### Novel Approach to Endovascular Management of Femoro-Popliteal Artery Chronic Total Occlusion

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#### Case Presentation

76-year-old male with an aorto-bifemoral and patent left femoro-popliteal arterial bypass graft was evaluated for lifestyle limiting right lower extremity claudication. CTA imaging revealed a heavily calcified right femoro-popliteal artery CTO, extending from the SFA ostium to the P3 segment of the popliteal artery. The patient refused bypass surgery given his cardiopulmonary and wound complications from the left femoro-popliteal artery bypass surgery. Previous endovascular attempts were unsuccessful.

#### Intervention

The occluded right SFA in its midsegment was cannulated with a Cook needle under ultrasound guidance. A 4Fr. sheath was then placed into the occluded right mid SFA. The CTO was crossed using an angled aqua tempo catheter and a 0.035 stiff angled glidewire. The proximal cap of the right SFA CTO was then penetrated in a retrograde fashion. The ostium and proximal was dilated. We then cannulated the right CFA in antegrade fashion under ultrasound access. With the proximal cap dilated from the retrograde approach, we were able to enter the proximal SFA CTO in an antegrade fashion.

After crossing the CTO in an antegrade fashion, we completed the intervention with balloon PTA and stenting. Given the heavily calcified popliteal artery, we managed this segment with “Crack and Pave” technique [Viabahn covered stent lined with a Supera stent]. The right common femoral arteriotomy was closed under local anesthesia with open repair.

Conclusions

This case illustrates a novel approach to a heavily calcified femoro-popliteal artery CTO in patients with aorto-bifemoral bypass grafts without compromising the infrapopliteal arteries. Finally, the hybrid approach to complex CTOs is highly under utilized. This patient was discharged the following day with no consequences.