ENDOVASCULAR TREATMENT OF EARLY OCCLUSION OF HYBRID REVASCULARIZATION FOR MULTILEVEL ARTERIAL DISEASE

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INTRODUCTION: A diabetic 59 year-old patient, with previous myocardial infarction, already undergone at two different Centers an endovascular recanalization of the left leg and a minor amputation, was admitted to our hospital in March 2016 with rest pain and a non healing wound of the left foot. An angiography found a severe, heavy calcified lesion of the common femoral artery extended to the profunda femoral artery, a diseased proximal and distal superficial femoral artery and a stenosis of the tibio-peroneal trunk. Our choice was an hybrid revascularization with replacement of the common femoral artery with a Dacron graft from the external iliac artery to the profunda femoral artery, replacement of the proximal SFA with a Propaten graft, stenting of the distal SFA with a Zilver PTX, finally a balloon angioplasty of the tibio-peroneal trunk and a transmetatarsal amputation. Two months later a non healing transmetatarsal amputation prompted to another angiography which documented the patency of the Dacron graft, an occluded Propaten graft with patency of the Zilver PTX distally to the SFA occlusion.

METHODS AND MATERIALS: We opted for a percutaneous endovascular treatment. A 45 cm 6 Fr Flexor Sheath was positioned in the left common femoral artery from the right side; a 0.18 (V18 Boston Scientific) guidewire supported by 4.0 Fr CXI catheter (Cook) allowed an intraluminal recanalization of the occlusion. In order to avoid distal embolization we performed a primary stenting: two Zilver PTX (6X80 mm) were deployed in overlapping within the previously implanted stent in the distal SFA; a Viabhan stent graft (6X150 mm) was released inside the Propaten graft from the patent proximal stump to the Zilver PTX, finally post dilated with a 5X150 mm balloon. Completion angiography detected the technical success of the recanalization.

RESULTS: At 6 months follow up, a duplex ultrasound and CT scan showed a good patency of all the graft and the stent, with complete healing of the transmetatarsal amputation. The patient improved from cathetory Rutheford 5 to 1.

CONCLUSION: Hybrid treatment is ideal for multilevel arterial disease involving the common femoral artery. Close follow-up is mandatory to assess the outcomes. Endovascular treatment of early and late complications, using a combination of different material offer a minimally invasive treatment of complex anatomy lesions in high-risk patients.