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A Unique Clinical Presentation of Subclavian Steal Syndrome Provoked by Walking in a Patient with a Patent Axillo-Femoral Bypass

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An 80-year-old compromised man had undergone a unilateral left axillo-femoral and below-knee femoral-popliteal bypass 18 months earlier, owing to chronic limb-threatening ischemia with a postoperative ankle-brachial index (ABI) of 0.9. He reported no significant symptoms from the revascularized limb and experienced no ischemic ulcers or rest pain. He was able to walk enough to complete his activities of daily living. The patient presented to our department with atypical symptoms of dizziness after walking a standard distance of 100 m; this feeling subsided after a short time of rest. He reported that symptoms had been persisting for 2 weeks. He did not experience claudication, and his ABI was 0.65. Color duplex ultrasonography revealed patent axillo-femoral and femoral-popliteal bypass grafts with a reduced peak systolic velocity of 50 cm/s. Color duplex ultrasonography of the carotid and vertebral arteries showed

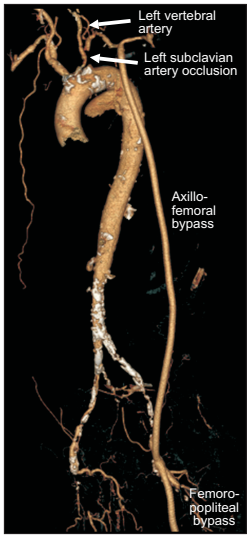

Fig. 1. Three-dimensional computed tomography angiography reconstruction showed a short occlusion of the proximal left subclavian artery and the patent axillo-femoral bypass graft.

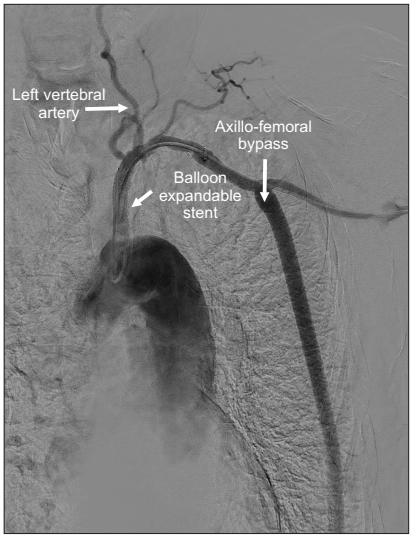

Fig. 2. Subclavian artery flow was restored using a balloon-expandable stent.

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complete flow reversal in the left vertebral artery. Computed tomography angiography revealed a short occlusion of the left subclavian artery, proximal to the origin of the vertebral artery (Fig. 1). Based on the clinical presentation and imaging examinations, subclavian steal syndrome from the lower limb during exercise was hypothesized to be the cause of this patient's symptoms [1,2]. Although both open surgical reconstruction and endovascular recanalization were feasible, angioplasty and stenting were recommended as most likely to provide improved symptom-free survival and freedom from re-intervention [3-5]. The patient, therefore, underwent percutaneous recanalization of the lesion via a brachial approach, using a balloon expandable stent measuring 8 mm×37 mm (Visi-Pro Peripheral Stent System; Medtronic, Dublin, Ireland) (Fig. 2). After the procedure, he reported complete resolution of symptoms, and repeat color duplex ultrasonography revealed restoration of the antegrade blood flow in the ipsilateral vertebral artery. This report describes a unique clinical presentation of subclavian steal syndrome triggered by walking; this is possible in case of a stenosed subclavian artery serving as inflow for a peripheral arterial bypass.

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