



CT-guided Left Descending Artery CTO PCI

BING LIU MD

*Cardiology Department, Beijing Hospital
National Geriatric Center of CHINA*

BEIJING HOSPITAL

No.1 Da Hua Road, Dong Dan, Beijing 100730 P.R. China

Background

- CTO was attractive to Interventional Cardiologist
- For CTO PCI, Toolbox was essential
- CTA can describe most details of CTO lesion

Knowing ourselves and knowing each other

DO or NOT to DO: Indication will be the key point

Case

- 58ys, male
- Effort chest pain for 19 months
- Undergo PCI to LAD CTO 16months ago
- Risk Factor: Ex-smoker , HTN

Pre-procedure Test

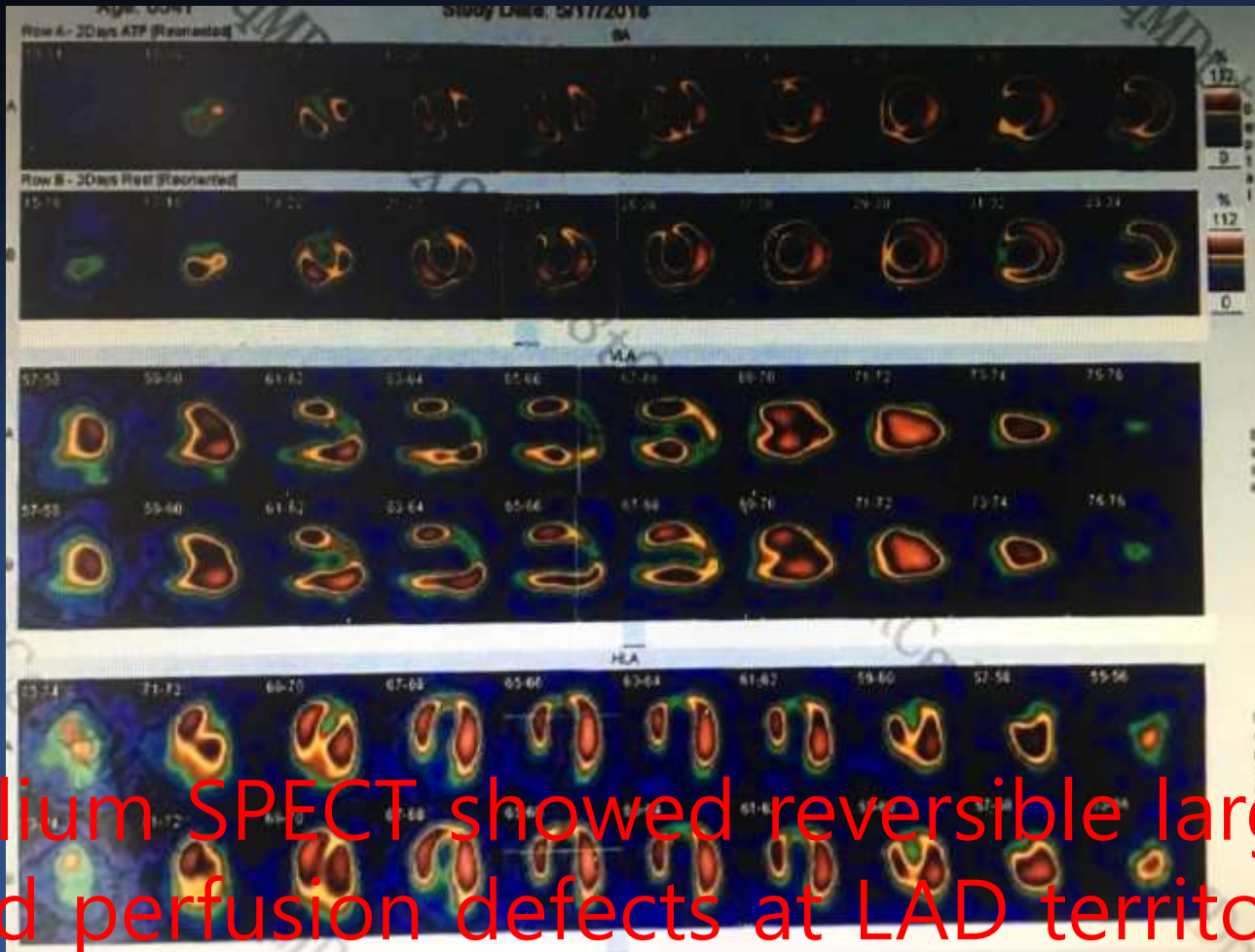
- ECG: Non-special ST-T changes
- Echo: No RWMA, EF 56%
- Lab. test: Cre 79 $\mu\text{mol/L}$
- Ccr: 69.4ml/min

Clinical presentations

- CHD AP CCS II
- Hypertension

DO or NOT to DO

Indication should be the key point



Thallium SPECT showed reversible large sized perfusion defects at LAD territory.

Strategy

- Medical Therapy ?

SPECT: large sized perfusion defects at LAD territory

Ischemia-driven coronary intervention

Strategy

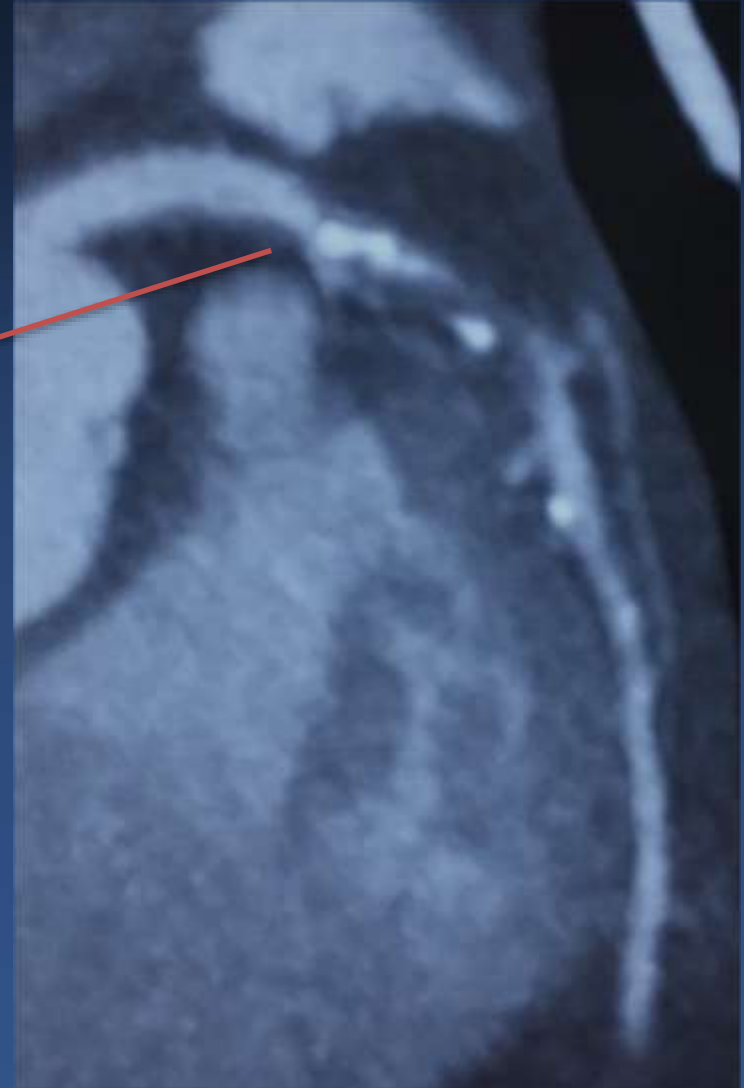
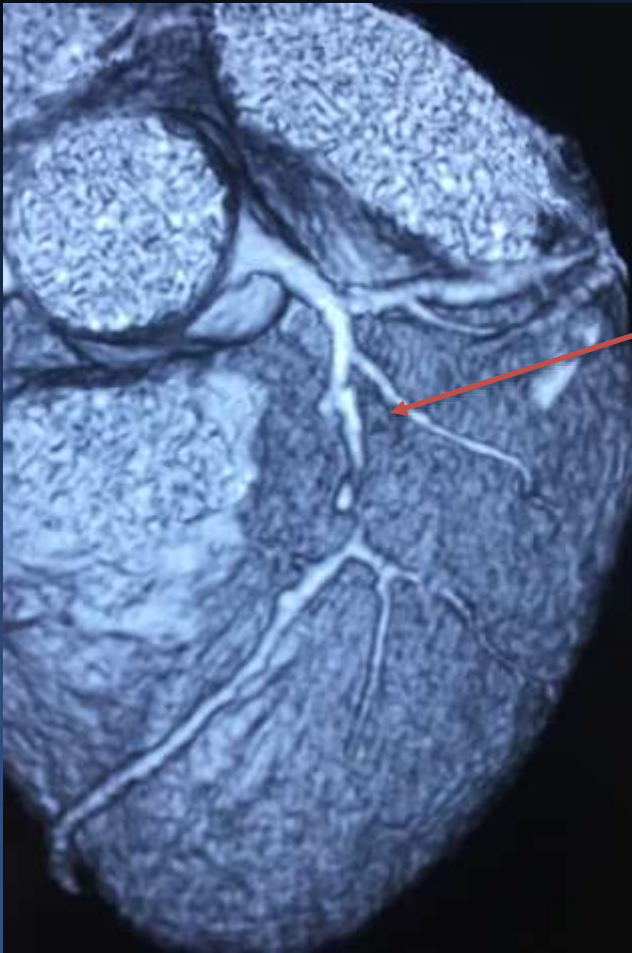
- Medical Therapy ?

SPECT: large sized perfusion defects at LAD territory

Ischemia-driven coronary intervention

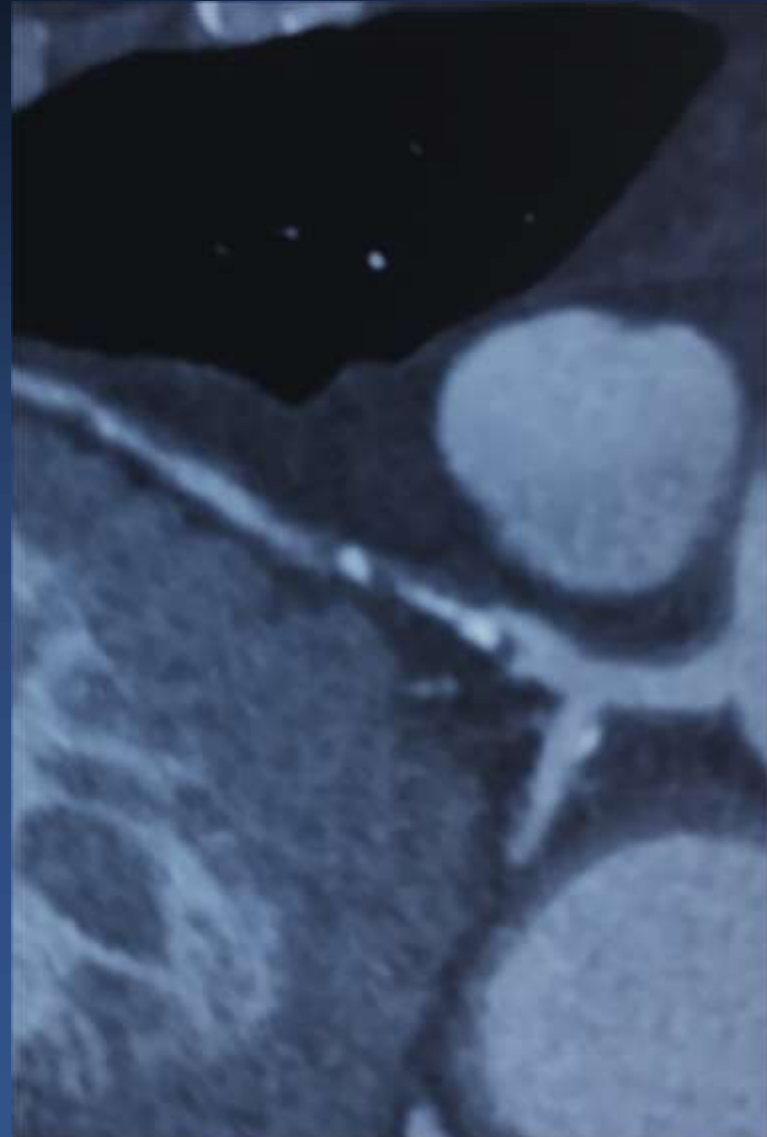
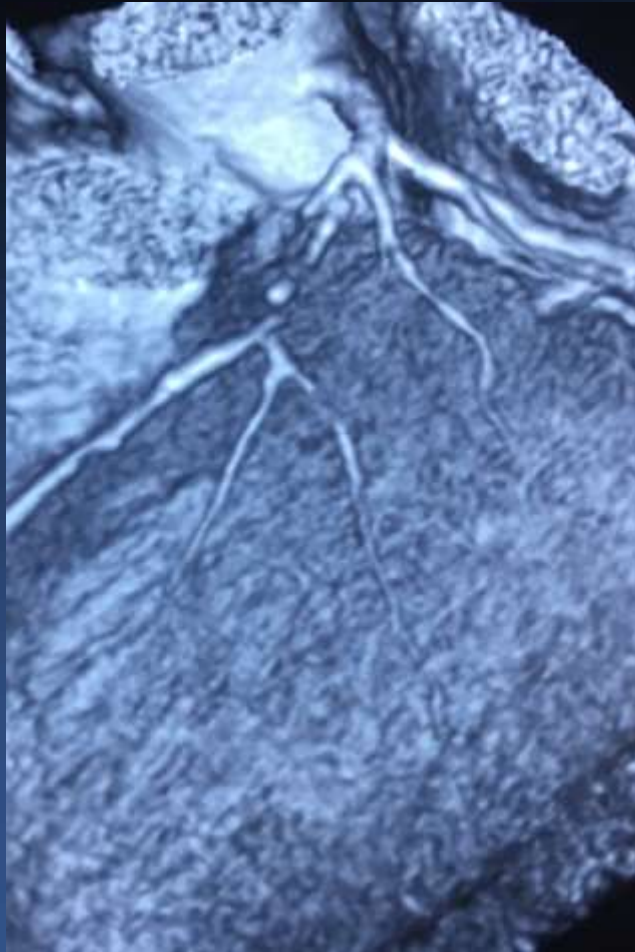
CTA prior to CTO PCI

-to clarify the ambiguity of the proximal cap of the CTO

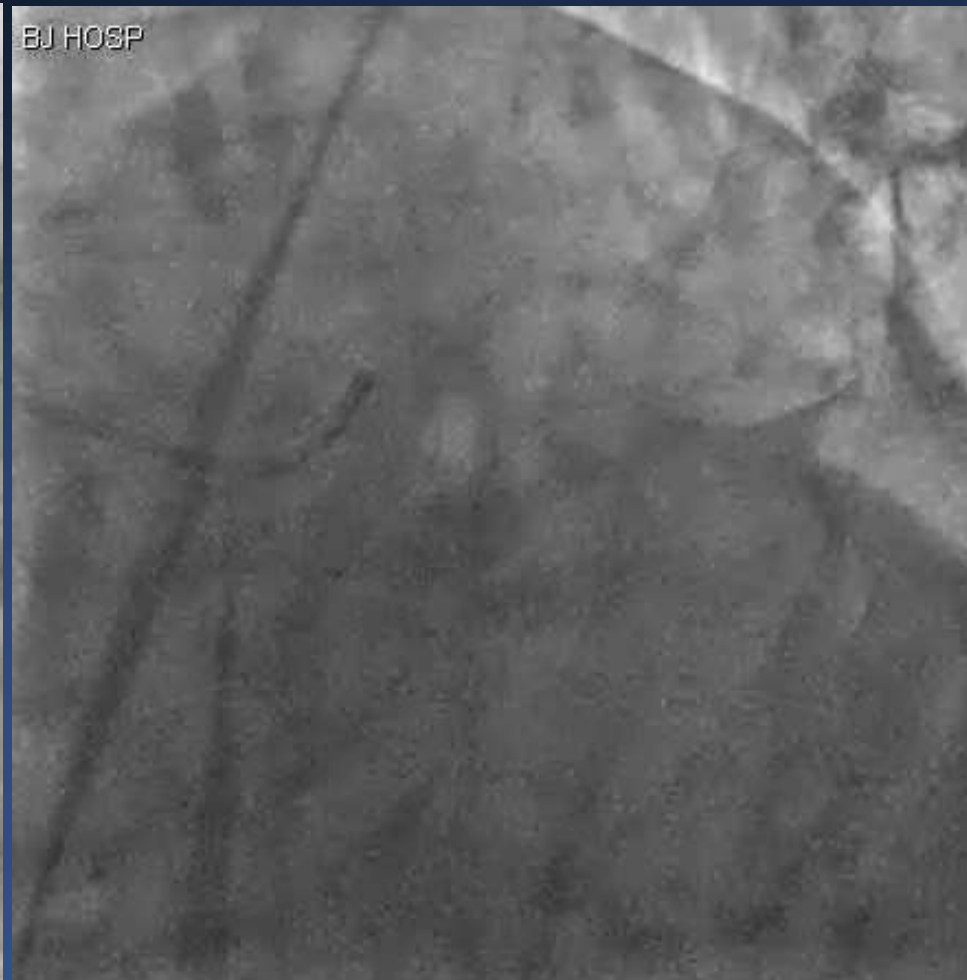


CTA prior to CTO PCI

-to clarify the ambiguity of the distal cap of the CTO



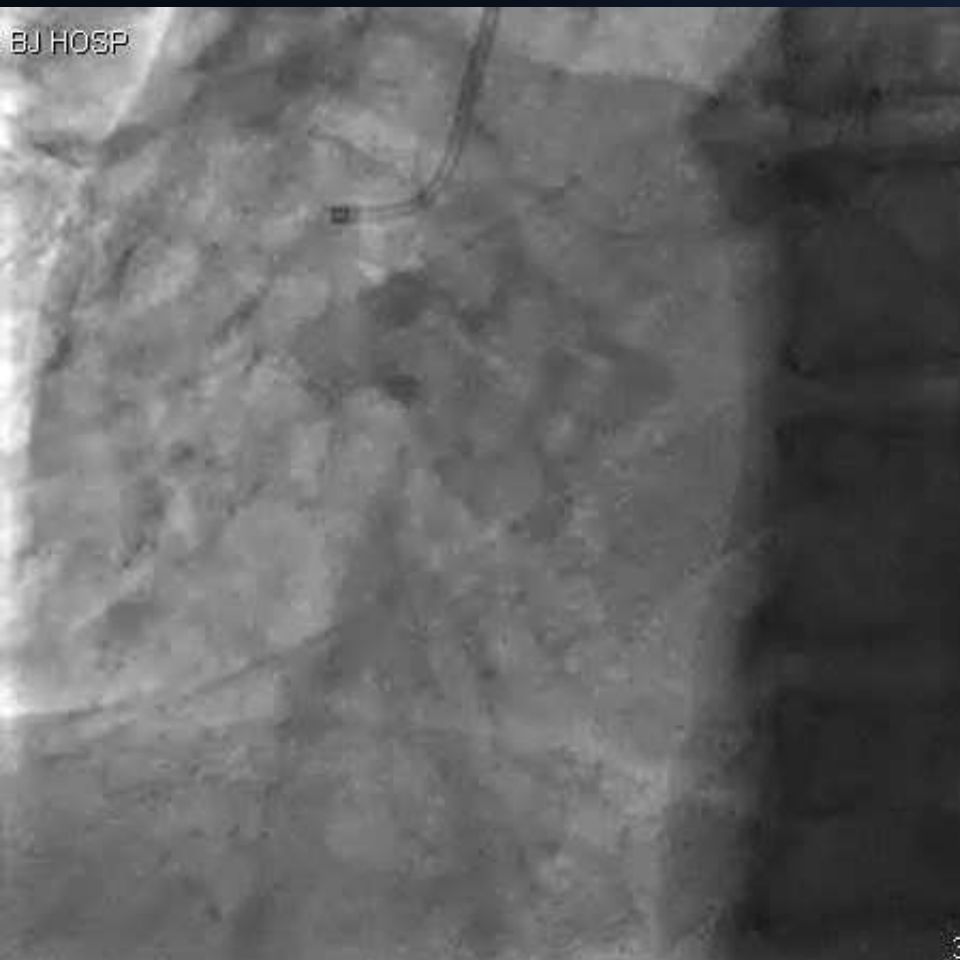
2ed Angiogram in BJYY



2ed Angiogram in BJYY



2ed Angiogram in BJYY



2ed PCI in BJYY



Strategy

- Medical Therapy ?

SPECT: large sized perfusion defects at LAD territory

Ischemia-driven coronary intervention

Strategy

- Medical Therapy ?

SPECT: large sized perfusion defects at LAD territory

Ischemia-driven coronary intervention

J-CTO Score : Entry shape (Blunt) Calcification (presence)
 Bending OCCL Length (20mm) Re-try lesion

Strategy

- Medical Therapy ?

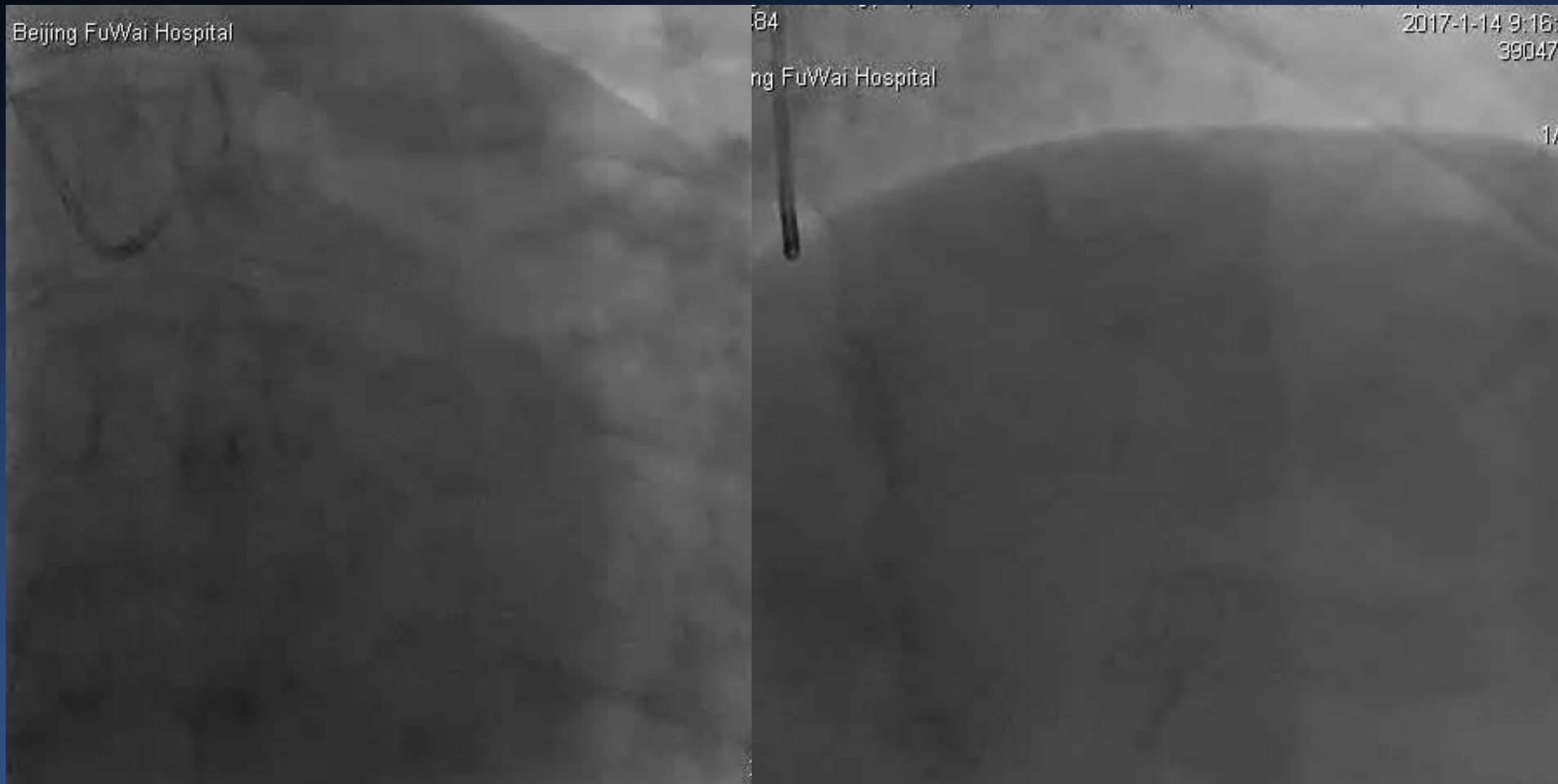
SPECT: large sized perfusion defects at LAD territory

Ischemia-driven coronary intervention

J-CTO Score : Entry shape(Blunt) Calcification(presence)
 Bending OCCL Length (20mm) Re-try lesion (4 points)

What cause 1st attempt failure

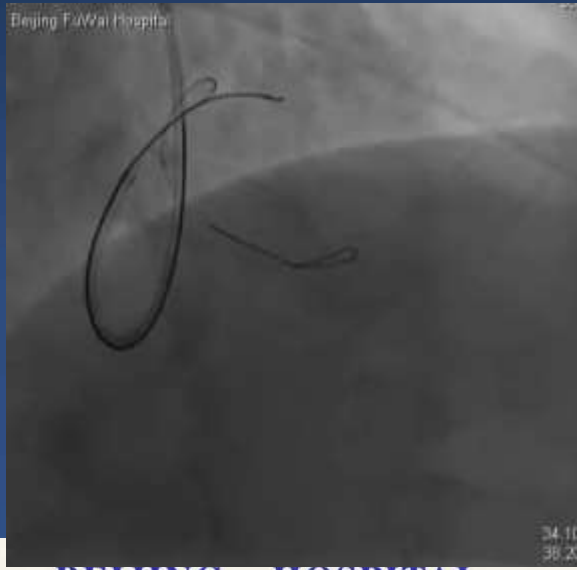
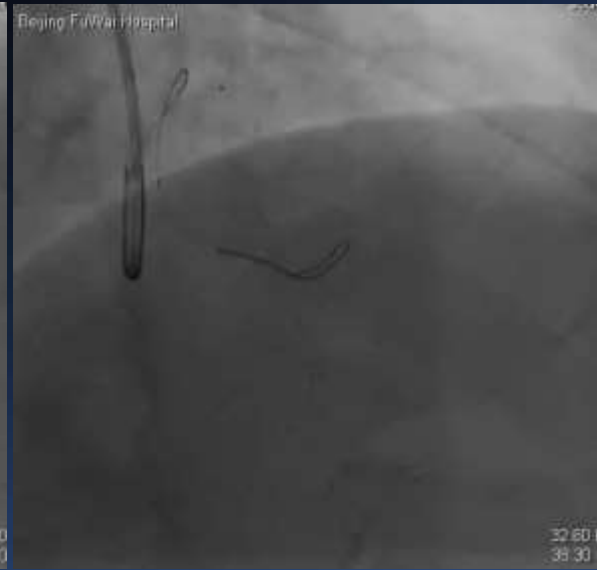
1st Angiogram



1st Angiogram



1st PCI



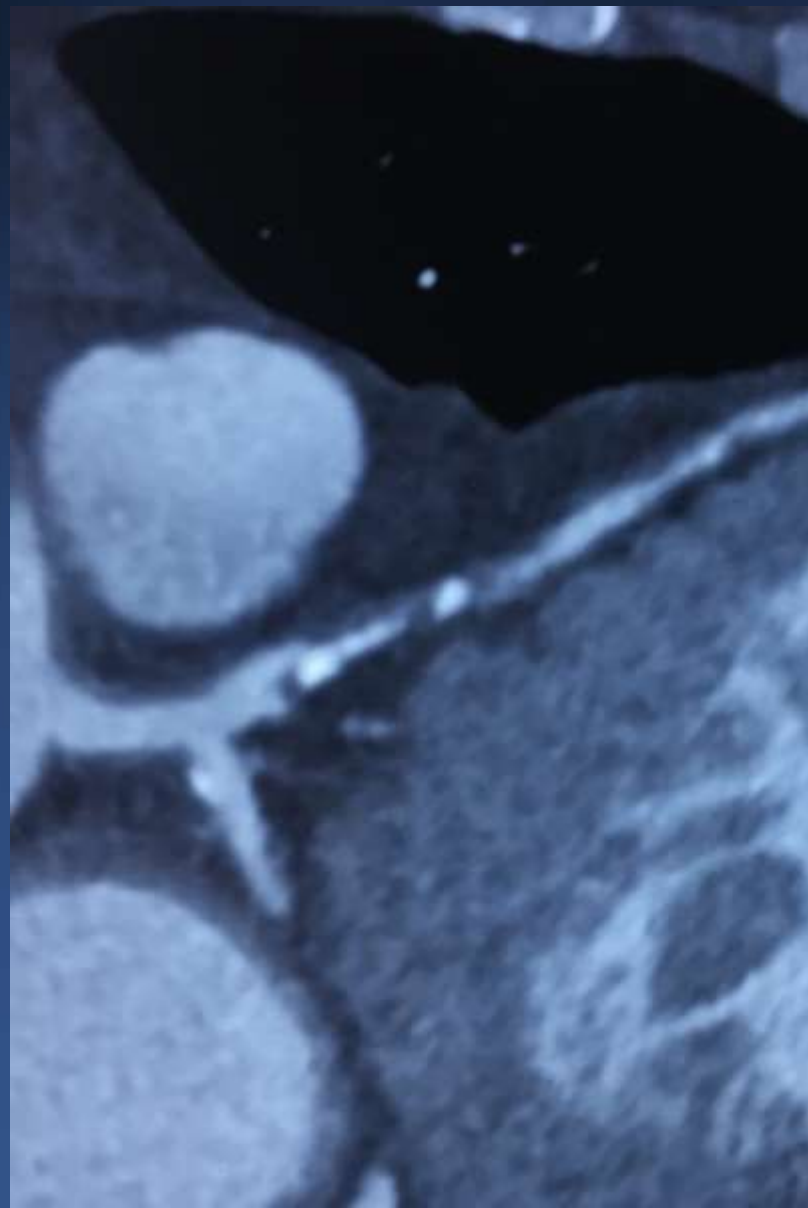
1st PCI--Result



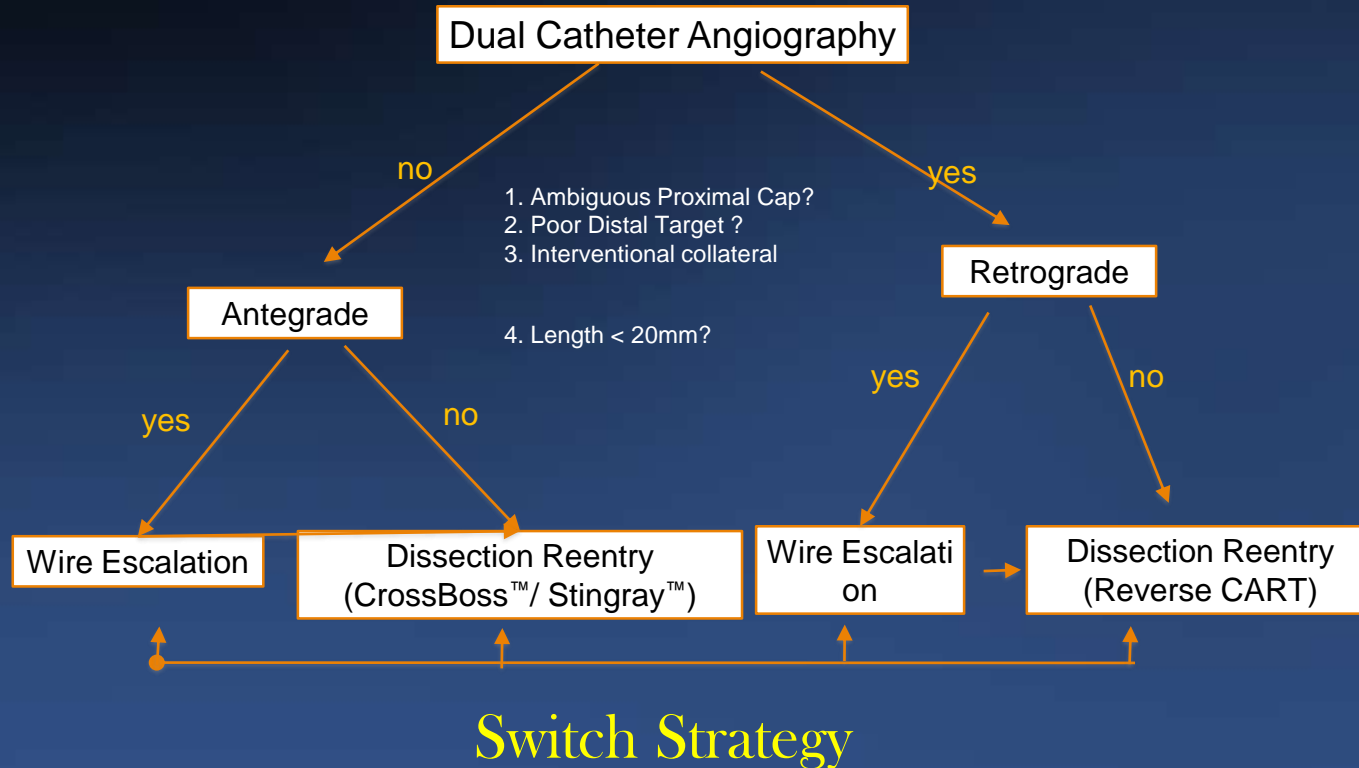
What can I learn from CTA

Calcified Nodule
at proximal cap
was the pitfall

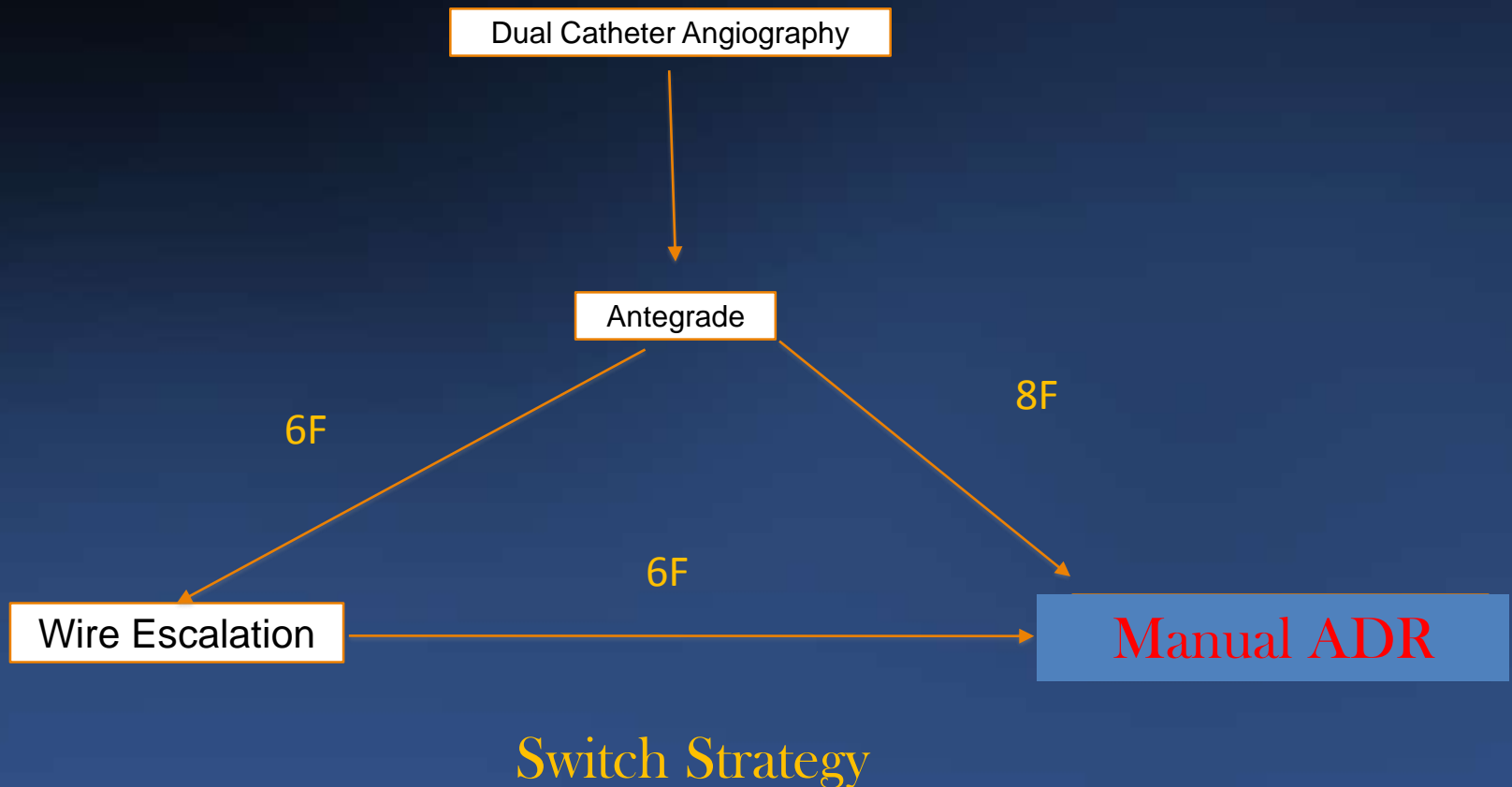
Another Calcified
Nodule
at distal cap noted



Hybrid Algorithm



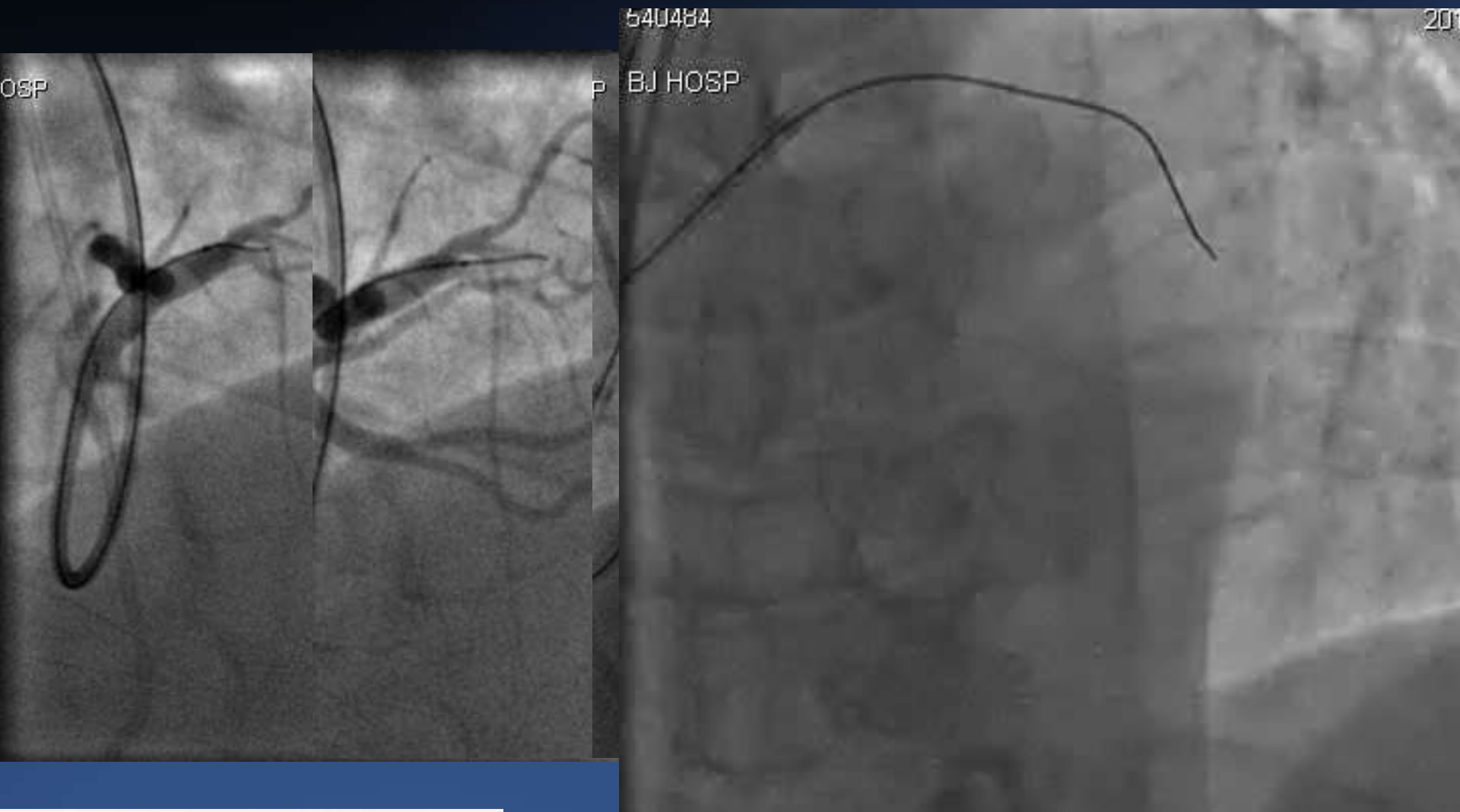
Hybrid Algorithm



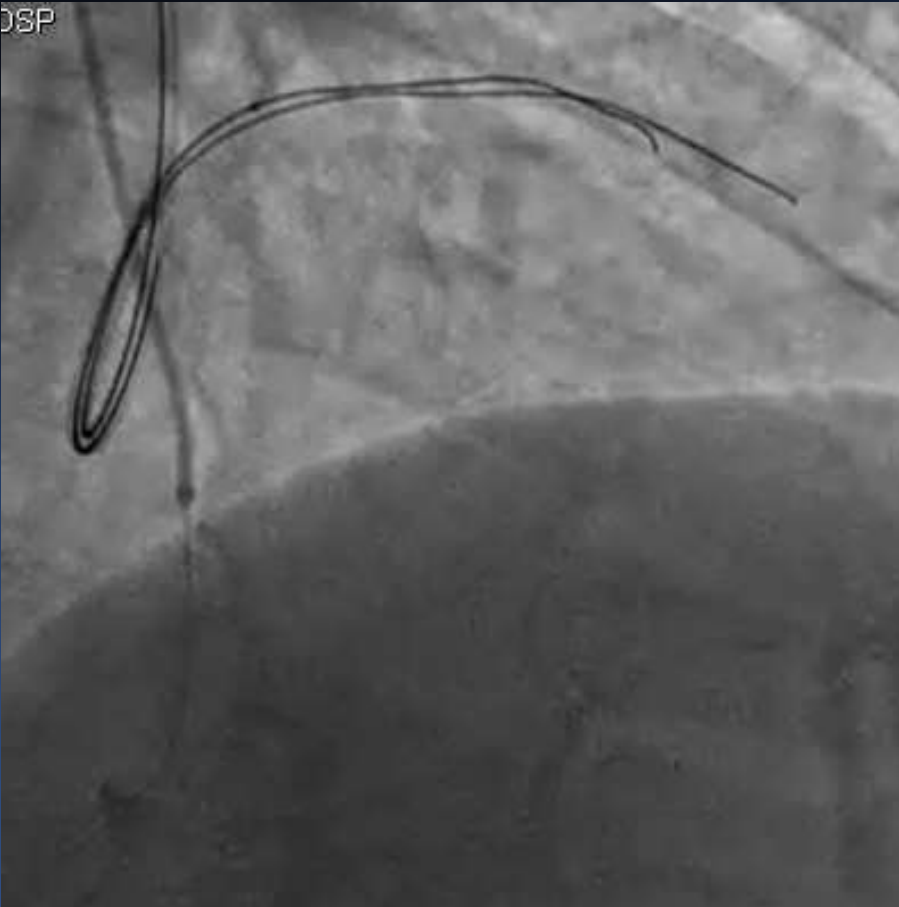
Facilities

- 6F EBU 3.75 via RRA and 5F JR 4.0 via LRA
- GW: ASAHI Fielder XT-->Gaia 3+2^{ed} Gaia 3
- MC: Finecross 130cm
- Abbott Xience Xpedition stents (2.75 x 38mm and 3.25 x 23mm)

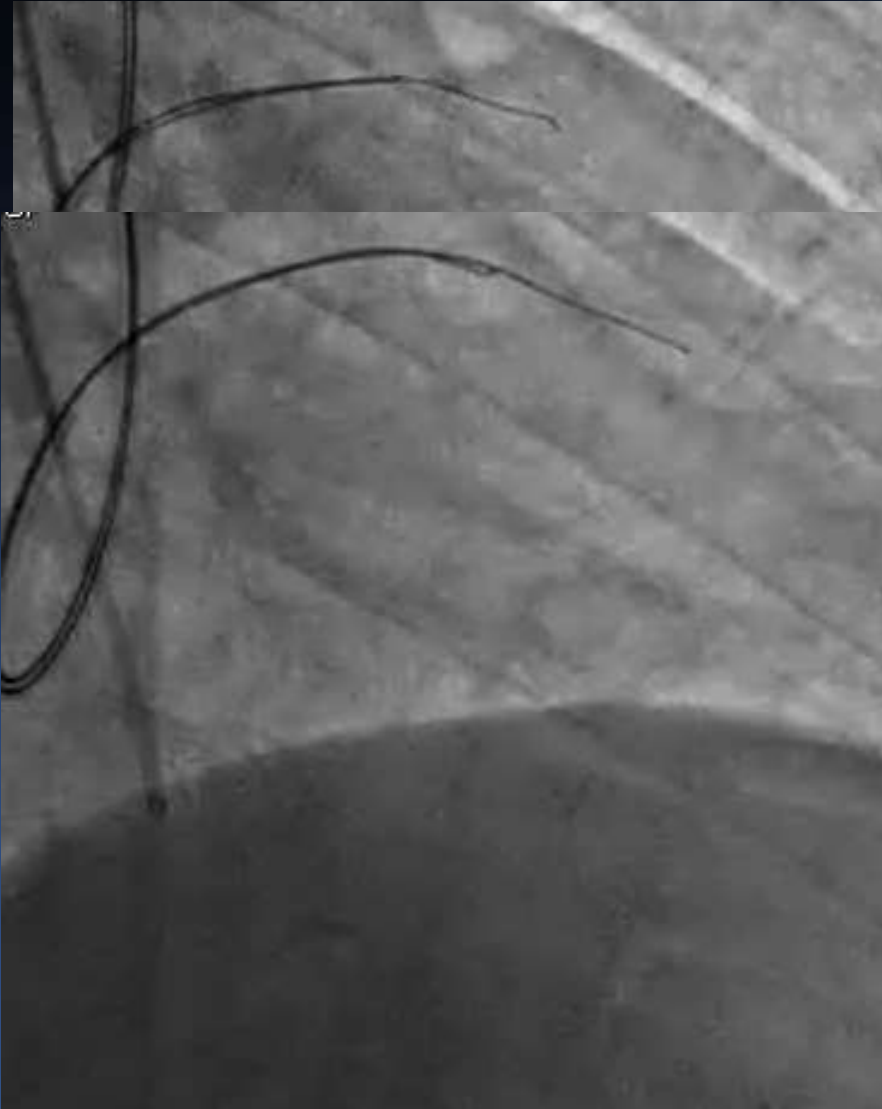
2ed PCI in BJYY



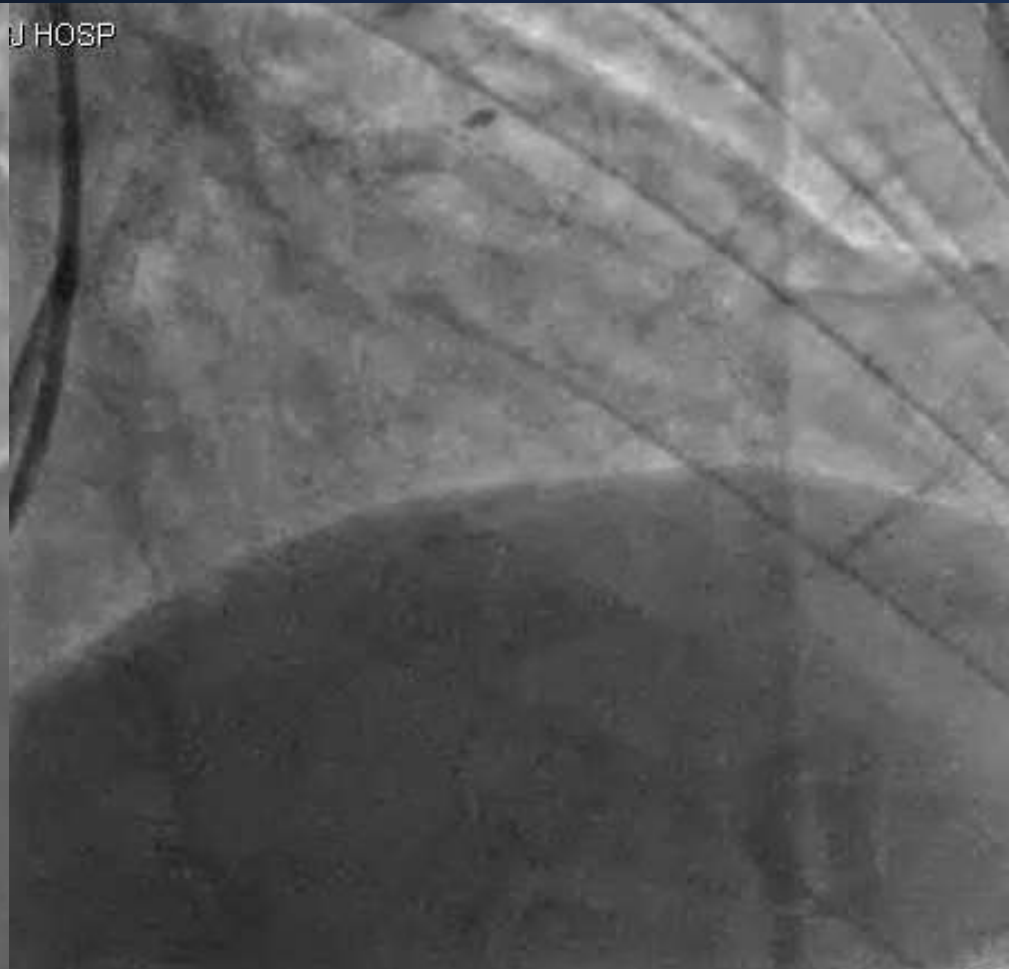
2ed PCI in BJYY



2ed PCI in BJYY



2ed PCI in BJYY--Result



Follow-up

- The Gentleman did not complain chest pain anymore.
- Pt got an essential promotion and was administering an Prefecture-level city at Mid-china

Take-home Message

- CTA was an useful tool for CTO PCI, but its value depends on the operator's understanding!
- Success CTO PCI was based on reasonable strategies of clinic and PCI, and still very dependent on great wire skills!



Thanks

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N0.1 Da Hua Road, Dong Dan, Beijing 100730 P.R. China