IVUS-Guided Retrograde Approach to Treat Ostial CTO

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Case

- 68 year-old gentleman
- Diagnosis : OMI (inf), post-PCI
- History

  He was suffered from acute inferior myocardial infarction about 1 year before and received primary stenting onto proximal RCA. Initial CAG showed multiple coronary disease including CTO of ostial LAD.

- Echocardiography

  Reduced inferior wall motion, LVEF 52%
  No valvular disease

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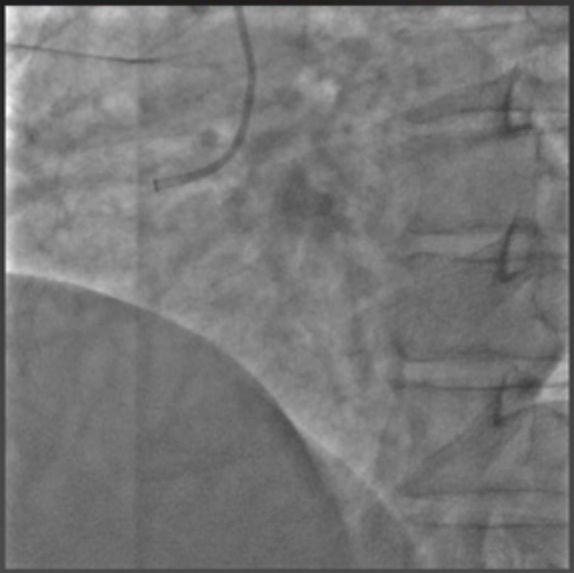
1st PCI



Right CAG showed subtotal occlusion of proximal segment of RCA.

We placed two Driver-Sprint stent after aspiration and predilatation with IVUS-guidance.

Final CAG showed TIMI-3 flow restoration of infarcted vessel.

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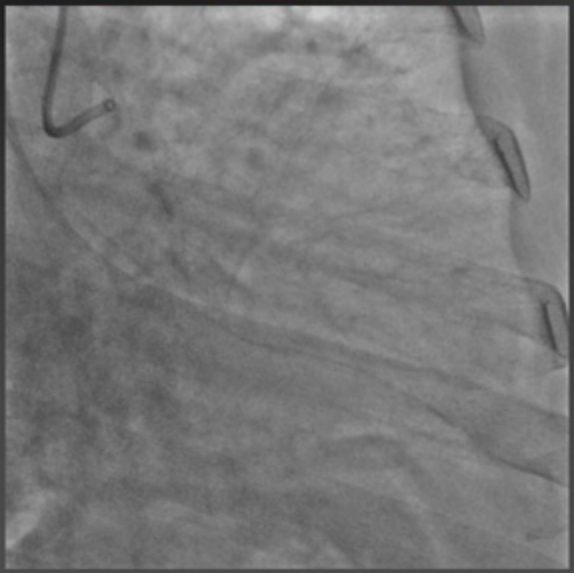
2nd PCI



Left CAG showed severe stenosis of middle segment of LCX.

We implanted two everolimus-eluting stents after IVUS examination and predilatation.

We performed kissing balloon dilatation to protect 1st-PL branch.

Final angiography showed good result without any complications.

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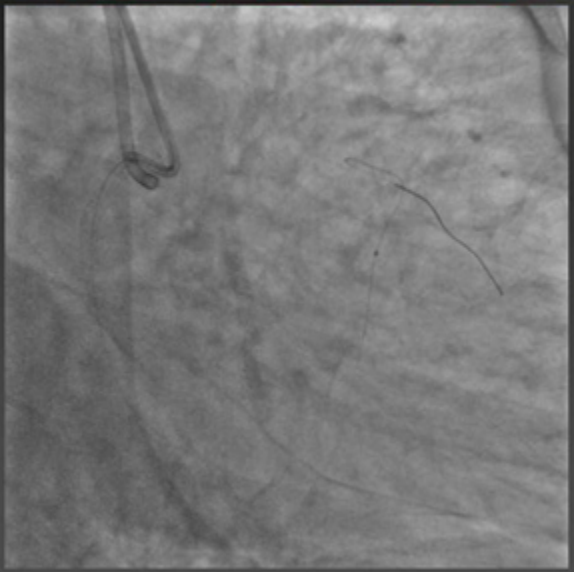
3rd PCI



Bi-lateral angiography was performed.

We performed retrograde approach.

Although a neo's Fielder-FC guidewire successfully went into LAD…..

Corsair microcatheter could not cross septal channel.

Therefore, septal channel dilatation was performed with a 1.25-20mm Ryujin-plus OTW.

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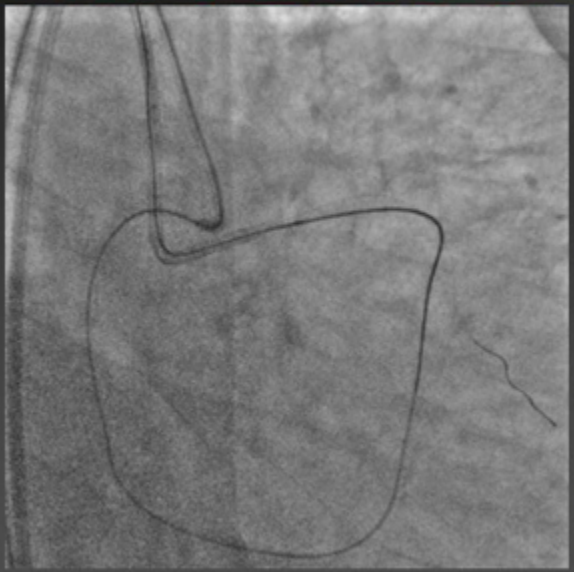
3rd PCI



Corsair microcatheter was successfully advanced after septal channel dilatation.

We found precise entry point of LAD-CTO using IVUS (Atlantis-SR Pro2).

A neo's Confianza-Pro guidewire was retrogradely advanced toward IVUS probe.

We successfully advanced the guidewire across whole length of the lesion.

We performed trapping technique and accomplished externalization.

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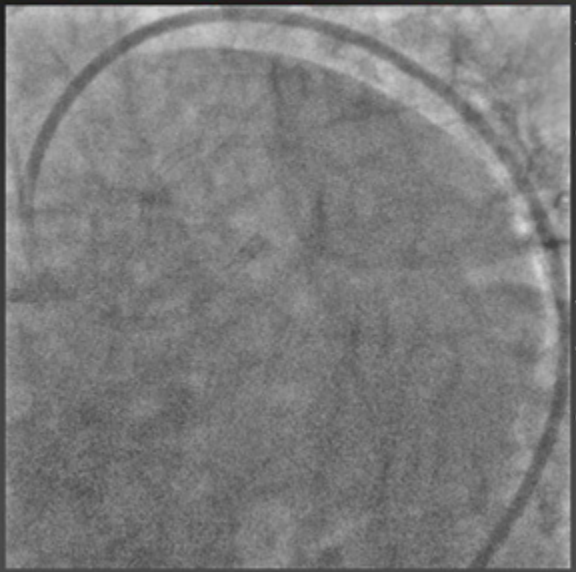
3rd PCI



Predilatation was performed
with a 2.5-14mm Cyclone balloon catheter.

The previous neo's Fielder-FC guidewire
was advanced as far as distal LAD
with a Crusade multi-functional catheter.

And we performed IVUS.

We implanted two Endeavor-Sprint stents.

The lesion was well dilated.

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Conclusion

- Bi-directional approach to treat CTO using intracoronary channel can be applicable to 6Fr systems.
- But we chose an 8Fr guiding catheter as antegrade system because we were afraid of antegrade IVUS-guided treatment.
- Because distal edge of lesion of our case belonged to tapered type, we expected that retrograde guidewire would easily cross the lesion and our idea worked well in fact.
- However, if retrograde procedure is not successful in such cases, we should not hesitate about exchanging to antegrade procedure.

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