**INTERVENTIONAL MANAGEMENT**

Procedural step. Under general anesthesia, both femoral arteries were accessed (right cut down method, left pre-close method) and left upper brachial artery access was done with cutdown for sandwich stent.

After completion angiogram, embolization of left internal iliac artery was done with coils from contralateral approach. And then, main body of excluder was deployed from right side. Right internal iliac artery was cannulated from left upper brachial artery. Deployment of excluder limb (12mm for distal diameter) for EIA sandwich stent was followed by deployment of 8mm*10cm Viabahn for IIA sandwich stent. Overlapping was at least 4cm in length between right limb and sandwich stents to prevent type III endoleak. Completion angiogram showed no endoleak. A month follow up CT scan also showed no endoleak with patent sandwich stents.

**Case Summary.** When iliac bifurcated devices is not available, Alternative technique is needed to save internal iliac artery. EVAR with Sandwich technique can be used to save internal iliac artery to prevent pelvic ischemia. Its durability needs to be evaluated.

**TCTAP C-175**
Endovascular Treatment of Aorto-Iliac Occlusion with Extreme Severe Calcification

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**CLINICAL INFORMATION**

Patient initials or identifier number. T.T.

Relevant clinical history and physical exam. A 72 year-old man visited our hospital complaining of severe intermittent claudication (Rutherford 3) in both legs. He received medical treatment for hypertensive heart disease and underwent endovascular treatment for the left subclavian artery occlusion in our hospital. His bilateral common femoral arteries (CFA) were not palpable.

Relevant test results prior to catheterization.
- Ankle-brachial index (ABI): right / left; 0.46 / 0.51
- Exercise ABI (Treadmill 3.2 km / hour, 12 % degree): Absolute walking distance was 267 mm. At the end of exercise, ABI value became immeasurable (almost flat).
- Computed tomography: Chronic total occlusion (CTO) with heavy calcification began from the infrarenal abdominal aorta and extended to the bilateral CFA. The occlusion length was about 70 mm.
Relevant catheterization findings. The infrarenal abdominal aorta was occluded. However, we realized the terminal aorta just above the bifurcation was not occluded and the bilateral CFA were communicated.

[Interventional Management]
Procedural step. A 4.5 Fr 95 cm Parent Plus (Medikitt) was inserted from the left brachial artery and advanced into the abdominal aorta. Two 6 Fr 11 cm sheaths were inserted from the bilateral CFA. We started with retrograde approach using a 0.014 Astate XS 9-12 (Asahi Intecc) with a 2.6 Fr 90 cm CXI (Cook) via the right femoral sheath. This guide wire penetrated the distal cap of CTO, but did not advanced anymore. The guide wire was exchanged to a 0.014 Naveed 4 50 g (Terumo) and advanced just below the CTO entry, but could not move. The CXI was exchanged to a 2.0 / 40 mm over the wire (OTW) balloon Armada 14 (Abbott vascular). This balloon was advanced into the CTO segment with repetitive inflation and deflation. Finally, the retrograde
guide wire was successfully introduced into the proximal true lumen. The retrograde wire was caught by a 7.0 mm Amplatz Goose neck snare (COVIDIEN) from the antegrade guide sheath and wire externalization was established. We tried to advance antegrade a 0.014 Cruise (Asahi Intecc) in the OTW lumen of a Crusade (Kaneka) to the left iliac artery, but failed. Therefore, this wire was caught by a 4.0 mm EN snare (Sheen man) from left femoral sheath, and wire externalization of the left side was established. After pre-dilatation, two self-expandable stents (SMART 8.0/150 mm, Cordis) were implanted from abdominal aorta to both common iliac arteries. After kissing balloon inflation, final angiogram showed optimal stents dilatation with good blood flow.

Case Summary. We successfully treated the extreme calcified aorto-iliac occlusion with careful manipulation of a very stiff 0.014 wire. During this procedure, externalizations using a snare wire were established twice to delivery devices after guide wire crossing. ABI greatly elevated to normal range; right 0.46 to 1.03, left 0.51 to 1.07, respectively and intermittent claudication completely disappeared.

TCTAP C-176
The Usefulness of CROSSER’s Both Crossing and Debubking Effect in Case of SFA CTO Lesion with Severe Calcification
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[CLINICAL INFORMATION]
Patient initials or identifier number. T. S.
Relevant clinical history and physical exam. 78 years old female with severe bilateral claudication referred to our hospital. Her comorbidity were angina pectoris, diabetic mellitus using insulin, hypertension, and dyslipidemia. The angiogram revealed total occlusion of right CFA to SFA and left SFA. The bypass surgery was strongly recommended, however, the patient rejected and scheduled for EVT. EVT for right CFA to DFA was previously performed.
Relevant catheterization findings. Lt SFA long CTO with severe calcification.

[INTERVENTIONAL MANAGEMENT]
Procedural step. Ipsilateral antegrade approach was selected and 6Fr Parent plus 23cm was inserted. We started wiring with 0.014 inch Treasure XS 12 but easily run outside the vessel because of severe calcification. Then we started knuckle wire technique using 0.035 inch Radifocus stiff J and 4Fr CXI catheter, however, could not proceed from mid portion of the lesion. We switched to IVUS guided wiring with 0.014 inch Astato 9-12 and NEXUS 50. The wire leached to the distal end of CTO, however, could not cross the distal thick calcified cap. So we used CROSSER finally crossed the lesion. IVUS revealed that wire was crossing the true lumen throughout the CTO lesion. After predilation, 2 Misago stent 7 * 150 mm were implanted, followed with post dilation with 6 mm balloon. Final angio showed good stent expansion and flow.