TCTAP C-195
Axillo-Femoral Bypass Steal Syndrome: Diagnostic Significance of Hemodynamic Assessment with Duplex Ultrasonography
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[CLINICAL INFORMATION]
Patient initials or identifier number. 2515902

Relevant clinical history and physical exam. An 84-year-old man who underwent axillo-bifemoral artery bypass surgery 5 years ago was referred to our institute for diagnosis and treatment of purple discoloration of the toes. Physical examination demonstrated pulsatile flow in the popliteal and dorsal arteries bilaterally and a vascular bruit in the right supraclavicular fossa and the right inguinal area. There was also a significant difference in blood pressure between the right and left upper extremities (right 106/61, left 136/61 mm Hg).

Relevant test results prior to catheterization. Ankle brachial index was 0.74/0.68 (right/left). However, SPP of the bilateral foot were preserved. Enhanced Computed tomography angiography showed a patent axillo-bifemoral bypass graft, as well as bilateral occlusive iliac artery disease with a shaggy terminal aorta. However, significant stenosis was detected in the proximal segment of the right subclavian artery. Duplex ultrasonography demonstrated reversed flow in the left limb of the graft and antegrade flow in the right limb.

[INTERVENTIONAL MANAGEMENT]
Procedural step. These findings suggesting a steal phenomenon in the left limb of the axillo-bifemoral bypass graft due to SCAS. Accordingly, the microemboli associated with the patient’s blue toesyndrome were considered to have originated from plaque in the terminal aorta, which disseminated to the right foot through the left limb of the axillofemoral bypass graft. Medical treatment consisting of a vasodilator and a statin was effective, and the patient was uneventfully discharged 24 days later. One month after discharge, the patient remained symptom-free.

Case Summary. SCAS can be associated with a wide range of clinical manifestations. Steal phenomenon and steal syndrome (if symptomatic) due to SCAS were well known as reversed flow in the ipsilateral vertebral artery and later in the internal thoracic artery in patients with a history of CABG. To the best of our knowledge, this is the first case report of axillo-femoral bypass steal syndrome due to SCAS. We conclude that hemodynamic assessment with duplex ultrasound, in addition to morphological assessment based on enhanced CT imaging, can be extremely helpful for identifying steal phenomenon in an axillo-femoral bypass graft.

TCTAP C-196
Successful Recanalization of Very Long Chronic Total Occlusion Ranging from External Iliac Artery to Superficial Femoral Artery Using Transcollateral Approach via Hypogastric Artery
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[CLINICAL INFORMATION]
Patient initials or identifier number. M.N

Relevant clinical history and physical exam. She was an 86-year-old female with severe intermittent claudication in both lower limbs for a year and a half. Symptom of the left lower limb was more severe than the right one. She was introduced from a family doctor and was diagnosed as peripheral artery disease because of ankle-brachial index (ABI) decline and typical clinical symptom. Her symptom limited her activity of daily life and did not improve after medication for several months. She had hypertension and dyslipidemia.

Relevant test results prior to catheterization. ABI was decreased to 0.62 / 0.38 (right / left). CT angiography showed chronic total occlusion (CTO) of her right external iliac artery (EIA). As for the left limb, very long CTO was confirmed which ranged from the left EIA through the left superficial femoral artery (SFA). In the entire CTO segment, clustered calcifications were observed. The left deep femoral artery (DFA) was visualized via the left hypogastric artery.

Blood test showed e GFR was 66.2 ml/min.