TCTAP C-077

Recanalization of RCA Stumpless CTO with Side Branch by Combined Antegrade and Retrograde Approach with Wires Kissing in Side Branch and Reverse CART

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Case Briefing

- Mr. YL Wu, 61 Y/O.
- Chest tightness for 2 weeks.
- History of CAD with 3VD, type 2 DM, HTN.
- Underwent PCI with drug-eluting stent to p-LAD and p-LCx, remaining CTO at m-RCA on 2007.
Non-Invasive Study

- EKG:
  - NSR
  - Poor R wave progression
  - Q wave at inferior leads

- Thallium-201 myocardial perfusion scan:
  - Reversible defect at inferior segment of LV.

So, CAG was arranged for him.
Relevant Catheterization Findings

- **LM**: normal
- **LAD**: 30% in-stent restenosis at posterior wall - Providing collateral flows to PDA via septal channels
- **LCx**: 30% in-stent restenosis at posterolateral wall - Providing collateral flows to PL via epicardial channels
- **RCA**: Stumpless CTO at middle RCA - RV branch provides intracoronary collateral flow to PDA
Revascularization Strategy

- CABG: SYNTAX Score: **24** (but the patient refused)
- PCI: Antegrade? Retrograde?
  Transradial? Transfemoral?

**Retrograde Approach First- Stumpless CTO**

- EBU 4.0 (7Fr, 90cm), AL1.0 (6Fr)
- Right radial artery, right femoral artery
- **Bilateral injection** to confirm CTO length and direction
- IVUS device
Bilateral Contrast Injection (AP-Cranial view)

- Septal branch-2
- Septal branch-4
- Prior stent at p-LAD

LCx, LAD, RCA, PDA
Retrograde SION GW coated in Corsair advanced->
Fielder XT / GAIA II GW advanced more and more->
GW reached the false lumen

New channel appeared
RV branch
Side branch near p-CTO cap
False lumen
CTO Body
Retrograde GAIA II GW advance to side branch via new channel

But GAIA II GW can not advance more!!

Retrograde approach

New channel
Angled channel retrogradely

m-RCA

d-RCA

Antegrade approach
Antegrade Fielder Fc advance to side branch (wire kissing)

Antegrade GW crossed CTO lesion via angled channel
Reverse CART technique

Sapphire balloon 2.0x20 mm, 8 atm

Subintimal space

Retrograde GAIA II GW to p-RCA

Externalization with RG-3 wire
Drug-eluting stent x2

3.0x48 mm DES, 12 atm
3.5x48 mm DES, 14 atm

Post-stent balloon dilation

3.0x18 mm NC balloon, 20 atm
3.5x18 mm NC balloon, 26 atm
Followed IVUS

Good stent position
Final Result

RAO-Cranial view

AP-Cranial view
Thanks for Your Attention