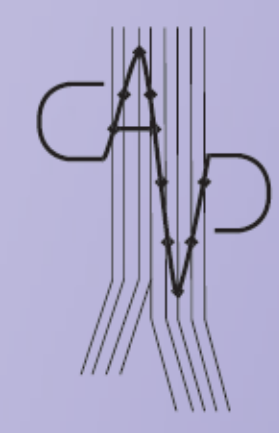


Different moments, Different treatments



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BACKGROUND

Bypass versus Angioplasty in Severe Ischemia of the Leg (BASIL) trial remains the only randomized controlled trial to compare endovascular therapy to open surgery for critical limb ischemia due to infra-inguinal disease. This trial recommends that patients expected to live more than 2 years, based on their other comorbidities, should usually be offered bypass surgery first, using the saphenous vein, if possible.

We report a clinical case with bilateral critical limb ischemia, where both options (surgical and endovascular) were offered, according to the clinical state of the patient.

2008



Age: 65 years-old;
A 2-week history of infected digital ulcer in the right foot;
Comorbidities: insulin-dependent diabetes, hypertension and dyslipidaemia;
Femoral pulses bilaterally; popliteal and distal pulses were absent;
After antibiotherapy, ultrasound and angiographic studies:
a **femoro-pedal bypass with reversed saphenous vein** was performed;
Patient evolution was favourable, with wound healing.

2010

The patient had a **non-ST segment elevation myocardial infarction** and was admitted to the coronary unit where the investigation revealed three-vessel disease, severe aortic stenosis and preocclusive stenosis of the right carotid artery.

2012

The patient underwent:

- implantation of biological aortic prosthesis,
- two coronary bypass (with the left saphenous vein),
- a right carotid endarterectomy.

2018

Patient was readmitted with a left digital ulcer and osteomyelitis;
Angio-CT showed femoro-popliteal and tibial disease with pedal artery patent;
The right femoro-pedal bypass remained permeable.

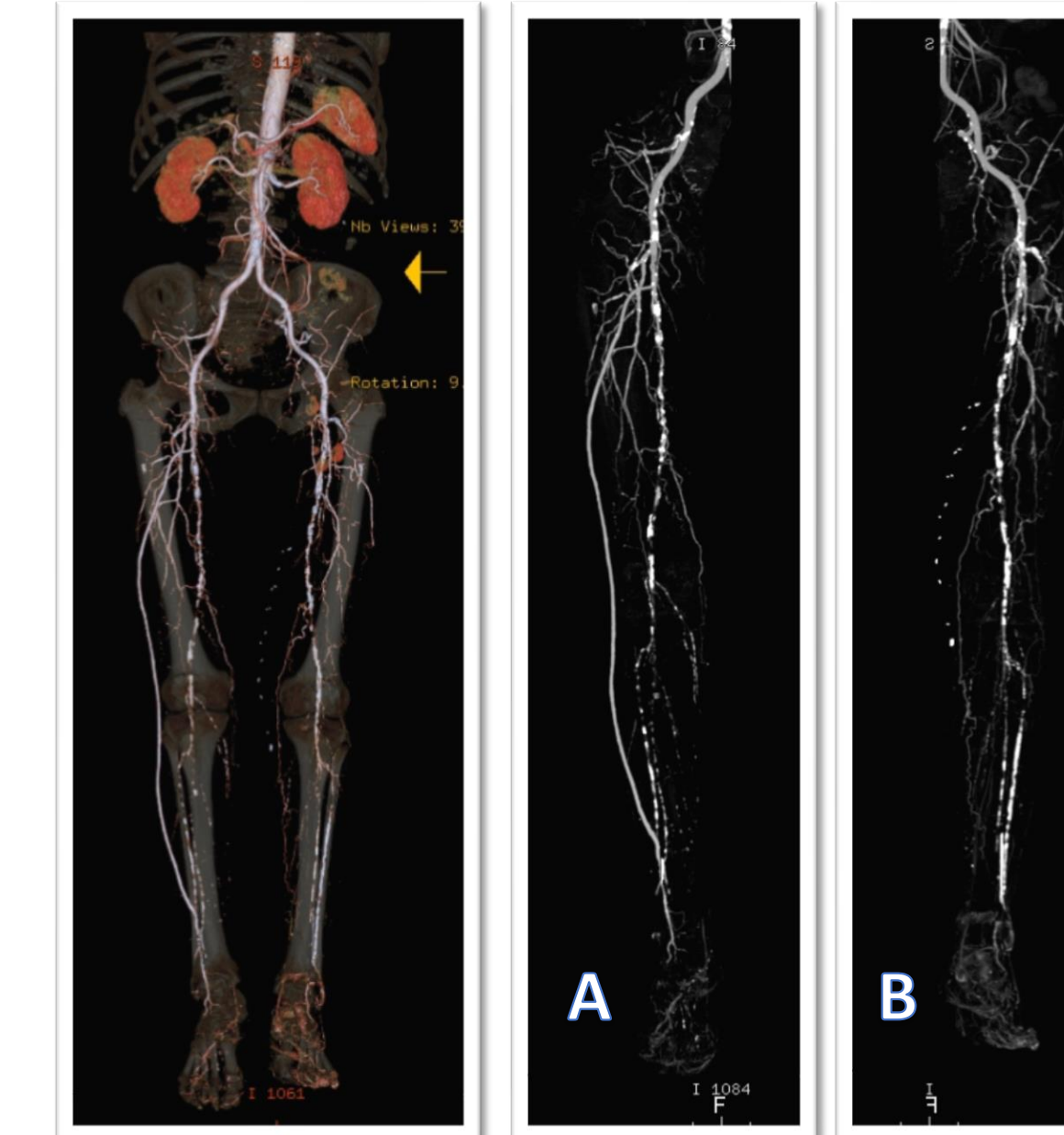


Figure 1 - Preoperative angio CT 3D reconstruction
A) Right lower limb, with patent femoro-pedal bypass
B) Left lower limb, with extensive arterial disease

Due to patient's actual comorbidities and the absence of venous conduit to bypass, an endovascular therapy was proposed.

1. An ultrasound-guided antegrade femoral common artery access was performed, and a 0.014" wire with supportive CTO catheter was advanced;
2. After several approaches, the antegrade approach proved to be ineffective in overcoming the multiple occlusions;
3. A fluoroscopy-guided transpedal access was obtained at the transition of the dorsalis pedis to the anterior tibial artery just above the instep of the foot;
4. A 0.018" wire was advanced through the needle and captured at superficial femoral artery with a 5Fr catheter;
5. The angioplasties were performed with Amphirion Deep tapered 2/2.5mm, 2.5/3mm, 3.5/4mm from anterior tibial artery to the superficial femoral artery;

The angiographic control was excellent, as was the evolution of the patient with healing of the wounds in just one month.

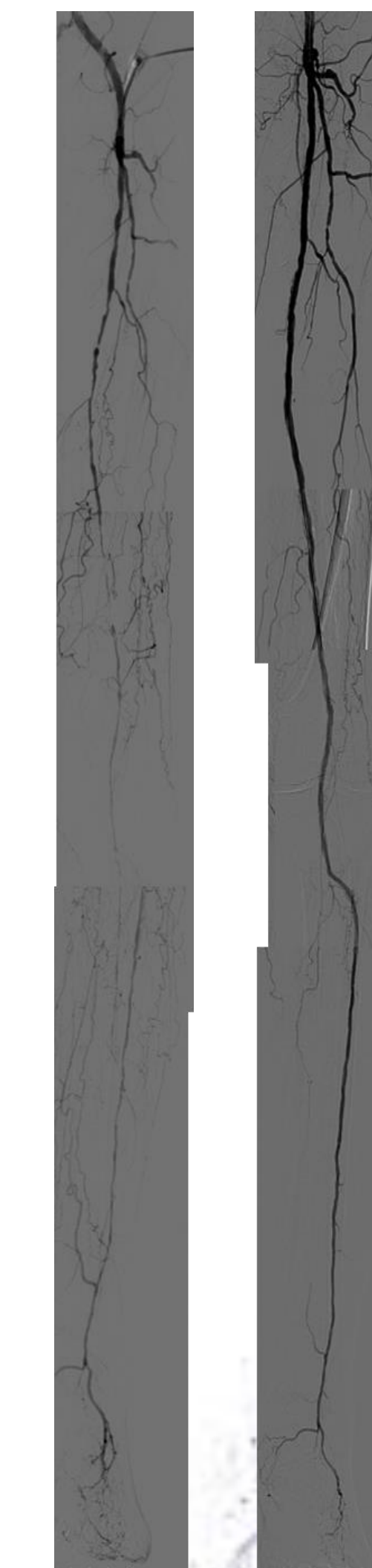


Figure 2 - Intraprocedural angiogram before and after angioplasties

CONCLUSIONS

The decision between endovascular intervention versus open surgical bypass should be based on patient's surgical risk, the availability of autologous vein, severity of limb threat and anatomic pattern of the disease. In this case report, both proved to be effective in two different phases of the patient medical state.