My invaluable experience in the RCA CTO intervention

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My Position

- The early phase of CTO intervention.

I often struggled to succeed the many challenging lesion, despite of back-up support from great teachers.

- Sometimes, looked as easy to pass, but visually easy lesion made me to fail

- Devices are sometimes not available in Korea (Corsair, Sion-blue, Fielder XTR and RG3 ....)
Patient information

- 38 year-old male
  - Hypertension (+)
  - Smoker (+)
  - Hyperlipidemia (+)

- Visited another hospital at 2009.12. for the sudden dyspnea

  CAG : proximal RCA total occlusion
  PCI was tried but failed
Patient information

- Visited our center for effort-related dyspnea for 2 months
- Very anxious for his coronary lesion and memory of failure
- Functional Study (non-invasive)
  Thallium spect: large perfusion defect in RCA territory
  TMT (+ recovery)
  Echocardiography: RCA hypokinesia with LVEF = 55%
Baseline Angiogram
Strategy

- Antegrade approach vs. Retrograde approach

1. Collateral channel tracking

2. Advancement of Micro-catheter

3. Retrograde approach
   Reverse CART (w/wo IVUS)

4. Externalization of 300cm wire

5. Antegrade balloon/stent though the reversed 300cm wire
LAD lesion

MLA 3.6 mm²
Procedure
Bilateral injection

Rt.7Fr AL1
Lt.7Fr EBU 3.5
Procedure
Procedure
Selective angiogram

Fielder FC + FineCross Micro-catheter 0.014 inch – 150 cm
Procedure

After several times of attack, Fortunately, the Fielder FC wire was advanced to the distal RCA

Antegrade wire – landmark or kissing Retrograde Fielder XT wire was advanced to the occluded segment
Procedure

Stepwise Approach

- Retrograde wire into the Guiding catheter
- Balloon anchoring (2.5x20 mm) in the GC
- FineCross micro-catheter advance to the GC
- Retrograde 300 cm long wire externalization
- Antegrade - Balloon inflation (2.0X20 mm – 2.5X20 mm)

I was very happy, all steps looked as my plan!!
Procedure

Immediate angiogram after ballooning
Very diffuse lesion

After IVUS examination,
Endeavor Resolute 3.0X38 mm
Procedure

Immediate angiogram after 1st stenting
Somewhat strange ?? PL ? PD ??
Memory-back

This is my original target !!

This is my actual road !!
Procedure

Another distal RCA total segment
Antegrade approach
Fielder FC – Fielder XT – Miracle 6
But, not easy and failed ….
Procedure

2\textsuperscript{nd} septal approach
FinceCross with Fielder FC – Fielder XT
Very struggling – really not easy !!!
Successful wire advance

Fielder XT passed the distal lesion
Double retrograde wire
One more 300cm wire
Retrograde externalization

Ballooning 2.5X20 mm
Procedure

Post-balooning angiogram

First retrograde wire – removed Antegrad wire (Fielder FC)
Procedure

2nd Endeavor Resolute 3.0X38 mm

3rd Endeavor Resolute 3.0X30 mm
My lessons from this case

- Still, I must learn & experience more and more for the development.
- There is no easy CTO intervention for me.
- Sometimes, there may be some unique connections.
- CT scan may give the important information.
- Still, I have some questions
  “What did I do for this young patient? “
  “Really beneficial or even harmful?”