Hybrid Revascularization of Extensive Multilevel Atherosclerotic Lesions Utilizing Self-expanding Intervenous Nitinol Stent and Paclitaxel-coated Balloon

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76 year-old female, critical limb ischemia of the right lower limb (Rutherford class IV) 

ABI*: on the right side –0.35, on the left side –0.65
Risk factors: diabetes mellitus, coronary artery disease

MSCTA*: occlusion of right common and external iliac arteries (a), bilateral occlusions of superficial femoral arteries, occlusion of the left popliteal artery (b).

After femoral endarterectomy, under the control of double-looped silastic slings around the distal external iliac artery, 6-F introducer sheath was inserted in the occluded external iliac artery (c). Combination of “0.35” hydrophilic guidewire and 5-F multipurpose catheter crossed iliac lesions. Graduated balloon angioplasty of iliac arteries with 4-6 mm balloons was performed. 6 x 150 mm Supera self-expanding stent (Abbott Vascular) was implanted from the ostium of the common iliac artery to the level of the proximal common femoral artery (d), with the distal end of the stent tacking proximal portion of endarterectomy(e).

Arteriotomy of the common femoral artery was closed and the blood flow through the profunda femoris artery was re-established. A 6-F introducer sheath was directed into the superficial femoral artery (f). After plain balloon angioplasty, control arteriography (g,h,i) revealed non-flow limiting dissections in the distal part of the superficial femoral artery (h). 5 x 120 mm paclitaxel-coated balloon was used at the level of dissections. As a result of a procedure rest pain resolved and ABI increased from 0.35 to 0.8.

*ABI-ankle-brachial index, *MSCTA-multispiral computed tomographic angiography