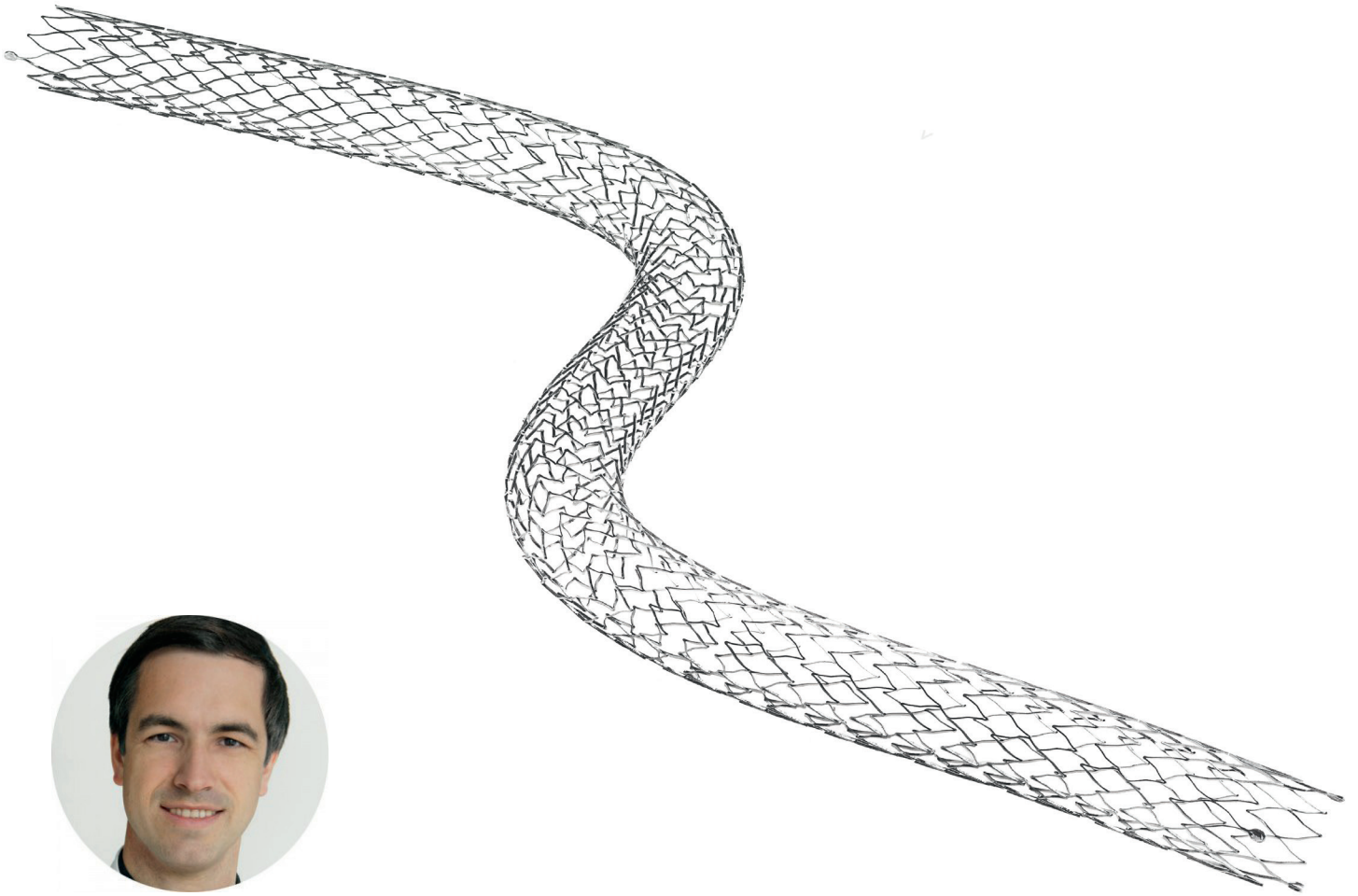


CASE REPORTS

TENTOS 4F



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ACUTE ISCHEMIA (TASC I)

Case summary

A 55-year-old male patient was admitted to our hospital with subacute pain in the right leg after multiple Bypass-Surgery in another hospital. The medication of Aspirin and Eliquis was stopped 4 days ago. The ultrasound examination shows that the vein-bypass (distal-origin femoro-crural (tibial posterior, fibular artery) implanted three years earlier is occluded as well as the femoral artery.

Therapy

We immediately started with a catheter lysis therapy. A Cross-Over maneuver was done and a 45cm Terumo Sheath 5F was introduced. In the angiography, the entire superficial artery was occluded, while the fibular artery was fed by collaterals. After positioning the Cragg-McNamara Valved Infusion Catheter (ev3, Medtronic), catheter lysis with Actilyse-tissue-type plasminogen activator was started at a rate of 1mg/h.

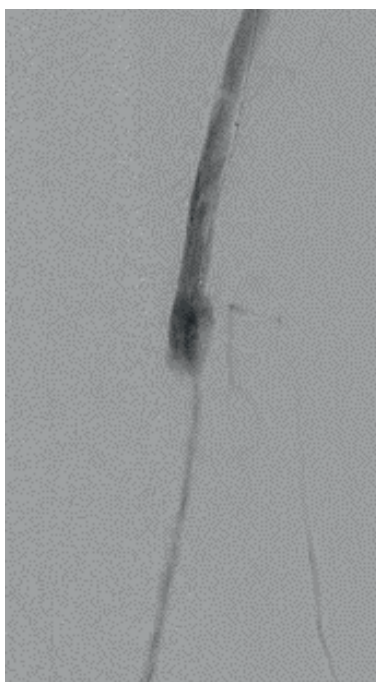
24 hours later, the occlusion in the superficial femoral artery and bypass was completely restored. However, there was some thrombotic material left in the bypass and bypass-anastomosis, causing a stenosis.

After balloon angioplasty we implanted stents in the superficial femoral artery (6x170mm Tentos 4F, optimed) and in the proximal Bypass-Anastomosis (5x40mm Tentos 4F, optimed) due to the small lumen of the old vein-bypass.

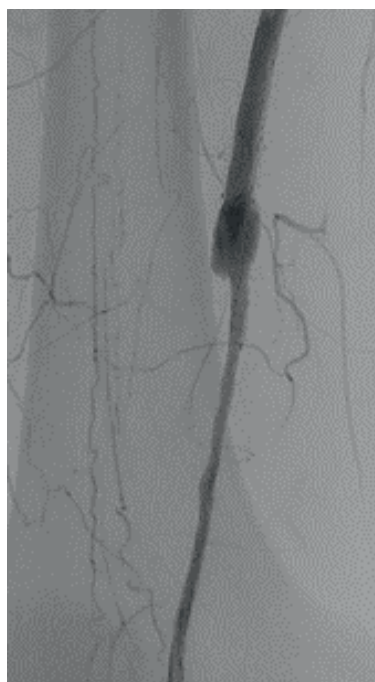
In the Bypass itself we implanted a Supera stent (4,5x60mm, Abbott) (due to its position in the popliteal region) with a good result. After post-dilatation with a long 4mm balloon, the entire vessel axis was reopened, except for the distal fibular artery. The remaining occlusion was removed by aspiration. At the level of the ankle, there were collaterals to the anterior and posterior tibial artery.

Follow-up

After 3 days, the patient was painless. We discharged him with an ABI of 0.9 and a recommendation of Aspirin (ASS) 100mg and Clopidogrel (Plavix) 75mg.



dist-origin – fibular Bypass



After 5x40mm Tentos 4F



Final Angiography

PAD RUTHERFORD STAGE 5 (FONTAINE IV)

Case summary

An 80-year-old man came to the emergency room with acute worsening of Rutherford 5 Peripheral Arterial Disease (PAD). Both legs were affected, and there was a risk of amputation in the feet. The patient had multiple cardiovascular risk factors, including diabetes, hypertension, and hypercholesterolemia.

Additionally, he had a long history of coronary diseases, including ACVB, cardiac stenting, decompensated heart failure, AV-block, and atrial fibrillation. The patient was in a very poor overall condition. Given the severity of the condition, we made the decision to treat the patient immediately with bilateral angiography, prepared for intervention.

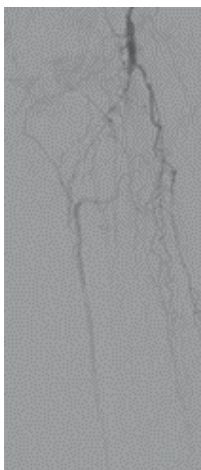
Therapy

Under duplex-ultrasound guidance, we performed an antegrade puncture of the right femoral artery and cannulated the superficial femoral artery using a 5F sheath. The angiography revealed no stenosis or occlusion in the groin and thigh. However, the popliteal artery below-the-knee was completely occluded, with collateral circulation supplying the distal end of the popliteal artery. The anterior tibial artery, which was the main vessel in the lower leg, showed some distal stenoses, while the fibular artery appeared small and continuous, and the posterior tibial artery was occluded distally.

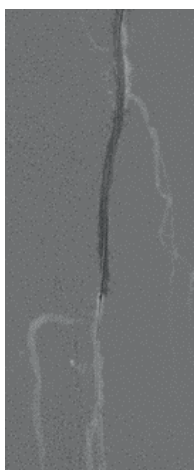
To address the popliteal occlusion, we navigated through it using an Hi-Torque Command 0.018" guidewire (Abbott) and a 0.018" Trailblazer support catheter (Medtronic). During the subsequent balloon angioplasty with a 3x120mm Sterling (Boston Scientific), there was an immediate recoil. After pre-dilatation, we attempted to implant a Supera stent (Abbott), but encountered difficulties advancing the stent-introducing system. To stabilize the situation, we successfully resolved the problem by using a Tentos 4F stent (Optimed) with a low-profile introducer system. Ultimately, a 5x80mm Tentos 4F stent was successfully implanted. The final angiography demonstrated complete recanalization of the lower leg vessels with normal distal flow.

Conclusion

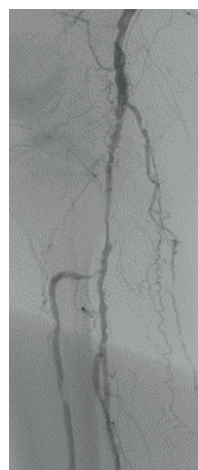
Unfortunately, the tissue loss in the toes had already advanced too far to salvage the forefoot. As a result, we had to perform a forefoot amputation several days later. However, the wound healing in the following weeks was good.



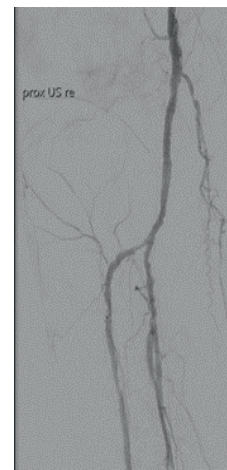
Occluded poplitea
right



PTA 3x120mm Sterling



before Stenting



Tentos 4F- 5x80mm
final Angiography

TASC IIB ISCHEMIA

Case summary

A 67-year-old woman presented to our policlinic via the rescue service with TASC IIB ischemia of the right leg. There was an acute occlusion of the complete femoral artery, profunda artery, and a bypass (femoro-popliteal P1 PTFE) implanted in 2018 due to an embolic event. The patient had known cardiovascular risk factors, including arterial hypertension and a history of smoking (50 pack years). In order to salvage the lower leg, we made the decision to perform an open revascularization procedure from the right groin.

Therapy

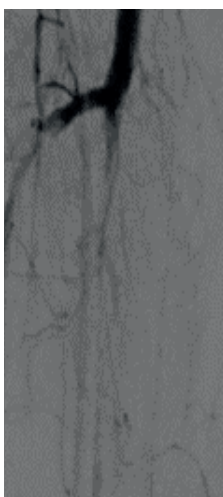
The typical approach to access the right femoral arteries involved an open thrombectomy of the femoral artery, deep femoral artery, and the alloplastic femoro-crural PTFE bypass using different Fogarty catheters. After embolectomy and atherectomy of the femoral arteries, and achieving a good inflow and slow backflow out of the bypass, the vessel was closed by adding a pericardial patch. In the follow-up angiography, the femoral arteries were open without stenosis, but the distal outflow of the bypass was still restricted due to embolic remnants. Consequently, we performed an open access to the lower leg. Thrombectomy was carried out to remove fresh and older thrombi/emboli, followed by open atherectomy, and the vessel was closed by adding a vein patch. In the subsequent angiography, the anterior tibial artery

was identified as the primary vessel in the lower leg, while the other vessels were not viable for revascularization. We transitioned to an endovascular approach and introduced a 5F sheath through the femoral arteries. During the angiography, it was observed that the proximal part of the anterior tibial artery was nearly occluded. We successfully passed through with a Hi-Torque Command 0.018" guidewire (Abbott) and a 0.018" Trailblazer support catheter (Medtronic). After confirming the intraluminal position, we dilated this area with a 3x40mm Sterling balloon (Boston Scientific). Due to restenosis and a single vessel outflow, we decided to implant a 4x40mm Tentos 4F stent (Optimed), which yielded positive results.

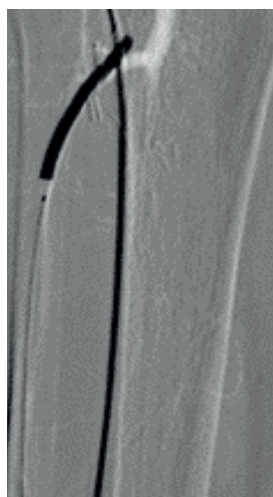
To prevent compartment syndrome, a complete fasciotomy of the lower leg was performed, and the skin incision was closed with artificial skin. Due to extreme muscle swelling, the incision was closed with a mesh graft transplantation a few days later.

Follow-up

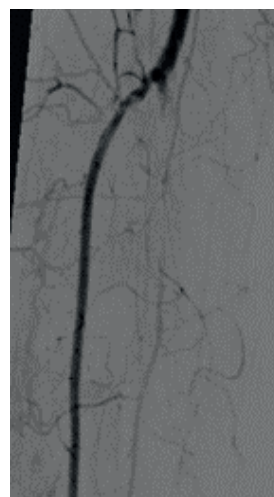
Two months after discharge, a planned follow-up examination was conducted. The patient reported no pain, and her walking distance was only limited by an old peroneal lesion. The foot pulse was palpable.



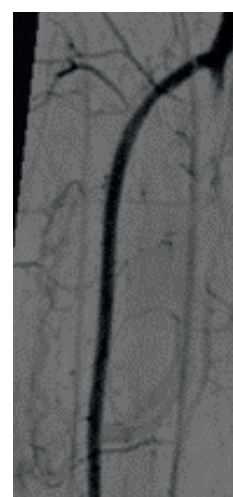
after open Thrombectomy



PTA ATA (3x40mm Sterling)



after PTA before Stent
Tentos 4F 4x40mm



Final angiography