Successful PTA by Retrograde Approach for Stumpless and Severely Calcified SFA CTO Lesion

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**Patient Information**
- 70 year-old male patient
- Progressively worsening claudication and both calf pain (Rutherford class 3)
- Onset: 6 months ago

**Past Medical History**
- Current smoker (2 pack per day for 30 years)
- Medication on hypertension for 40 years
- History of coronary artery bypass graft surgery 4 years ago due to unstable angina of 3 vessel disease

**Ankle-Brachial Index**
- Left: 0.68 / Right: 0.69

**Low Extremity CT**

**Initial Angiography**

**Percutaneous Transluminal Angioplasty**
- Antegrade wiring had failed with 0.35 Terumo shapeable long wire → Astato 30/300 wire → V18 wire
- Ipsilateral retrograde approach done via right distal SFA with micropuncture set
- Retrograde subintimal wiring was done with Astato 30/300 guidewire with CXI microcatheter

**Initial Angiography**

**Summary**
- Intervenion of stumpless SFA ostium CTO by antegrade approach is usually difficult
- Not crossing the wire caused by frequent wire prolapse, non-visualized stump or heavy calcified ostial cap.
- Retrograde approach can be a solution for these difficulties
- Cap penetration is the main concern with the subintimal approach of retrograde intervention.
- Cap penetration from retrograde approach can be sometimes easily done with CTO dedicated guide wire supported by balloon or micro catheter.
- Distal SFA access takes advantages in stumpless SFA ostium CTO intervention for not requiring movement of the patient by prone position and therefore bidirectional approach can be possible

- Ostial cap penetration was done with 4.0x40mm balloon catheter support and the retrograde wire externalization was performed
- Antegrade rewiring was done with 0.35 Terumo shapeable longwire, and sequential balloon dilatation was done with 6.0x150mm balloon (ev3, Nanocross).
- Thereafter stenting was done on distal SFA with 3X150mm (Terumo, Misago) stent and proximal SFA with 8x80mm (ev3, Everflex).
- No significant stenosis was shown on final angiography.
- Post PTA ABI was improved by 0.90 on right and 0.73 on left.

**Low Extremity CT**

- Right SFA showed total occlusion with heavy calcification at ostium and reconstruction flow at distal SFA