The combined use of an excimer laser and rotational atherectomy to overcome a severely calcified lesion bouncing any other device back

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Disclosure

Speaker name: Keisuke Nakabayashi

I have the following potential conflicts of interest to report:

- [ ] Consulting
- [ ] Employment in industry
- [ ] Stockholder of a healthcare company
- [ ] Owner of a healthcare company
- [ ] Other(s)

☑️ I do not have any potential conflict of interest
74 y-o, male

CC: Intermittent claudication

HPI: He had bilateral intermittent claudication, 6 months before admission

PMH: post PCI (LAD: PlCr-EES 2.5*20mm, LCX: PlCr-EES 2.5*20, 2.25*28mm)

Vascular Risks: HT, DL, DM, ESRD, Ex-smoker
Contralateral approach
- Destination 6Fr
- GOGO catheter 5.5Fr

Failed Antegrade Wiring
- Prominent Advance
- VASSALO 40
Of course,

It’s time to do the retrograde approach.
Distal Puncture Point

Antegrade System
- GOGO catheter 5.5Fr

Retrograde System
- Prominent NEO2
- Jupiter FC3
Antegrade System - GOGO catheter 5.5Fr

Retrograde System - Prominent NEO2 - Jupiter FC3

Rendezvous♥
Rendezvous was the entry of the hell.

Any devices were not able to pass the lesion by the antegrade and retrograde fashion, regardless of the wire externalization!!
Thin balloon catheter
(1.5*40 mm)
Corsair Pro micro-catheter
Needle Cracking Technique (Outside)
Needle Cracking Technique

With Stiff wire

With Tailed Wire

Needle Cracking Technique (Inside)
Even after all techniques, a minimal balloon could not pass the lesion.
Give-up ??

We have to cross the lesion, because the bleeding was not controllable by the outside compression.
ELCA: Turbo Elite 0.9mm also could not pass the lesion. However, it might modify the entry-morphology.
After ELCA ablation, Caravel micro-catheter with BADFORM tech. finally passed the lesion.
After Wire-exchange, 1.5 mm burr ablation.
POBA 3.0mm

POBA 5.0mm with hemostasis
Bare Nitinol Stent
6.0*150mm
Final Results

ABI: unmeasurable $\rightarrow 0.79$
Failed Strategy

- Any thin balloon
- Any thin micro-catheter with BADFORM technique
- CROSSER system
- Needle cracking technique (Inside and Outside)
- Wire tailed technique
- Re wiring & Re root with Parallel wire technique (not shown)
Bail-out Strategy

- Combined use of ELCA and Rotational-atherectomy

RASER technique
In coronary section
RASER technique
In coronary section


0.014 wire
RASER technique

In coronary section


Micro-catheter NOT pass

0.014 wire
RASER technique
In coronary section


ELCA ablates CTO-entry

0.014 wire
RASER technique

In coronary section

Micro-catheter passes


0.014 wire
RASER technique
In coronary section


Micro-catheter passes
RASER technique
In coronary section

RASER technique

In coronary section


Rotational atherectomy

0.009’ Rota wire
RASER technique

In coronary section

Rotational atherectomy

0.009’ Rota wire

RASER technique
In coronary section


This technique might be applicable in EVT section to deliver a micro-catheter to the distal CTO.
Limitation

- Both of ELCA and RA were considered off label use in Japan.
- We have to refrain from frequent use.
- However, RASER technique in EVT section is an option to overcome the severely calcified lesion.
Thank you for your attention.
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