



VASCUPEDIA

# Critical limb ischemia due to an occlusion of an aorto-biiliac prosthesis step by step case presentation and decision making

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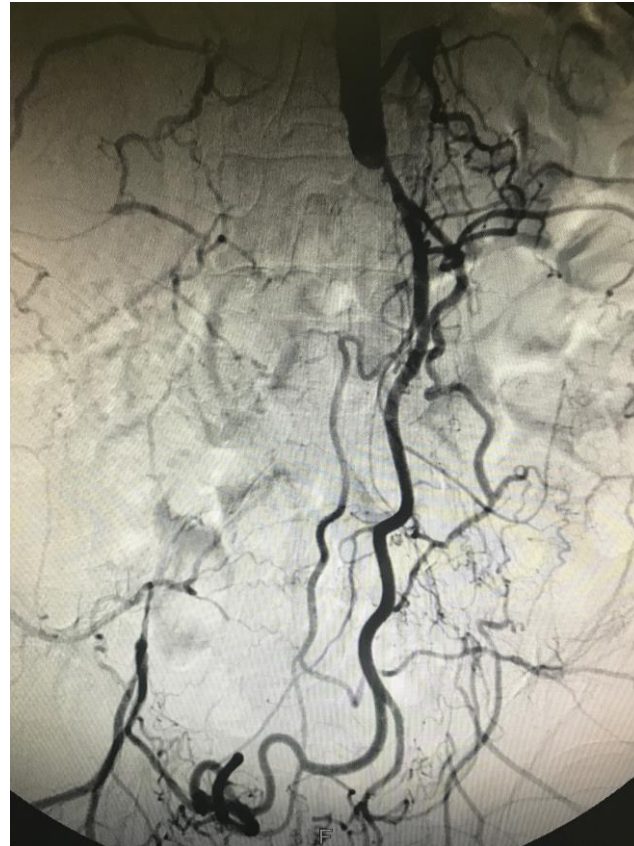
# Case presentation

- Male
- 62 yrs old
- Comorbidity: Coronary heart disease, hypercholesterolemia, arterial hypertension
- **Previous operations/interventions:** Outward aorto-biiliac bypass, amputation of the left leg after limb-occlusion and ischemia

# Case presentation

- **Symptoms:** Critical limb-threatening ischemia of the right leg, Rutherford 4
- **Duplex and CTA:** Occluded aorto-biiliac Y-graft, occlusion of the right CFA and SFA, main collateral circulation for the right lower limb and the amputated left leg over the IMA

# Transcubital angiogram



Complete occlusion of the aorto-biiliac prosthesis and the right external iliac artery. Collateral circulation of the IMA for the right leg and the residual left limb. Occluded right CFA and SFA. The right deep femoral artery is open.

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# What would be your treatment?

**Re-do transperitoneal reconstruction?**

**Axillo-femoral bypass?**

**Transfemoral thrombectomy?**

**Hybrid-revascularization?**

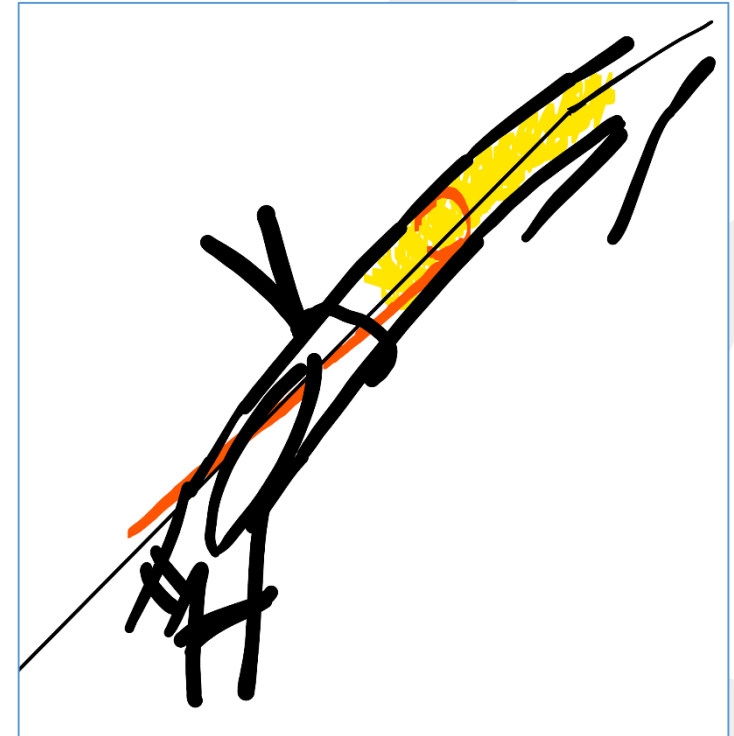


# Our concept

We decided the hybrid-revascularization through (1) an endovascular treatment of the aorto-iliac level with chimney-protection of the IMA and (2) an open reconstruction of the right femoral bifurcation and the right external iliac artery.

The perfusion of the IMA was of great clinical relevance considering this vessel as crucial collateral for the amputated left limb.

The right external iliac artery was treated by remote iliac endarterectomy in a retrograde approach with a Vollmar ring dissector. This technique is routinely performed under angiographic control and through a stiff wire.



Remote endarterectomy with a Vollmar ring dissector

# Materials

- Endurant limb ETLW1610C93E (Medtronic)
- Viabahn 5x50 mm (Gore)
- Viabahn 10x100 mm (Gore)
- Haemashield Cardiovascular Patch (Maquet)
- Lunderquist extra stiff wire (Cook Medical)
- V-18 Control Wire (Boston Scientific)
- 6F Flexor Shuttle Guiding Sheath, 110cm (Cook Medical)
- 14F Performer Sheath (Cook Medical)
- 16x40 mm Atlas Gold PTA Catheter (Bard)
- 7x80 mm Evercross PTA Catheter (Medtronic)
- 5x60 mm Pacific Plus PTA Catheter (Medtronic)
- 0.035 Glidewire-Advantage (Terumo)
- 0.035 Quick-Cross Catheter, 135 cm (Spectranetics)
- 6x40 Everflex-Stent (Medtronic)

# Step by step procedure

1. Cut-Down of the right femoral bifurcation, endarterectomy of the CFA and proximal SFA
2. Retrograde recanalisation of the native right EIA and CIA with a Quick-Cross Catheter and a Glidewire-Advantage (0.035)
3. Remote iliac endarterectomy in a retrograde manner with a Vollmar ring dissector under angiographic control over the positioned wire
4. Transcubital positioning of an 6F Shuttle-Sheath in the infrarenal aorta and cannulating the IMA with a 0.018 wire (V-18)
5. After pre-dilatation with a 7 mm PTA-Catheter, placement of the Endurant-limb in the infrarenal aorta and right CIA in chimney-technique for the IMA by transcubital positioning of an 5x50 mm Viabahn.
6. Extension of the iliac stenting with a 10x100 mm Viabahn to the distal external iliac artery
7. Post-dilatation of the Endurant-limb (16x40 mm) and the IMA-Viabahn (5x60 mm) in kissing-technique
8. Patch-plasty of the CFA and proximal SFA
9. Spot-stenting of the proximal SFA (6x40 Everflex) due to residual stenosis



# Intraoperative angiography



a) Retrograde recanalization and wire positioning



b) Post dilatation in kissing-technique after Endurant-limb-placement and chimney for the IMA

# Final result



Aorto-iliac reconstruction with patent IMA



Iliaco-femoral result. After TEA and spot-stenting patent right SFA

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# Questions to Vascupedians

- Would you have done sth else ?
- How do you treat the ischemia of an amputated limb ?
- Is the open re-do-repair of aortic occlusions still an important option?
- Which is the role of hybrid treatment of complex aortoiliac occlusions?
- What is your approach in elective cases? All in one or first endovascular treatment of the iliac vessels and then CFA endarterectomy?
- Complex aortoiliac occlusion: ilio-femoral bypass or hybrid revascularisation?