



Catheter-Induced Spiral Dissection of the Left Main Coronary Artery

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Background

- Catheter-induced coronary artery dissection is an uncommon complication of PCI, but when it occurs, the outcome can have devastating consequences
- The estimated occurrence is approximately 0.008 to 0.02% of diagnostic catheterizations and 0.06 to 0.07% of percutaneous coronary interventions

Andrew j, Boyle et all J Invasive Cardiol, 2006



Case Presentation

A 60-years-old man

Dyslipidemia

Heavy smoker

Severe chest pain, CCS FC IV

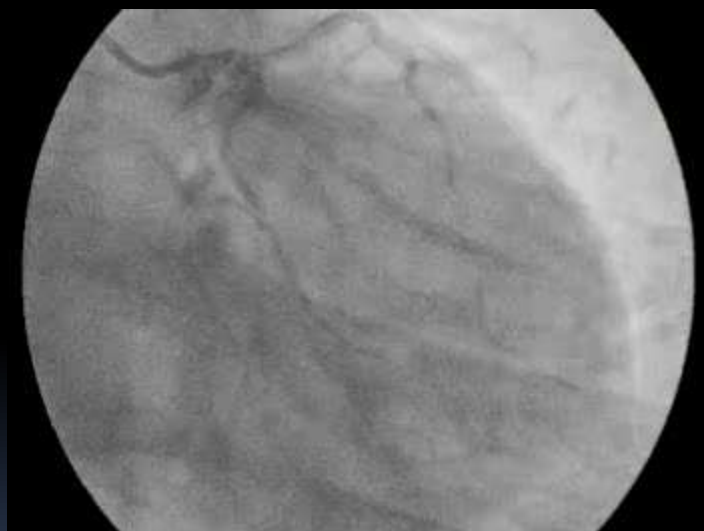
ECG : Anterolateral ischemia

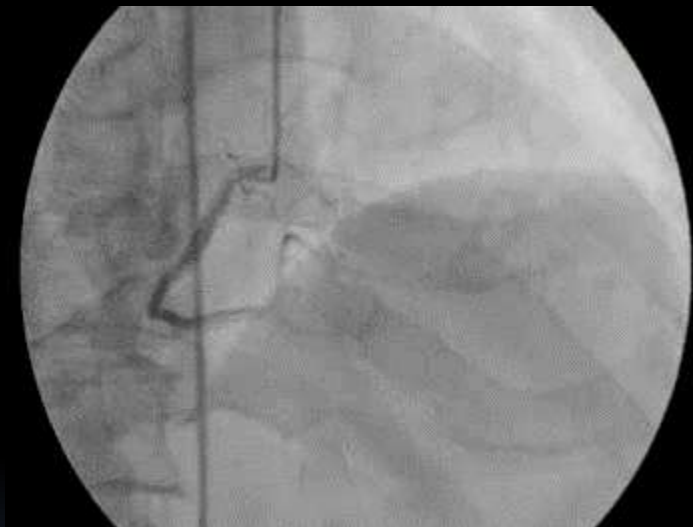
Troponin T increase 0,2 ng/ml

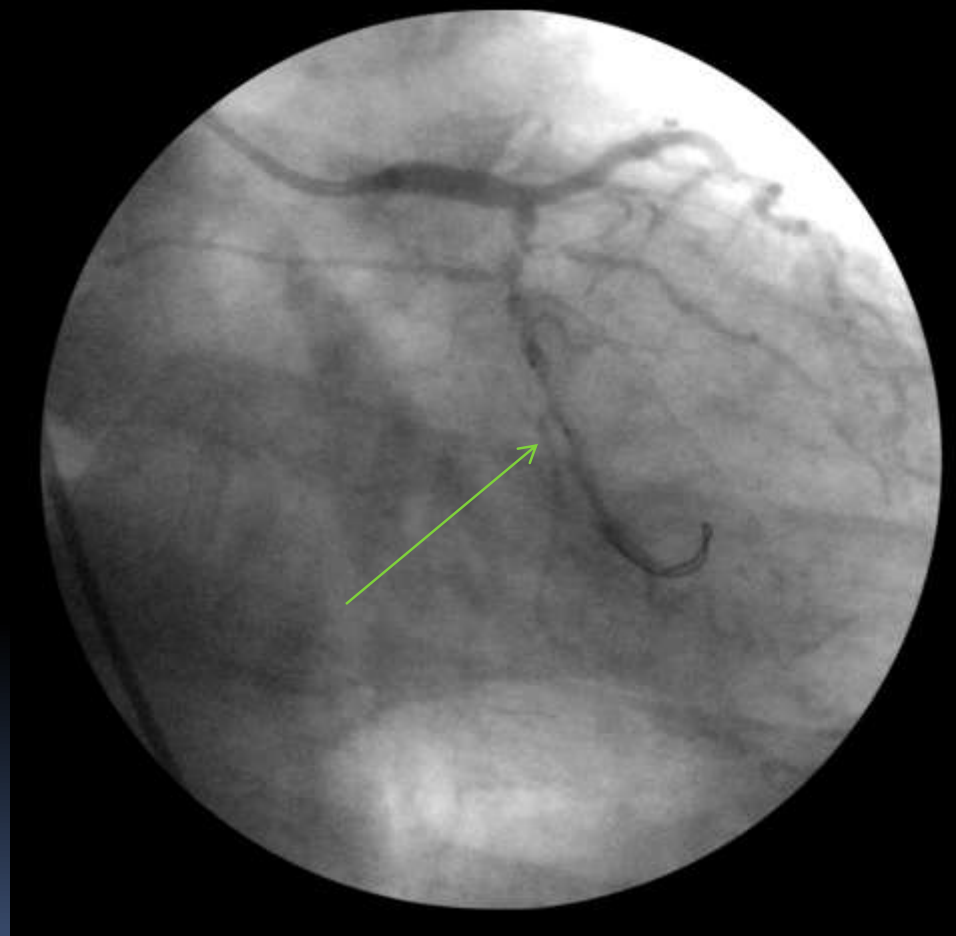
Echocardiography :
Normal , EF : 65 %,

Dx : ACS, NSTEMI









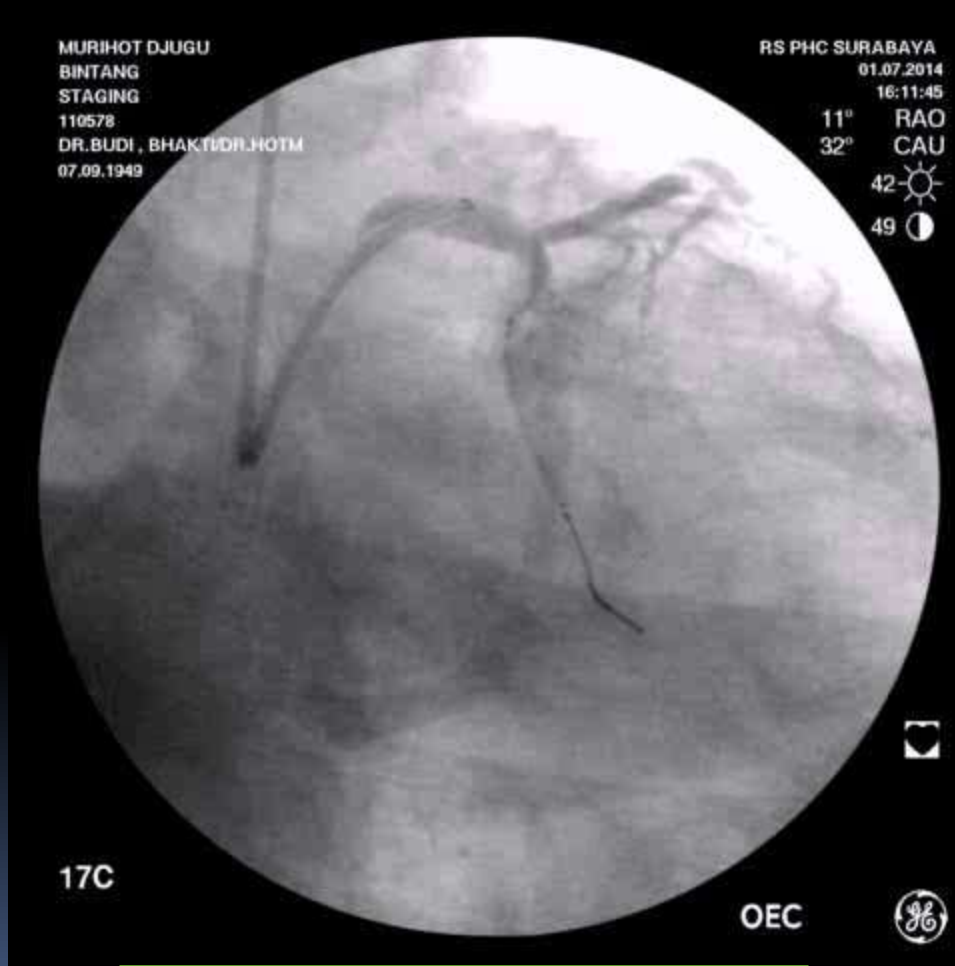


- The LCX was engaged with a 7 Fr BL 3.5 (BL 3.5)
- 6 Fr Judkin' s Left 4 (JL 4)
- Wire Runthrough NS cross to LCX
- predilatation with balloon sapphire 2,0 x 12 mm.

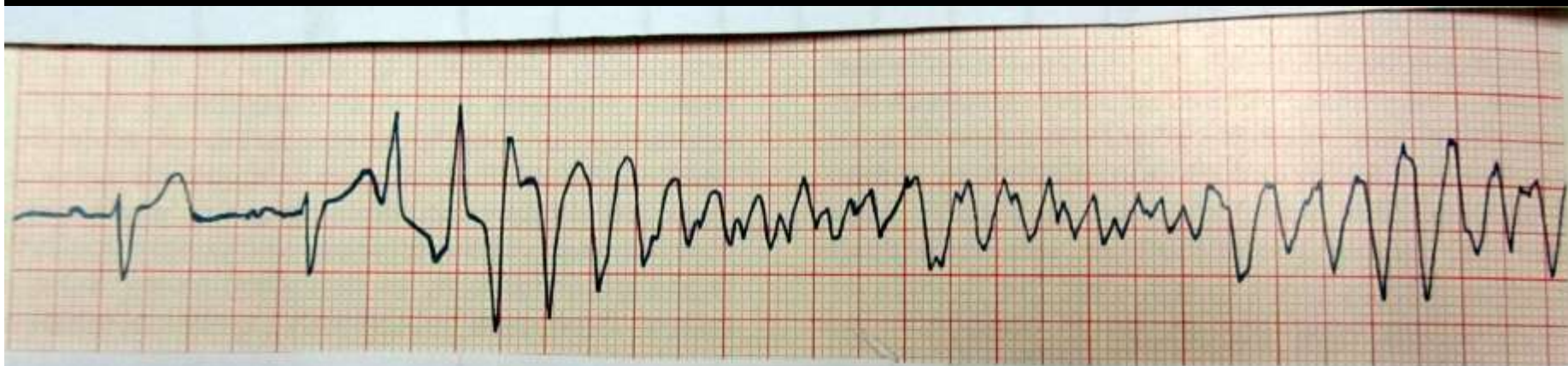




Guiding catheter was inadvertently deep seated into the LM,
↓
severe chest pain
↓
ventricle fibrillation
↓
CPR
Defibrillation at 360 joules



Stent Create 2.5 x 25 mm



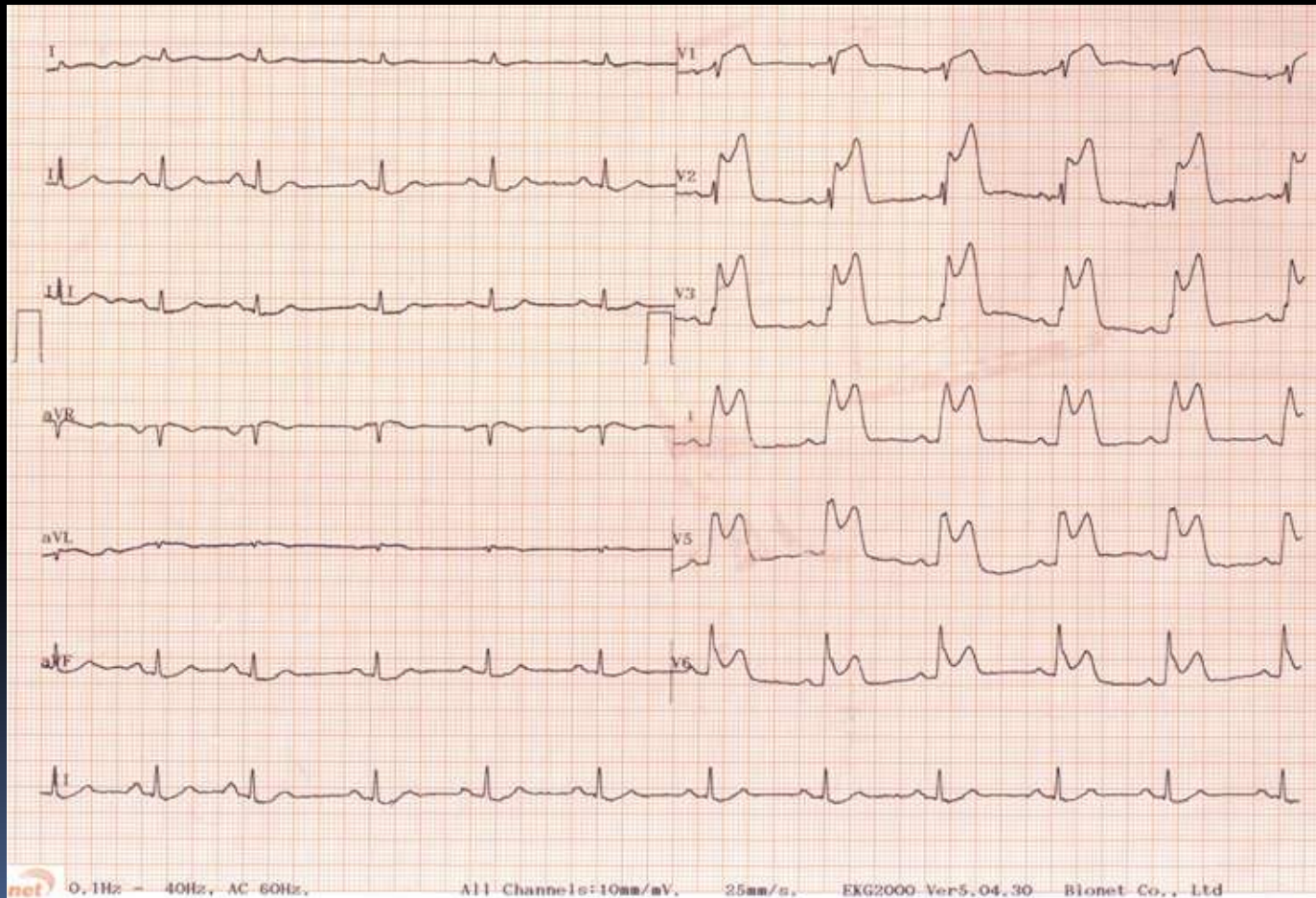


A 6 Fr, BL 3.0 (BL 3.0) guiding catheter we attempted to engage

Fluoroscopic test injection demonstrated a spiral dissection from the ostium left main to mid LAD .

ST-segment elevation in the anterior leads







- What should I do..?
- Be calm
- Make immediate decisions.



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RS PHC SURABAYA
01.07.2014
16:18:37
9° RAO
32° CAU
28 ☀️
32 🌑



15C

OEC



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RS PHC SURABAYA
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16:22:43
4° RAO
22° CRA
33 ☀️
21 🌑



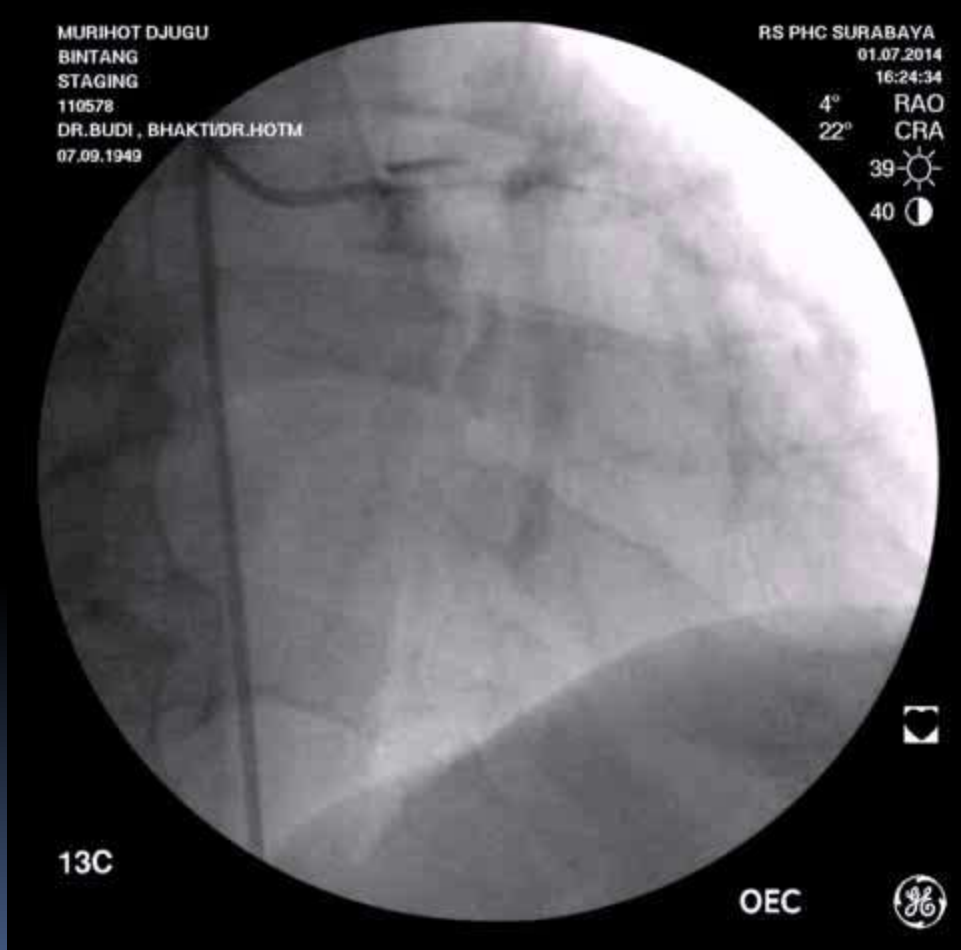
14C

OEC





Stent Azule 4.0 x 28 mm from ostial LM to distal LM





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16:25:10
4° RAO
22° CRA
43
49



12C

OEC



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RS PHC SURABAYA
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16:26:37
41° RAO
25° CAU
35
24



9C

OEC



Stent Azule 4.0 x 28 mm



from proximal to mid

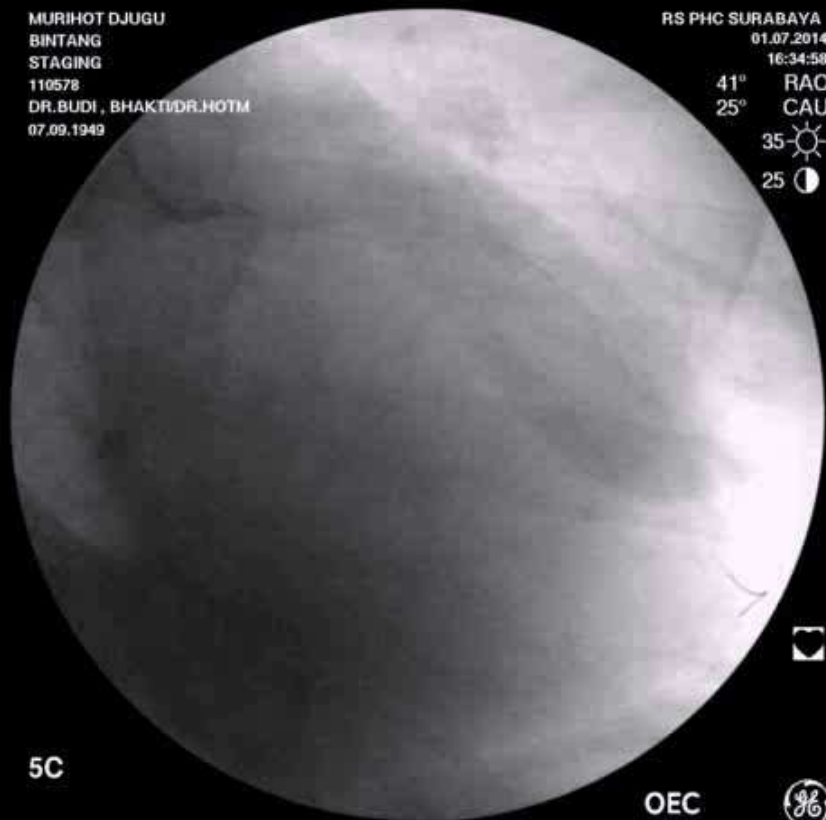


Stent prokinetik 3.5 x 35 mm



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16:34:58
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25° CAU
35-☀
25-☾



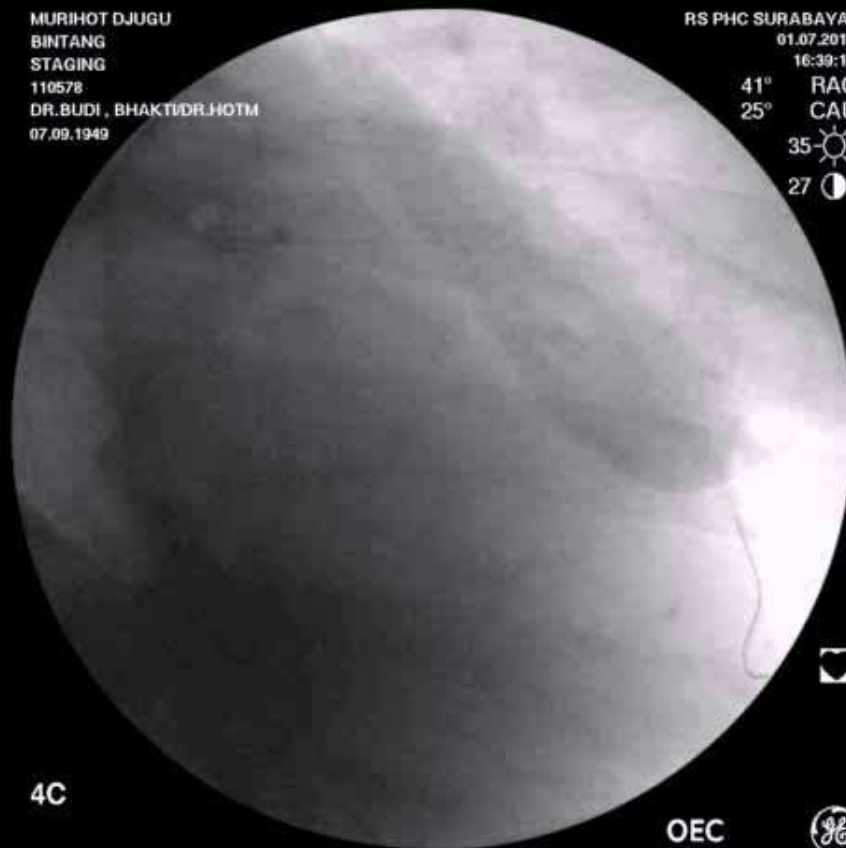
5C

OEC



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RS PHC SURABAYA
01.07.2014
16:39:12
41° RAO
25° CAU
35-☀
27-☾



4C

OEC



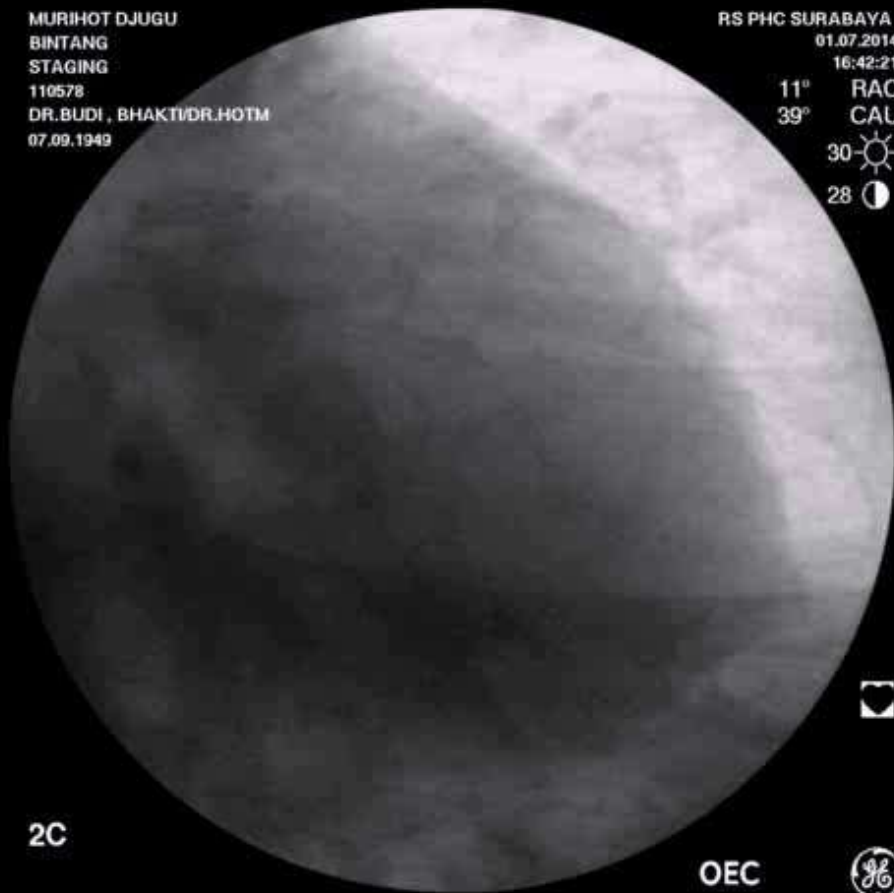
Stent prokinetik 3.0 x 25 mm



Final Result

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RS PHC SURABAYA
01.07.2014
16:42:21
11° RAO
39° CAU
30 ☀
28 🌑



2C

OEC



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RS PHC SURABAYA
01.07.2014
16:42:50
40° RAO
10° CRA
38 ☀
11 🌑



1C

OEC





Discussion

More factors that have been suggested to increase the likelihood dissection include :

1. Catheter manipulations.
2. Vigorous contrast injections.
3. Deep intubations of the catheter within the coronary artery.
4. Variant anatomy of the coronary and ostia.
5. Vigorous, deep inspirations.

K.Onsea, Neth Heart J. 2011



TAKE HOME MESSAGES

- Left main dissection is a preventable complication with choice of appropriate guide catheter and handling techniques
- If a similar case happens, don't panic. Instead, be calm, and then make immediate and correct decisions .