

Single pedal access for treatment of ipsilateral superficial femoral artery and anterior tibial artery

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PURPOSE

Peripheral artery disease is a common condition that affects around 200 million people in the world. Treatment options include balloon angioplasty, bare metal stents, drug eluting stents, atherectomy, and distal tibial bypass surgery. Single retrograde access in the posterior tibial artery allows for precise deploy of self-expanding stents at the origin of the superficial femoral artery when there are ostial lesions, however, it is challenging when it is necessary also to treat the ipsilateral anterior tibial artery. We present a successful case of angioplasty of superficial femoral artery and anterior tibial artery through a single access in posterior tibial artery.

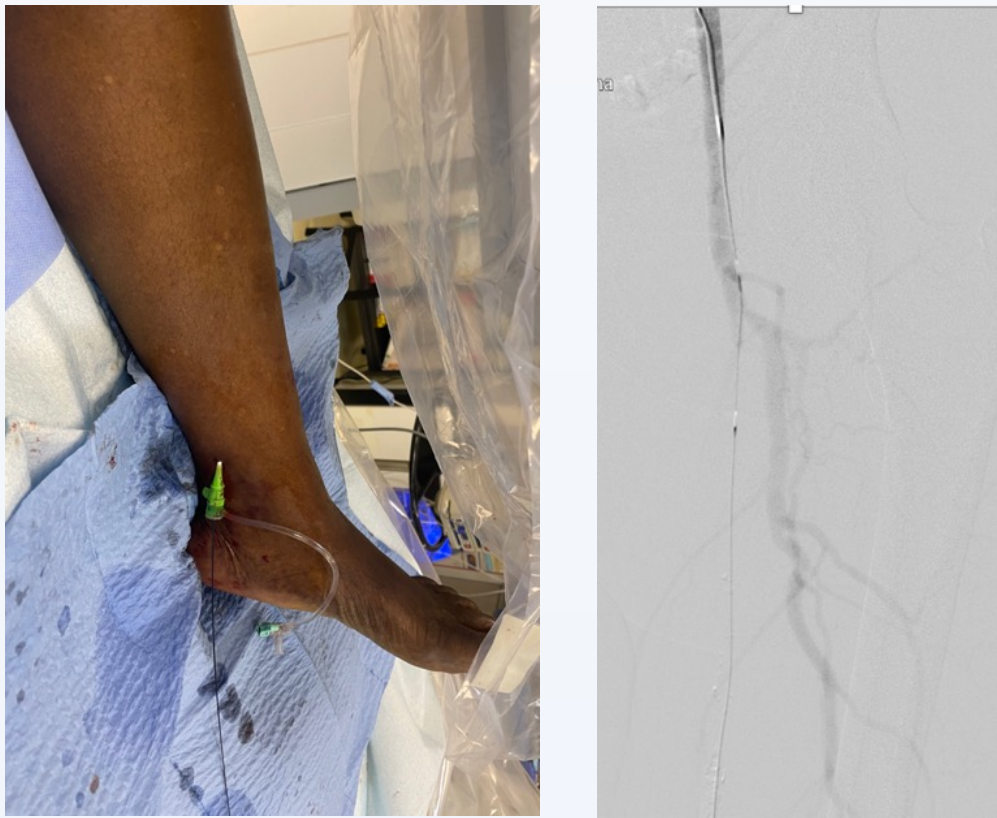


Figure A and B showing posterior tibial Access and occlusion of SFA



Figure C, D and E showing pre-dilatation, angioplasty and stent deployment in SFA

MATERIAL AND METHODS

A 60-year-old lady with a history of high blood pressure, smoking for more than 15 years, complains of rest pain in the left lower limb, on physical examination absence of anterior and posterior tibial artery pulses of the left lower limb, Angio-CT scan revealed ostial occlusion of superficial femoral artery and stenosis of 90% of anterior tibial artery. After signing informed consent patient is taken to cath-lab, ultrasound guidance access of left posterior tibial artery was performed with micro puncture kit (Cook Medical, Bloomington, Indiana) a 6fr sheath was placed, command 0.018 wire (Abbott Vascular, Santa Rosa, CA) and catheter sergeant 0.018 (iVascular, Sant Vicenç dels Horts, Barcelona) were used to cross the lesion in SFA, oceanus balloon pro 3 mm x 200 and 5 mm x 150 mm (iVascular, Sant Vicenç dels Horts, Barcelona) were used for vessel preparation then a 5 mm x 150 mm supera stent (Abbott Vascular, Santa Rosa, CA) and 5 mm x 200 mm iVolution stent (iVascular, Sant Vicenç dels Horts, Barcelona) were deployed proximal and distal respectively in SFA. hydrophilic vertebral catheter and asion blue wire 0.014 x 300 cms (Asahi, Sumida, Tokyo) were used to cross the anterior tibial artery lesion and plane balloon angioplasty was performed.

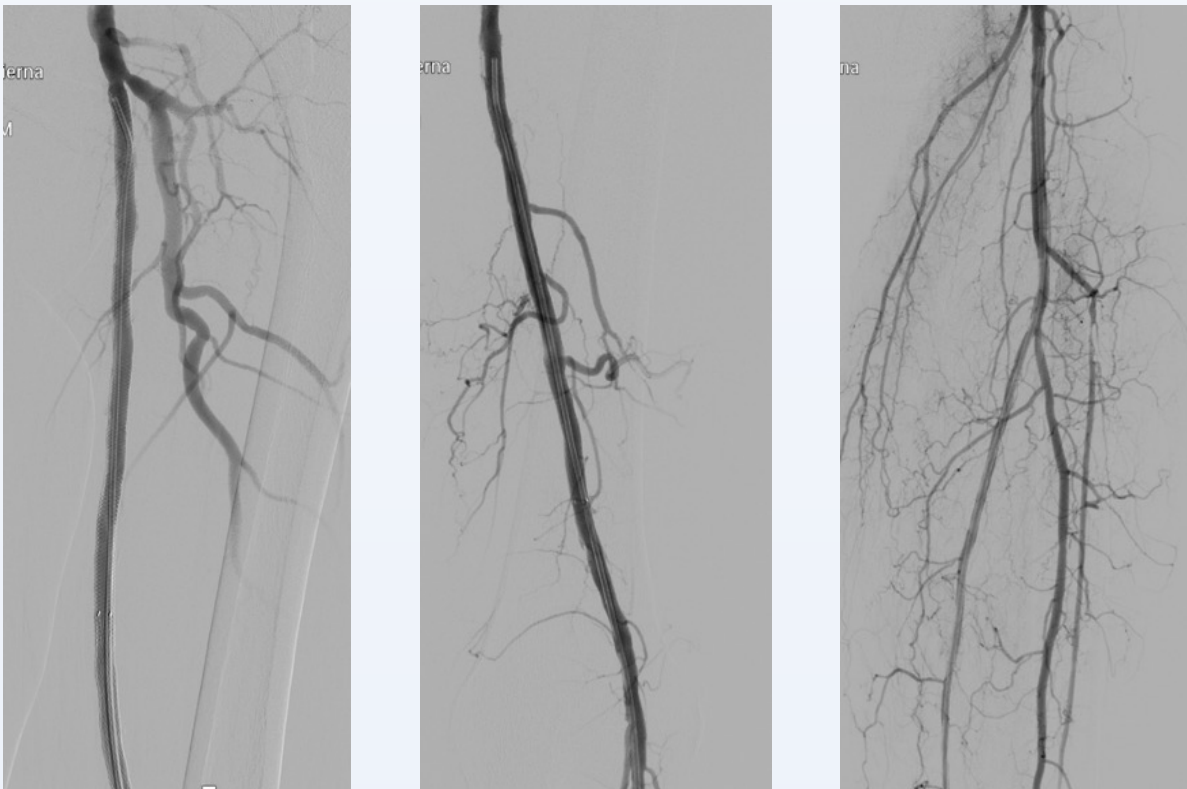


Figure F, G and H showing good results after stent deployment in SFA with critical stenosis in ATA

RESULTS

The final arteriography shows satisfactory results with adequate blood flow, the patient leaves the cath-lab with anterior tibial artery palpable pulse

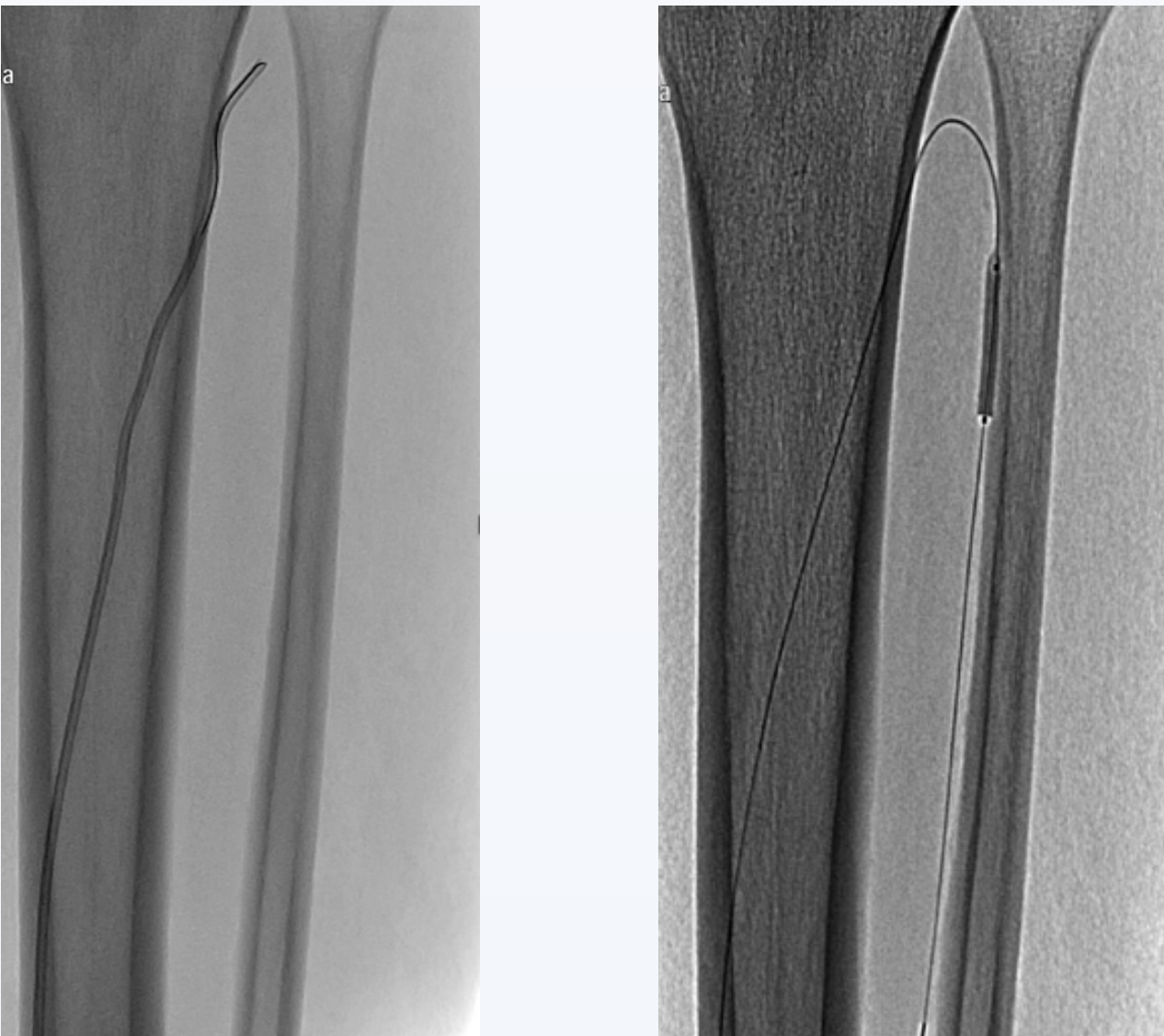


Figure I and J showing access and angioplasty of ATA

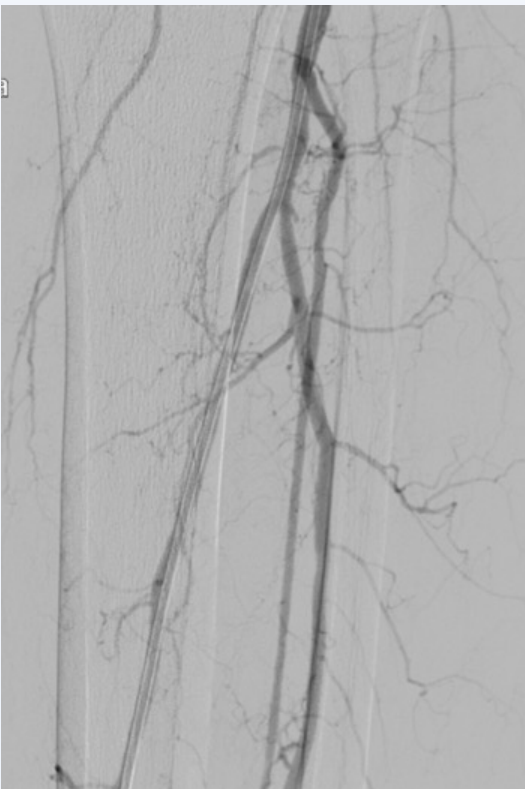


Figure K showing final arteriography with three vessel runoff

CONCLUSIONS

Single retrograde access in posterior tibial artery allows precise deploy of self-expanding stent in the ostium of superficial femoral artery and ipsilateral anterior tibial artery angioplasty in the same intervention decreasing surgical time and use of contrast



Figure L showing triphasic waveform with lineal doppler

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