

Atherectomy with Drug-Eluting Balloon for Common Femoral Artery Occlusive Disease: Short Term Experience

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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. Stenting of the common femoral artery is possible, however we believe it is better to avoid it. Calcified arterial lesions cannot be treated well with drug-coated balloons alone. Vessel preparation with rotational atherectomy, followed by drug-eluting balloon usage, could be a good option.

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.

Results: There were 15 men and 7 women, each group including 2 with bilateral lesions. Mean age was 75 years old. 86% of the patients had had arterial hypertension, 55% used to smoke, 32% had had diabetes and 86% had had dyslipidemia. 7 patients had had chronic kidney disease. 18 legs had had preoperative Rutherford stage 3 peripheral arterial disease, 3 stage 2, 3 stage 4 and 2 stage 5. The mean preoperative ankle brachial index was 0,69. The mean length of the lesions was 4,2 cm. All lesions were heavy calcified. 3 chronic total occlusions were present. All procedures were performed with the patient under local anesthesia. 19 were antegrade with contralateral femoral puncture and 7 were retrograde with ipsilateral superficial femoral puncture. No filters were used. Technical success rate was 100%. One case of asymptomatic embolization had occurred in the deep femoral side branch. One of the patient had died after one month following cardiac decompensation. Two patients had experienced a none-ST-elevation myocardial infarction, one on the first and one on the 30th postoperative day. 2 patients had developed a false aneurysm at the puncture site, one treated surgically and with thrombin injection. All others had had no complications. Mean follow up was 4 months. Primary patency rate was 100%. All patients had had decreased Rutherford stage peripheral arterial disease. Enrollment and follow-up are on-going.

Conclusion: These short term 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.

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