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ASIAN INTERVENTIONAL CARDIOVASCULAR THERAPEUTICS
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A COMPLEX CASE WITH A UNIQUE COMPLICATION

Guideziella catheter fracture in left main stem and retrieval with trapping balloon technique

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☑ I do not have any potential conflict of interest

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Background

- 65 years old male: underlying DM, hypertension, COPD, paroxysmal atrial flutter.
- Coronary angiogram in 2015 showed chronic total occlusion of LAD and RCA, severe proximal lesion of 80% at LCX.
- Counselled for CABG but he refused CABG and opted for medical therapy.
- Presented with chest pain and an episode of syncope.
- Diagnosed as non-STEMI and atrial flutter.
- Echocardiogram: LVEF 17% with global hypokinesia.

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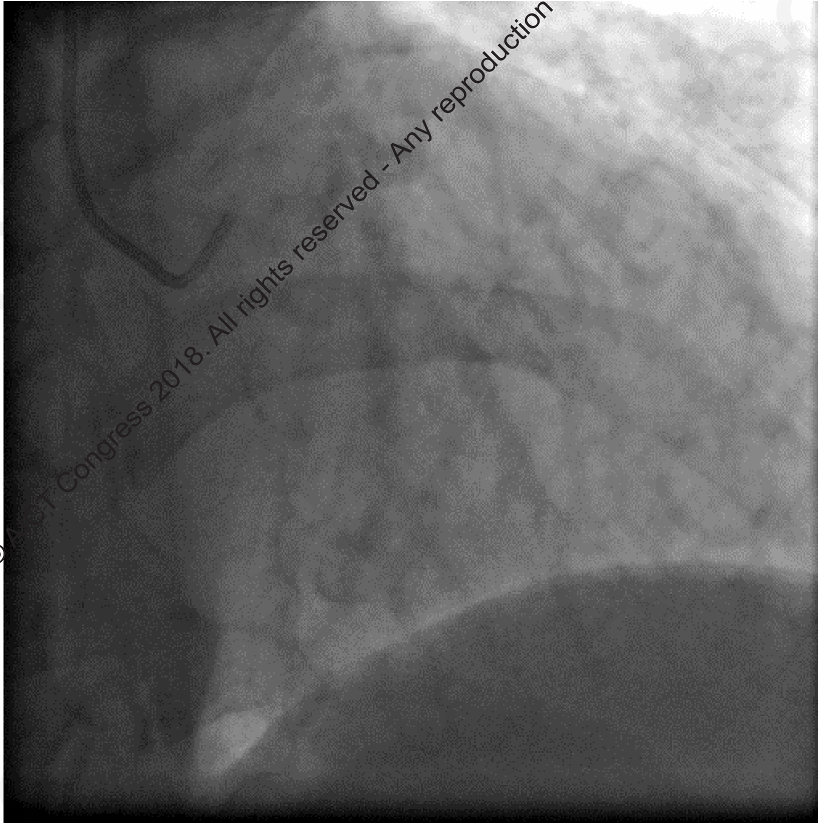
Coronary angiogram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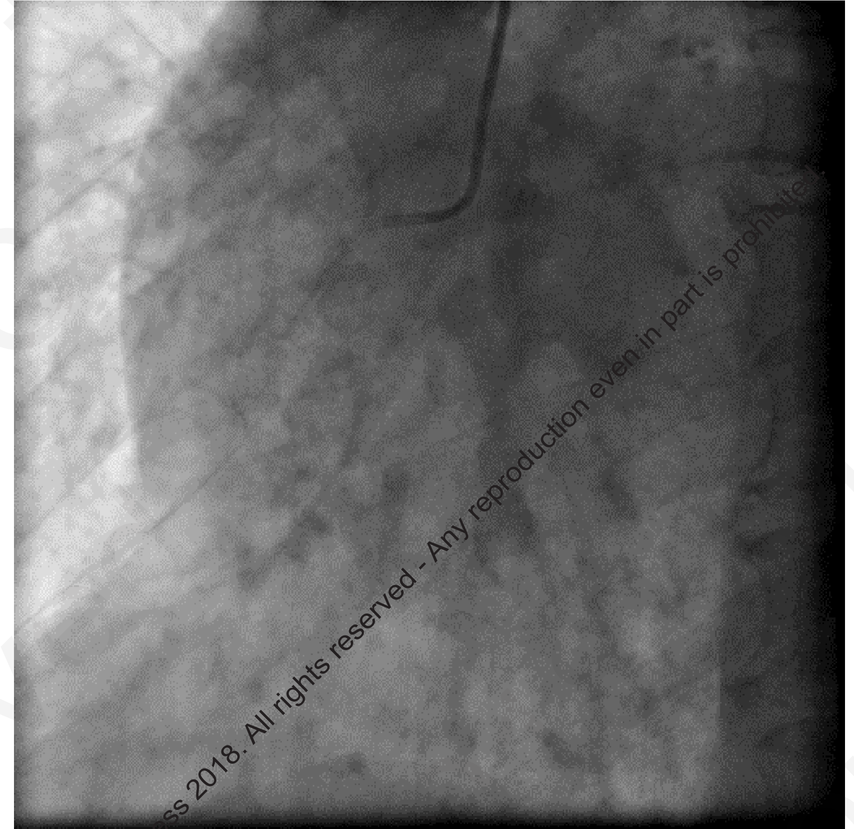
CTO LAD and severe LCX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CTO RCA collateral to LAD

CABG vs High-risk PCI

- Discussed in multidisciplinary meeting.
- Cardiothoracic surgical team decided that the patient is not a good candidate for surgery in view of multiple comorbidities with poor LV function.
- Electrophysiology team suggested to manage ischaemia prior to implanting ICD for primary prevention of SCD.
- Informed consent was taken to undergo high risk angioplasty.

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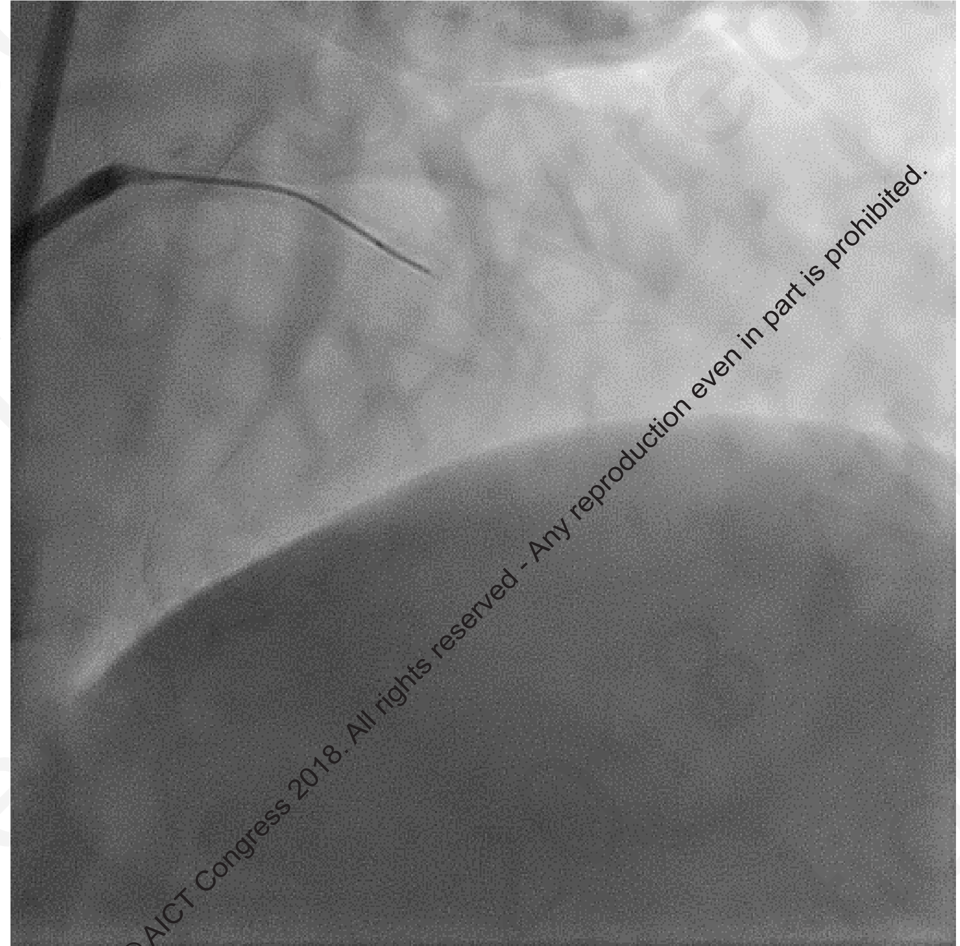
PCI to LAD with IABP support

- Intra-aortic balloon pump support.
- Guiding catheter EBU 3.5/7F.
- Wired down to LAD by using Runthrough floopy and another wire to diagonal.
- LAD wired down using **microcatheter finecross** which is managed to cross with parallel technique.
- Pre-dilated with SPRINTER 1.5/15 sequentially until proximal, then use SCOREFLEX 2.0 x 20 mm, then EMERGE 2.0 x 15 mm, then TAZUNA 2.5 x 20 mm, then NC QUANTUM 2.5 x 20 mm.
- To crack the calcified plaque.



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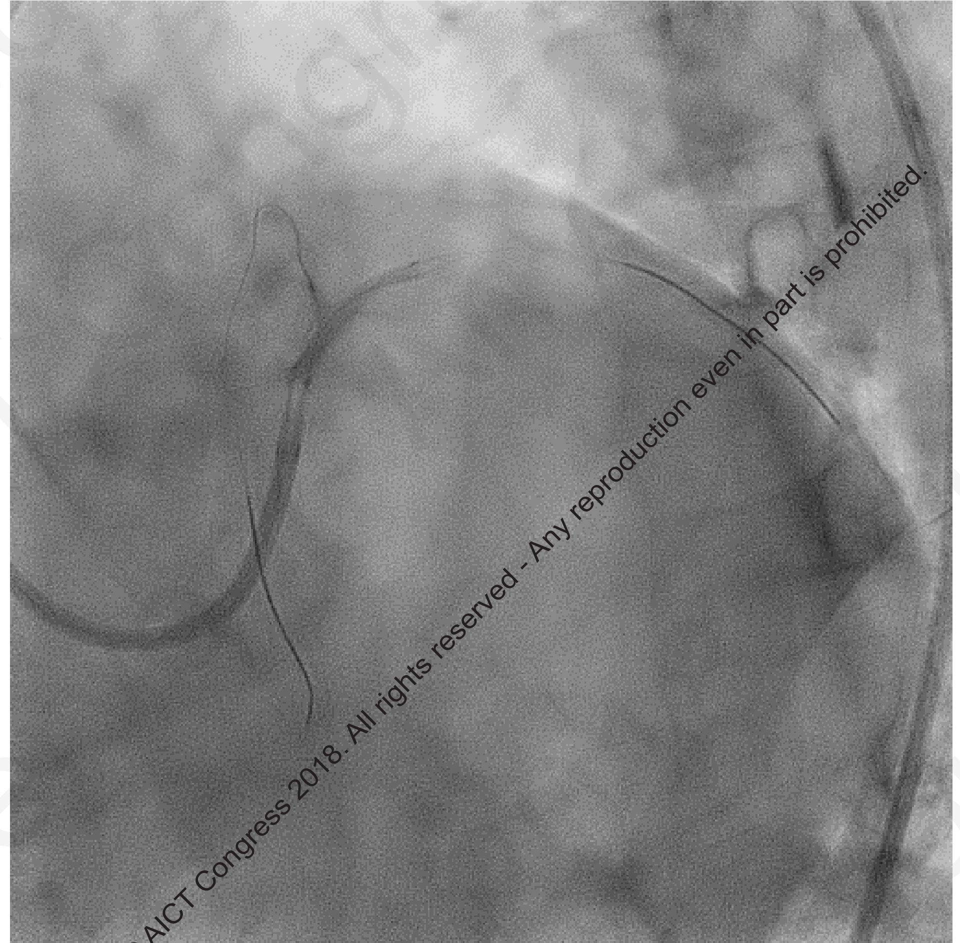
Kissing balloon in LAD and LCX

- Kissing balloon technique was used to improve flow in LCX.
- EMERGE MONORAIL 2.0/15 MM in LCX and SCOREFLEX 2.0/20 mm in LAD @ 8 ATM.
- Distal LAD was planned for drug eluting balloon (DEB) only.
- However, DEB was not able to advance due to calcification, then decided to deployed DEB sequent please Neo 2.5/30 mm at mid segment of LAD.
- Then, pre-dilated again with NSE ALPHA 2.5 x 13 mm sequentially.



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PCI to proximal and mid-LAD

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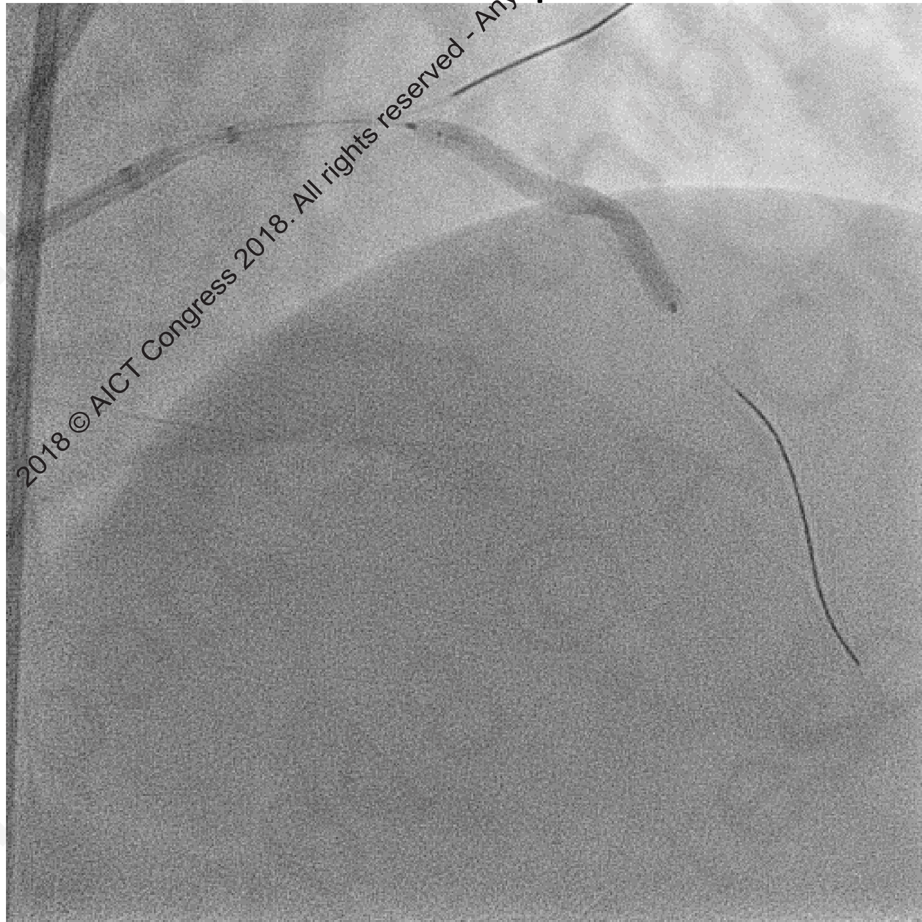
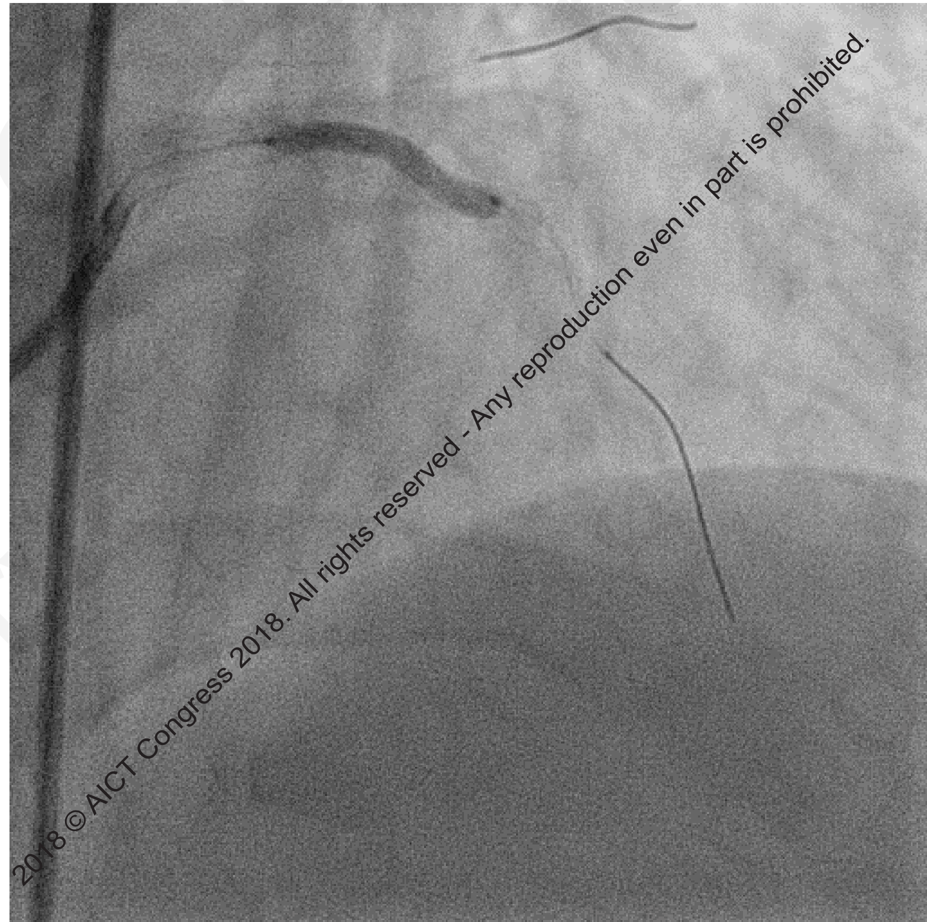
- In view of heavily calcified artery, decided to use guidezilla.
- Introduce Stent CRE-8 2.5 x 30 mm with some difficulties and deployed at 12 atm at mid LAD, then overlapped with another CRE 8 3.0 x 25 mm at 12 atm then 14 atm at proximal LAD.





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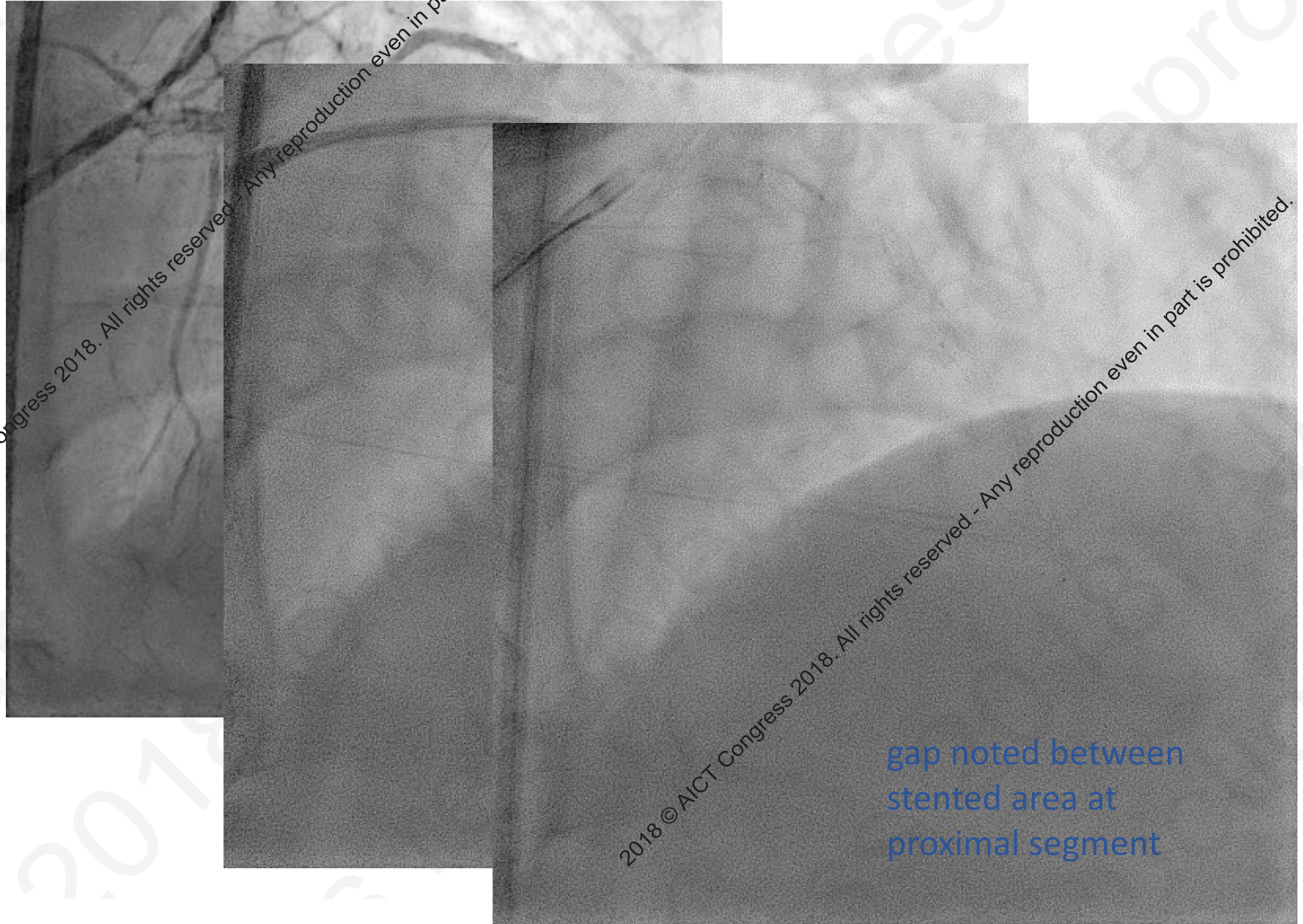
Dissection distal to the stent



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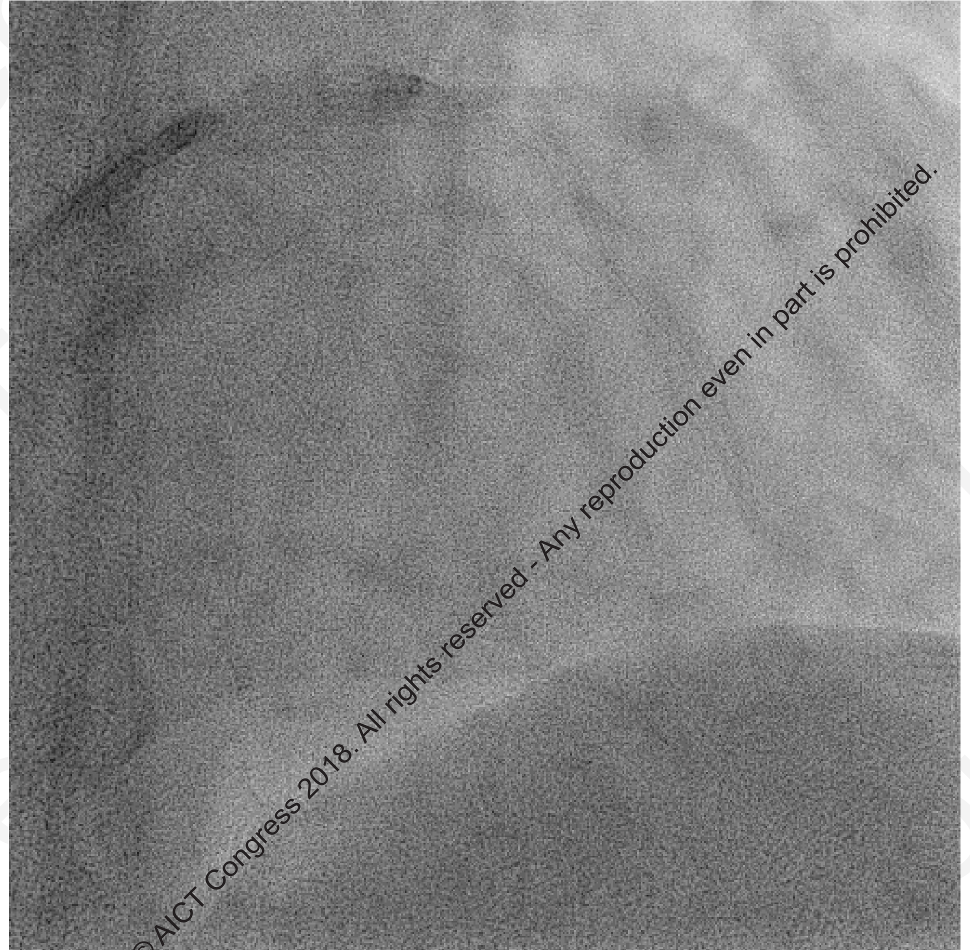
Guidezilla fructured in left main

- Using gudezillla again push it into previous stent.
- Guideziella was not able to introduce short stent CRE 8 2.5 x 8 mm.
- Noted the guidezilla was fractured and left the tip in left main stem.



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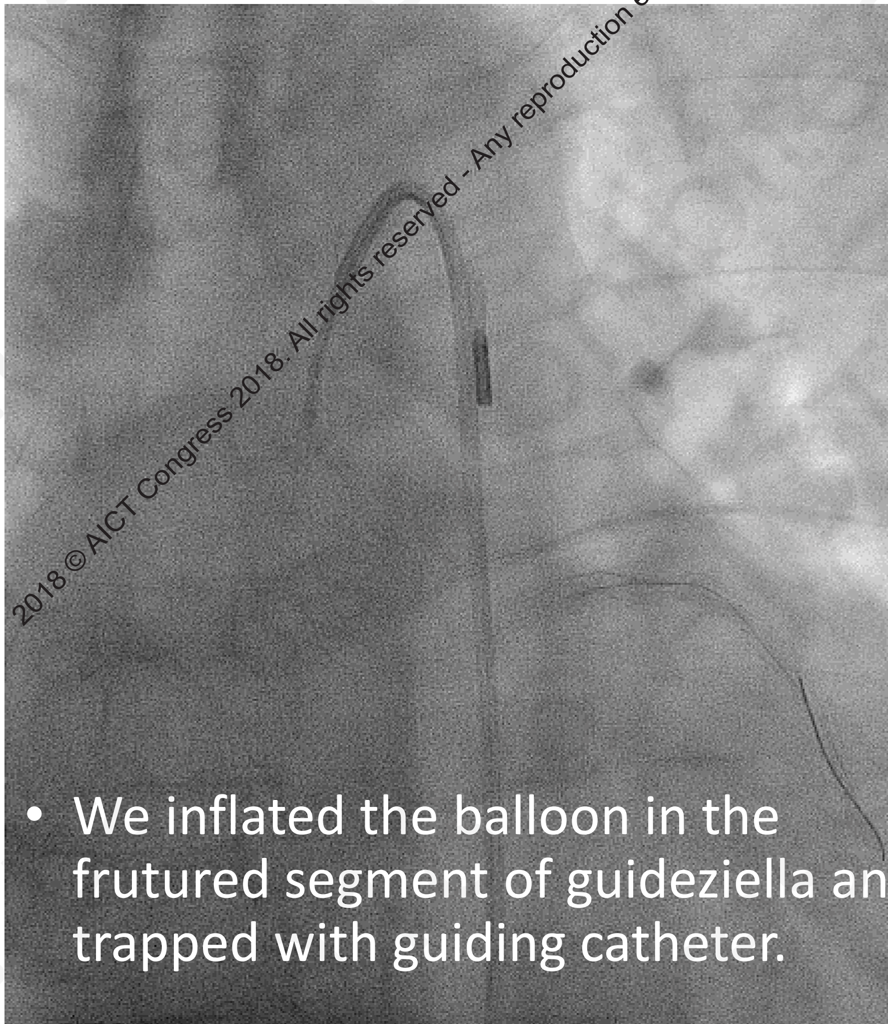
Trapping balloon technique for retrieval of fractured guideziella



- We inflated the balloon in the frutured segment of guideziella and trapped with guiding catheter.
- Then removed by withdrawing the whole system via right femoralsheath.

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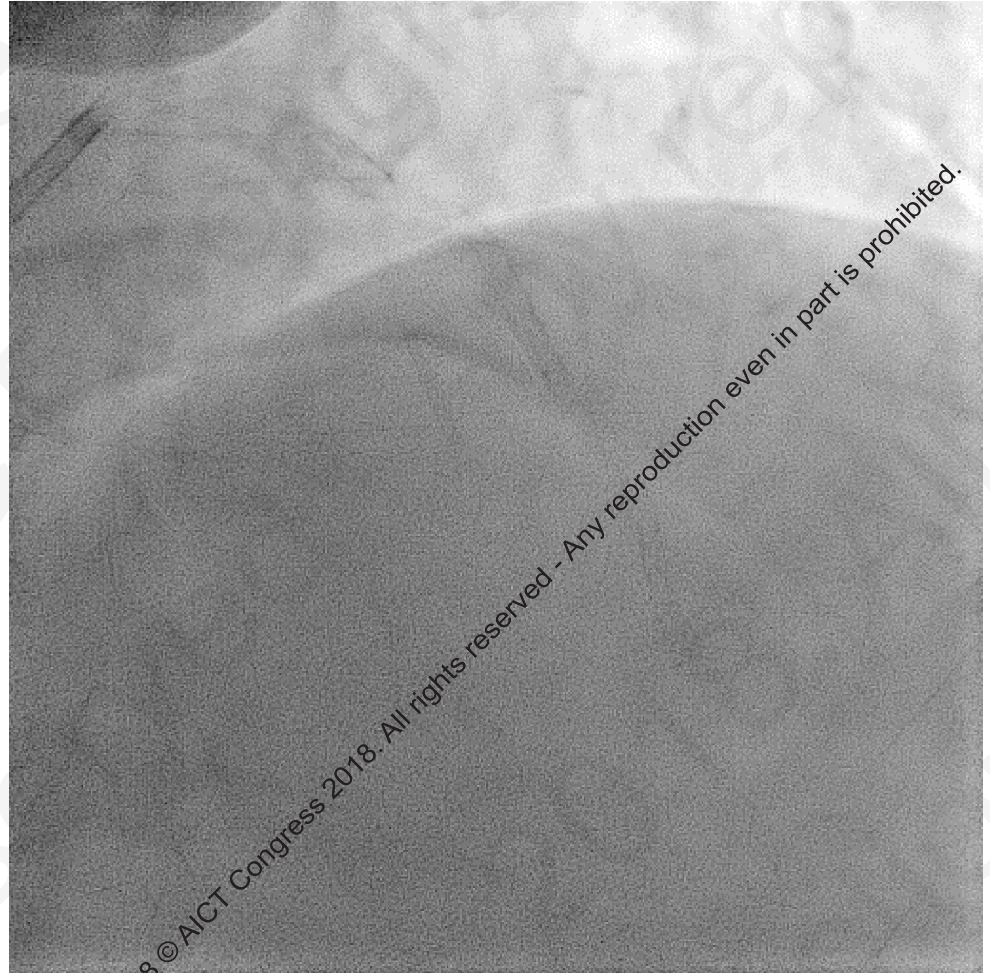
Good final result

- Stent deployed again after reengagement with same guiding cathether and wire
- TIMI III flow and good result
- Patient was monitored in CCU for 2 days
- ICD was implanted for primary prevention of sudden cardiac death.
- Patient was discharged well after 1 week.



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Learning points

- PCI is a feasible option for patients with severe triple vessel disease with poor LV function.
- Mechanical circulatory support with IABP.
- We should use rotational arthrectomy to prepare severely calcified lesions.
- Lesion preparation with several cutting balloons with high pressure could lead to dissection.

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Learning points

- Guideziella guide supporting catheter is designed for performing complex PCI by facilitating to deliver devices such as stents and balloons.
- Need to be gentle when advancing devices.
- Multiple usage of guideziella to pass through the stent could lead to fracture of its tip.
- Retrievial techniques: Trapping balloon technique or two wires technique .

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Conclusion

- Explained the possible complications to the patient prior to the procedures.
- Vigilent monitoring and careful handling of devices is mandatory.
- Early detection of complications can prevent serious complications.
- Do not panic.

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7 - 9th September 2018

Hong Kong

Convention and Exhibition Centre (HKCEC)

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