One-stage Treatment for CTO in Anterior Tibial Artery and Tibioperoneal Trunk with Retrograde Approach Technique

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Case

- 60 y.o. Male
- Diagnosis) Critical Lib Ischemia, Rutherford 5
- Present illness) He had skin ulcer of bilateral 1st and 5th foot finger one month ago. Left foot ulcer was improved with conservative therapy, but right foot had ulcer progression.
- Risk factor) Diabetes mellitus
  - Diabetic nephropathy under hemodialysis
- Past history) Old cerebral infarction
  - Post Rt. CEA restenosis
  - Bilateral STA-MCA bypass operation
CT image
Baseline angiogram
Initial procedure system

- Ipsilateral CFA antegrade puncture
- 5Fr. sheath (60cm)
- Micro catheter: Prominent (150cm) (Tokai Medical)
- Guide wire: X-treme PV (Asahi Intec Co.)
Antegrade approach for ATA

X-treme PV (=Fielder XT)

GW was confirmed to be in intimal space by IVUS
EVT for TPT

Cruise GW (=Fielder) crossed to PTA

After balloon dilatation (2.0mm)
Trans collateral retrograde approach to Dorsal artery via pedal arch

Tip injection from micro catheter  
Cruise GW (=Fielder)
Wire cross to ATA

Micro catheter advanced to distal ATA

Retrograde GW advanced to proximal true lumen
Externalization

Catch the retrograde GW
by Soutenir snare wire

- Soutenir caught and fixed retrograde GW, and retrograde micro catheter was advanced to proximal ATA.
• Retrograde GW is usually exchanged to 300cm GW after retrograde micro catheter inserted to sheath entry in PCI externalization.

• But retrograde micro catheter did not have enough length to reach to sheath entry. Therefore GW was exchanged to Agosal XS GW (300cm).
Bare wire externalization

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Externalization

Agosal XS (300cm)

Agosal XS entered into the sheath, and externalization was completed.
Balloon dilatation for ATA

After antegrade insertion of MC to ATA, collateral channel was confirmed no injury.

2.0mm balloon dilatation
IVUS check and balloon dilatation

IVUS confirmation of ATA after insertion of antegrade GW

2.5*100mm balloon
Balloon dilatation for TPT

2.5*100mm
Final angiogram

Initial angiogram

Final angiogram
Summary

• I performed EVT to CLI patient with double CTO of ATA and TPT.

• I started procedure to ATA which had priority to be opened for healing of skin ulcer on 1\textsuperscript{st} and 5\textsuperscript{th} finger, but antegrade approach for ATA was failed. I switched procedure to treatment for TPT. After opened TPT, I performed trans collateral retrograde approach to ATA, and achieved successful revascularization of ATA and TPT CTO lesion finally.