

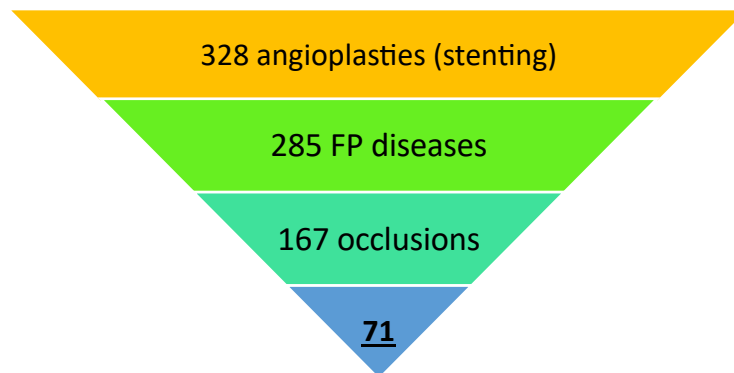
Introduction

Endovascular therapy is the gold standard for femoro-popliteal (FP) arterial occlusive disease. But, heavy calcified lesions and very long ones are challenging to treat percutaneously.

We report our experience about percutaneous recanalization of very long femoro-popliteal chronic total occlusions (CTO), longer than 25 cm.

Material and methods

Between January 2021 and December 2023, we included all percutaneous recanalization of CTO more than 25 cm in femoro-popliteal axis. The data were reviewed retrospectively.



Results

There were 67 patients (71 limbs). Mean age was 70,5 years old. Cardiovascular risk factors were : 83.6% tobacco, 76.1% systemic hypertension, 68.7% dyslipidemia, and 44.8% diabetes.

The average ankle brachial index (ABI) preoperatively was 0.54 ± 0.15 . Most of our patients had moderate (35.2%) or severe (33.8%) claudication. Average length of the lesion was 31.1 ± 5.6 cm.

The preparation was mainly by plain old balloon angioplasty (POBA) (81.8%). All treatments were carried out by drug eluting balloon (DEB). Only one third (33.3%) of patients had bailout stenting, mainly due to arterial dissection (63.6%). The immediate technical success rate was 93%.

The median length of hospitalization was 1 day. 88.7% of patients had no complications.

Percutaneous recanalization of very long femoro-popliteal chronic total occlusions

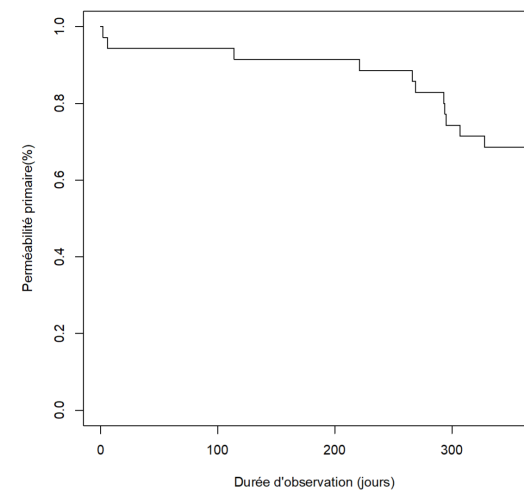
Dememaker V, Kerzmann A, Boesmans E, Holemans C, Alexandrescu V, Defraigne JO

Department of Cardiovascular and Thoracic Surgery, University Hospital of Liège, Belgium



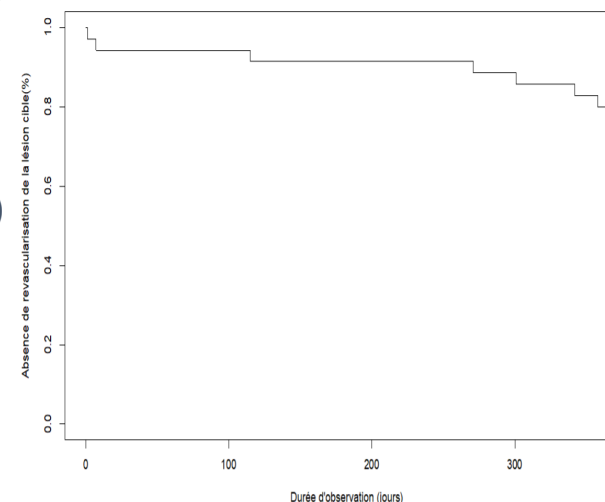
Primary patency at 1 year was 68.6% (figure 1). It tends to decrease in the case of bailout stenting (OR=0.36, $p=0.073$) but not significantly.

(FIGURE 1)



The rate of freedom from TLR at 1 year was 80% (figure 2). The risk of further revascularization increases significantly in the event of bailout stenting (OR=4.07, $p=0.0018$).

(FIGURE 2)



Mean time for re-occlusion was 293,5 days.

The amputation rate was 9.4% including 4 minor (6.3%) and 2 major (3.1%). The risk of amputation decreases significantly in the presence of smoking (OR=0.12, $p=0.019$). It increases significantly in cases of chronic kidney disease (CKD) (OR=27.2, $p=0.0042$) and according to the severity of the pre-operative Rutherford stage (OR= 2.77, $p=0.016$).

We observed a significant increase in the ABI ($p<0.0001$) and a decrease in the Rutherford score ($p<0.0001$).

4 patients died during the follow up (mean 12.3 months). The amputation free survival at 1 year was 93.8%.

Conclusions

At 1 year, primary patency and rate of freedom from TLR were 68,6% and 80% respectively. The amputation rate was 9,4%. Clinical improvement and amputation-free survival were also favorable.

The only predictive factor of freedom from TLR was bailout stenting. The crossing and preparation of the target vessel must be optimized to prevent dissection and the need for secondary stenting.



Disclosure : none to declare

Contact: v.dememaker@chuliege.be, akerzmann@chuliege.be