

# Atherectomy with drug eluting balloon for common femoral artery occlusive disease : early experience

Kerzmann A, Boesmans E, Holemans C, Szeceł D, Demesmaker V, Pudzeis J, Alexandrescu V, Defraigne JO

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

## Introduction

Gold standard treatment for occlusive lesions of the common femoral artery used to be endarterectomy.

In recent years, interest for endovascular treatment of the common femoral artery has been increasing<sup>1</sup>.

Stenting of the common femoral artery is possible<sup>1,2</sup>, however we believe it is better to avoid it. Calcified arterial lesions are not well treated with drug coated balloons alone<sup>3</sup>.

Vessel preparation with rotational atherectomy, followed by drug-eluting balloon usage, could be a good option. We report our early experience.

## Methods

Between June 2021 and March 2022, 22 patients with 26 occlusive diseases of the common femoral artery had been treated with rotational atherectomy followed by drug-coated balloon. They were reviewed prospectively.

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- 15 men - 7 women
- Mean age 75 years old
- 86% arterial hypertension - 55% smoking habit - 32% diabetes - 86% dyslipidemia
- 7 patients chronic kidney disease
- 18 legs preoperative Rutherford stage 3 peripheral arterial disease - 3 stage 2 - 3 stage 4 - 2 stage 5
- Mean preoperative ankle brachial index 0,69.
- Mean length of the lesions 4,2 cm
- All lesions heavy calcified
- 3 chronic total occlusions
- All procedures under local anesthesia
- 19 contralateral common femoral puncture

## Results

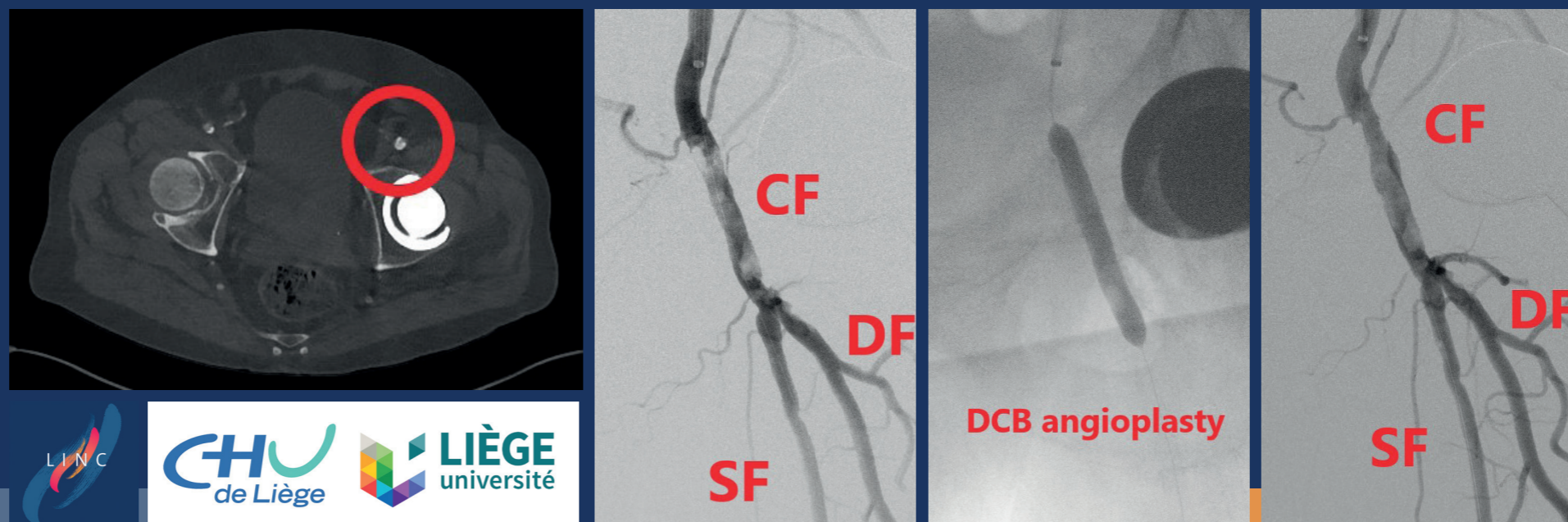
- 7 ipsilateral superficial femoral puncture
- No filter
- Technical success rate 100%
- 1 asymptomatic embolization in a deep femoral side branch
- 1 death after one month following cardiac decompensation
- 2 patients with none-ST-elevation myocardial infarction, 1 on the 1<sup>st</sup> and 1 on the 30<sup>th</sup> postoperative day
- 2 patients with false aneurysm at the puncture site
- Mean follow up 4 months
- Primary patency rate 100 %
- All patients with decreased Rutherford stage peripheral arterial disease

## Conclusions

These results have shown that rotational atherectomy with drug-coated balloon angioplasty for common femoral calcified occlusive disease is feasible and safe.

It has the advantages of avoiding the potential complications of surgical treatment, and of leaving nothing behind (no stent).

Long term results will be required.



## References

- <sup>1</sup> Deloose K, Martins I, Neves C, Callaert J. Endovascular treatment for the common femoral artery: is there a challenger to open surgery? J Cardiovasc Surg. 2019;60:8-13.
- <sup>2</sup> Gouëffic Y, Della Schiava N, Thaveau F, Rosset E, Favre JP, Salomon du Mont L, Alsac JM, Hassen-Khodja R, Reix T, Allaire E, Ducasse E, Soler R, Guyomarc'h B, Nasr B. Stenting or Surgery for De Novo Common Femoral Artery Stenosis. JACC Cardiovasc Interv. 2017;10:1344-1354.
- <sup>3</sup> Fanelli F, Cannavale A, Gazzetti M, Lucatelli P, Wilderk A, Cirelli C, d'Adamo A, Salvatori FM. Calcium burden assessment and impact on drug-eluting balloons in peripheral arterial disease. Cardiovasc Intervent Radiol. 2014;37:898-907.

Contact: akerzmann@chuliege.be