

Atherectomy with Drug-Eluting Balloon for Common Femoral Artery Occlusive Disease: 3-Year Experience

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Objective:

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. Vessel preparation with rotational atherectomy, followed by drug-eluting balloon usage, could be a good option.

Methods:

Between June 2021 and August 2024, 71 patients with 86 occlusive diseases of the common femoral artery had been treated with rotational atherectomy followed by drug-coated balloon. They were reviewed retrospectively. Primary end point was freedom from target lesion revascularization.

Results:

There were 51 men and 20 women. Mean age was 73 years old. 83,7% of the limbs had had preoperative Rutherford stage 1 to 3 peripheral arterial disease. The mean length of the lesions was 4 cm. All lesions were heavy calcified. 61 procedures were anterograde with 54 contralateral femoral and 7 upper limb punctures, and 25 were retrograde with ipsilateral superficial femoral puncture. No filter was used. Technical success rate was 100%. No bail-out stenting was required. Four patients had died after one month, two patients had experienced a none-ST-elevation myocardial infarction, three an acute kidney injury, five false aneurysm and two thrombosis at the puncture site.

Mean follow-up was 16,6 months. Freedom from target lesion revascularization rate was 90,7%. Seven patients had needed secondary endarterectomy and one new atherectomy. Two patients had a major amputation, and two a minor amputation.

Conclusion:

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 not leaving a stent.

The best indication for this treatment could be in older and sicker patients with intermittent claudication. The worst indication could be in patients with CLTI and multi-level extensive occlusive disease.