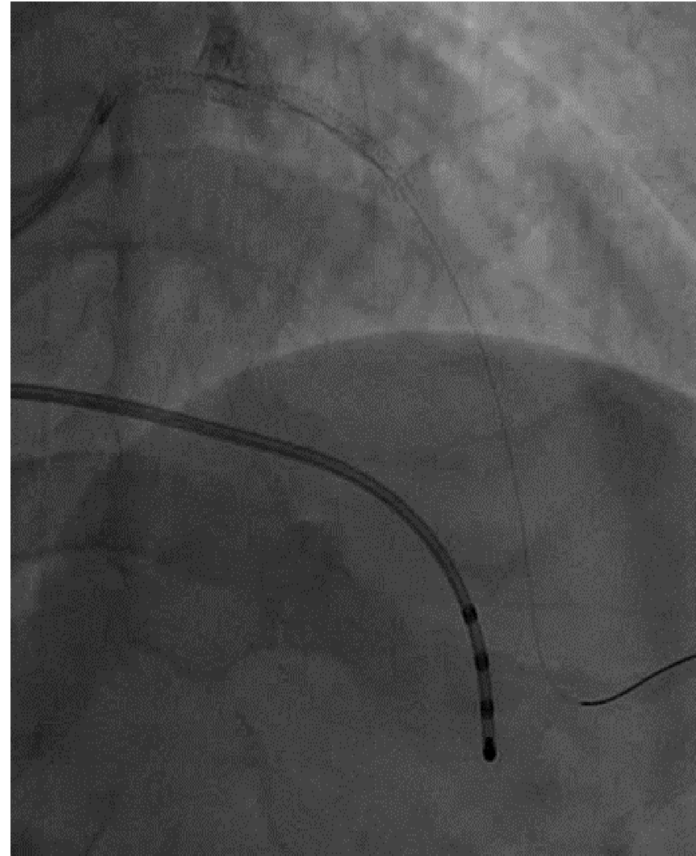
Patient still hemodynamically unstable

- Dopamine infusion.
- Call ECMO team to be ready

Cardiac arrest

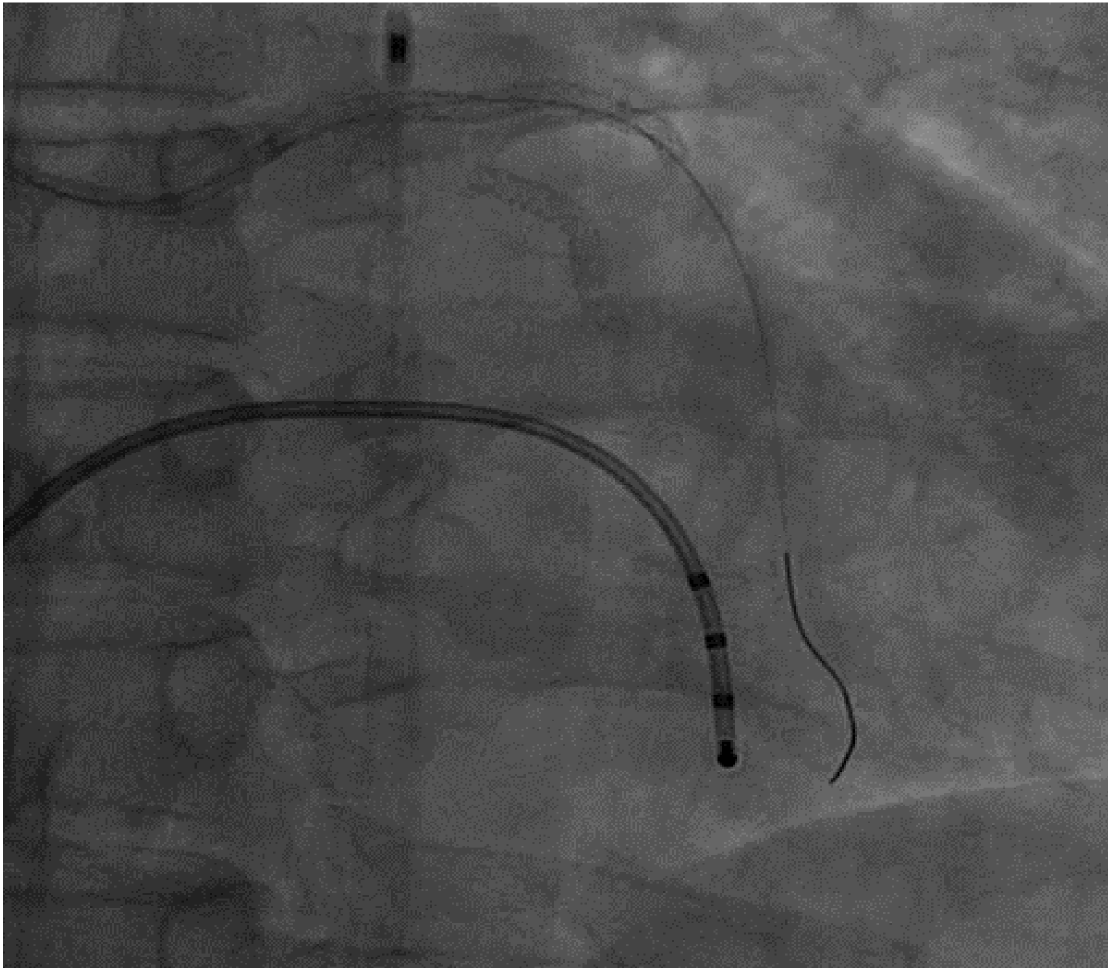






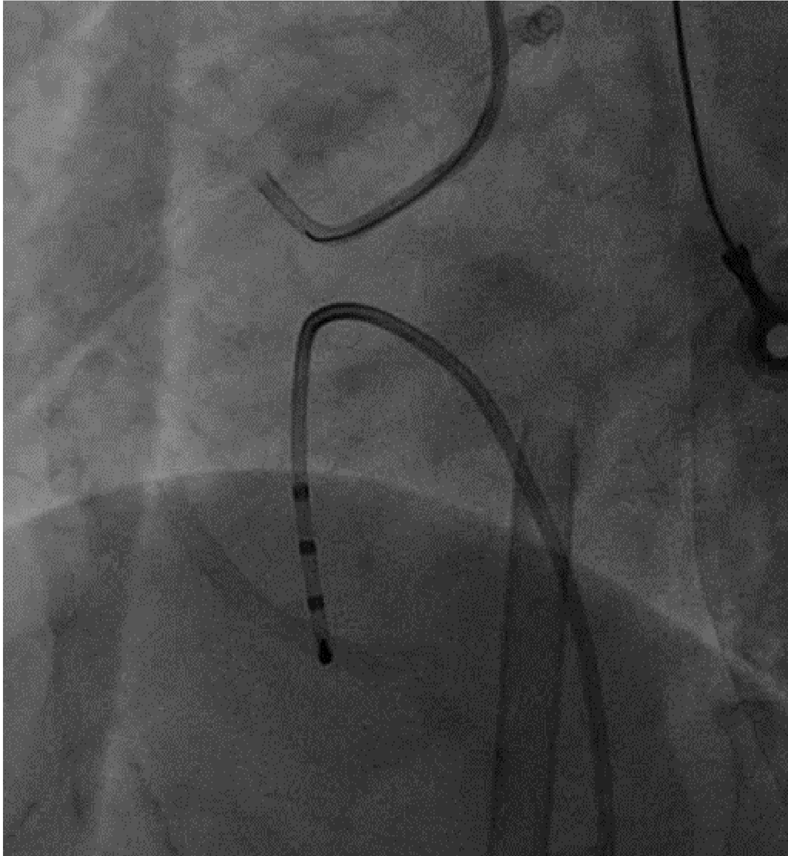
Tirofiban IC + thrombectomy

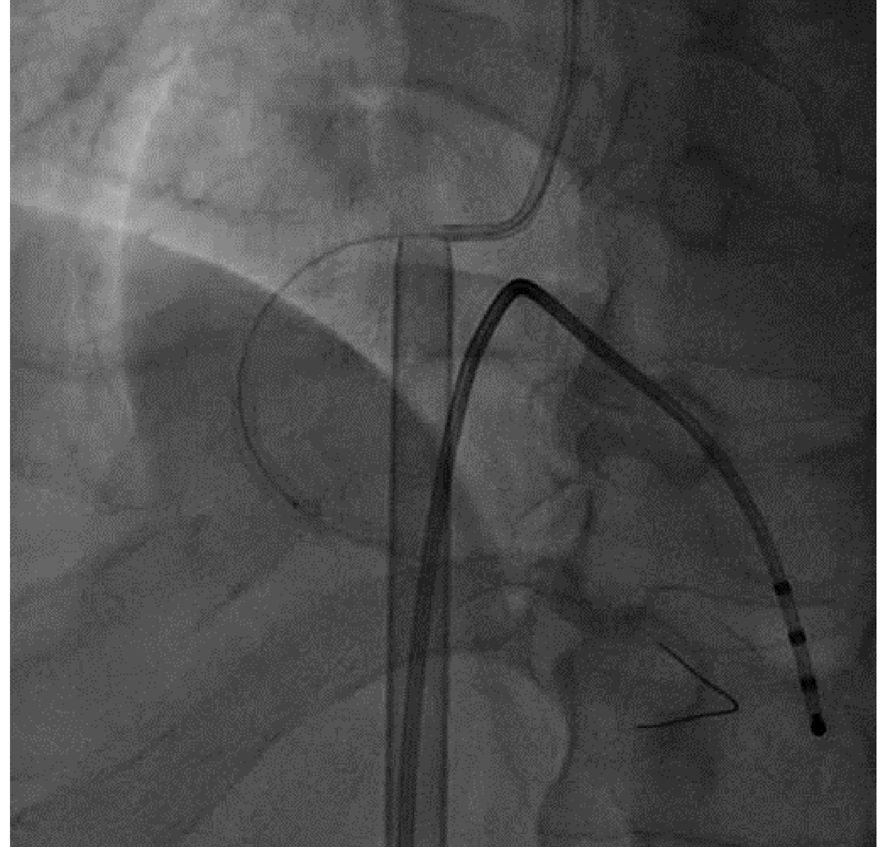
Accepted result in LCA



Hydrocortisone 200mg IV STAT was given for the fear of hypersensitivity of contrast or Zotarolimus polymer

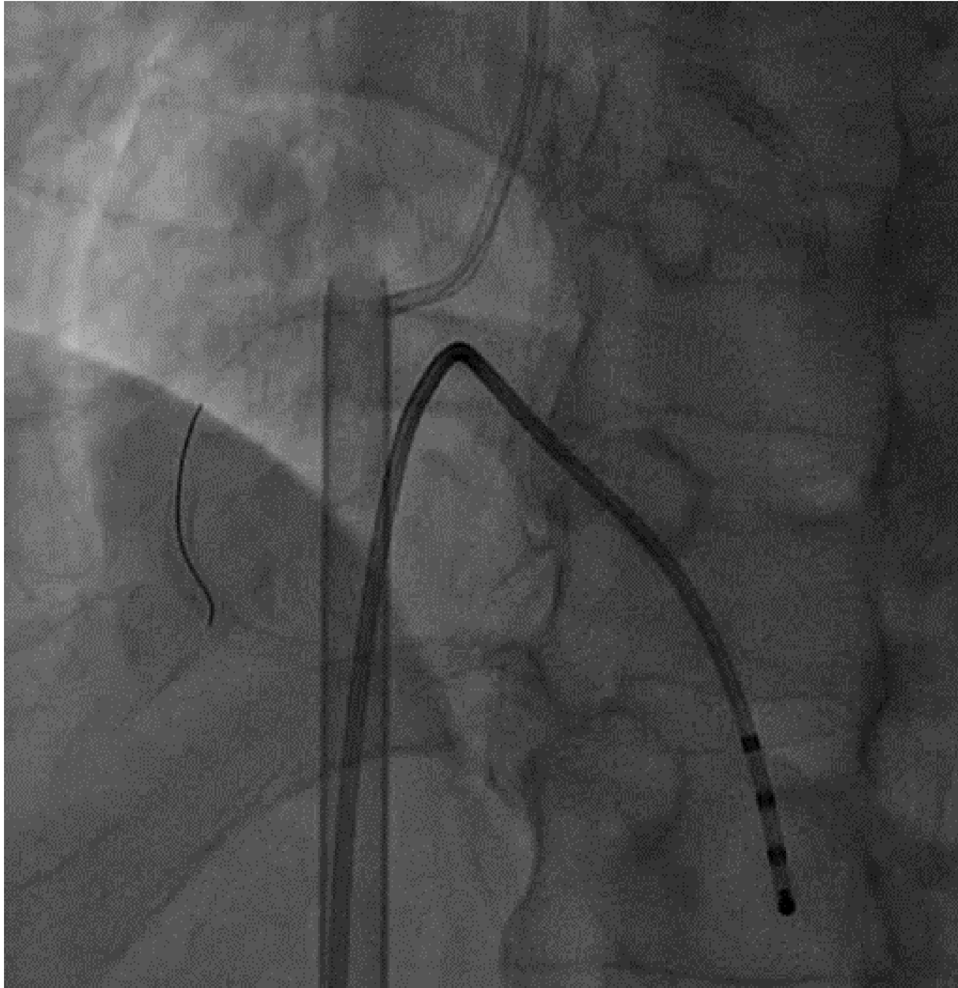
RCA in-stent thrombosis





Wiring - Thrombosuction

Accepted result in RCA



- Patient regain conscious under MV , IABP , TPM,ECMO support
- Shifted to CCU with SBP 120 under dopamine infusion

During CCU

- Bedside **echo** : sever thrombotic diathesis , nearly akinetic heart , EF 17% .
- Hematologist **consultation** : normal tests for hypercoagulable state.

- Tirofiban and fondaparinux was given
- Dual antiplatelet (ASA + Ticagrelor)
- Bleeding : Mild Hematuria + prophylactic PPI

- After one week patient weaned from all support devices
- After 10 days discharged home (Echo EF 35%)

- Follow up after 3 weeks
- Asymptomatic
- ECHO done with EF 50%

Life style

Risk factors for stent thrombosis

Patient factors	*Lesion factors*	*Stent factors*	*Procedure factors*	*Platelet factors*
Diabetes mellitus	Lesion length	Polymer reaction	Inadequate stent expansion (malapposition)	Inadequate antiplatelet therapy
Renal failure	Lesion diameter	Drug reaction	Edge dissection	Resistance to antiplatelet agents
Low EF	Bifurcation lesion	In-stent restenosis	Other untreated stenosis in the vessel	Premature discontinuation of DAPT
Previous MI	Ostial lesion			
Hypersensitivity reaction	Thrombotic lesion			
Drug response				
Smoking				
Noncompliance with DAPT				

What is your definite diagnosis?

Take home message

- Acute **stent thrombosis** is uncommon but life threating complication after PCI.

- Stent thrombosis may be treated with emergent **thrombectomy** , **balloon** angioplasty or potent **antiplatelet** regimens including glycoprotein IIb/IIIa inhibitors.

- The placement of **additional stents** should usually be avoided unless there is a mechanical reason for the initial thrombotic event.

- The use of **imaging such as IVUS or OCT** will often reveal a possible cause of stent thrombosis..

THANK YOU FOR YOUR ATTENTION.
HAVE A GREAT DAY!