DRUG-COATED BALLOONS REDUCE THE RISK OF RESTENOSIS IN HEMODIALYSIS PATIENTS WITH RECURRENT STENOSIS OF ARTERIOVENOUS FISTULA

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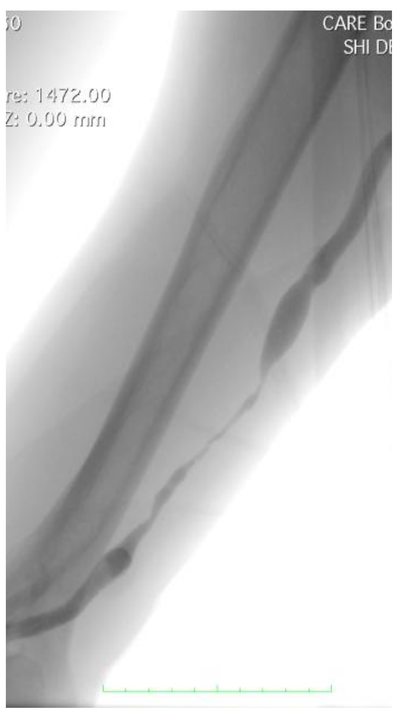
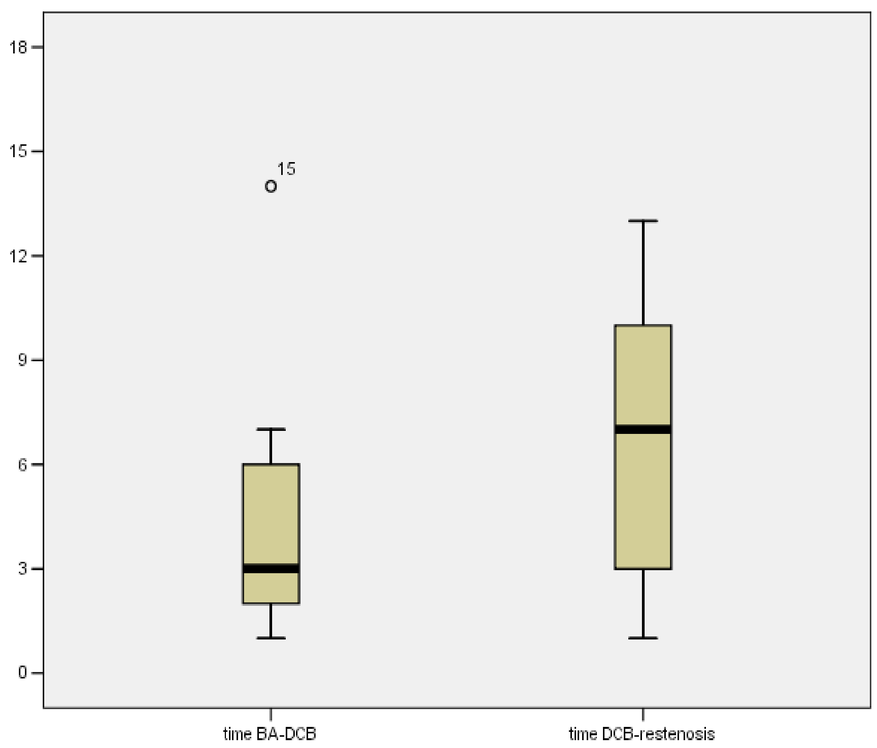
INTRODUCTION

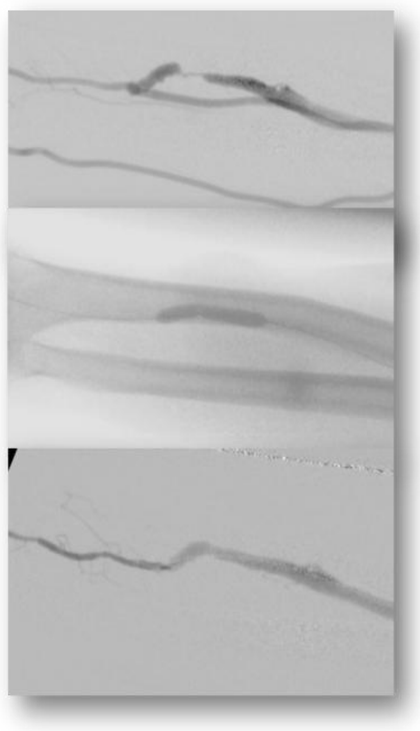
In the last years endovascular treatment with drug-coated balloons (DCBs) of femoro-popliteal arteries demonstrated surprising outcomes. Aim of this study was to evaluate the early and mid-term outcomes of DCBs in hemodialysis patients with recurrent stenosis of arteriovenous fistula, paying particular attention to their impact to the risk of new restenosis and the time to the new restenotic lesion.

METHODS

Between July 2013 and June 2016 38 hemodialysis patients with recurrent stenosis of failing vascular access underwent treatment with a DCB releasing paclitaxel. All patients were previously treated at the target lesion with a standard balloon angioplasty (BA). The intervals in months between the standard BA and the procedure with DCB (*time BA-DCB*) and between the procedure with DCB and the new restenosis (*time DCB-restenosis*) were compared with T-test. Estimated outcomes at 2 years in terms of survival, primary patency, primary assisted patency, secondary patency, and freedom from target lesion restenosis were assessed with Kaplan-Meier curves.

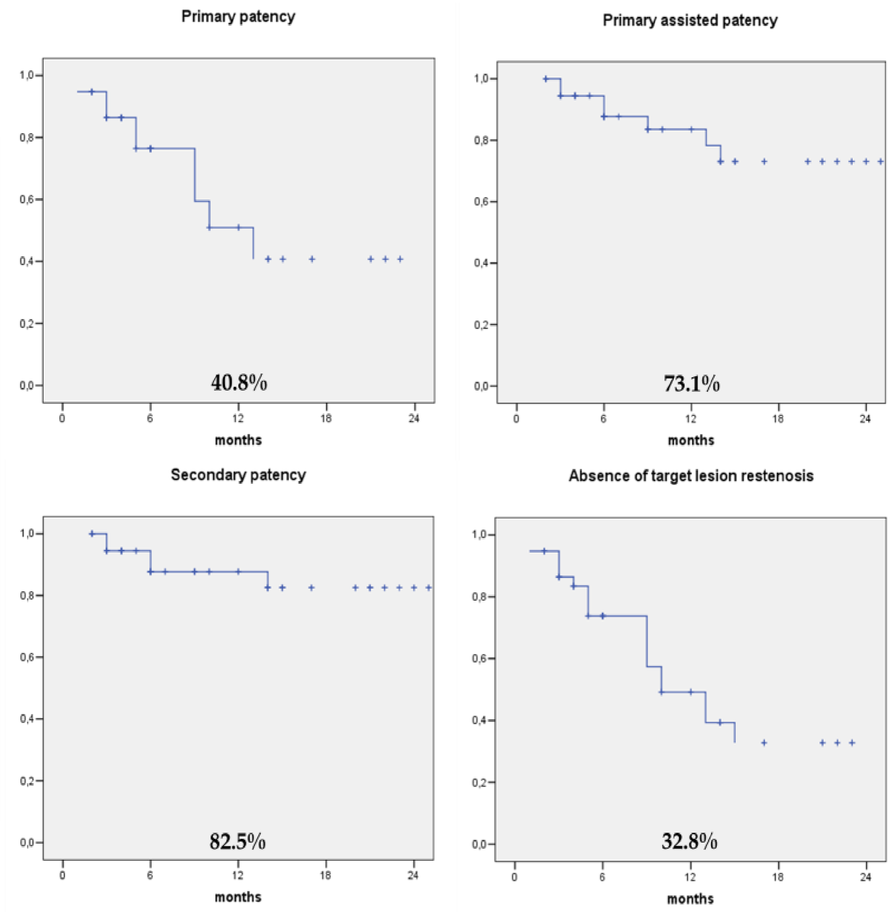






RESULTS

Patients were predominantly males (22, 57.9%) with a mean age of 70.8 years (range 13-91). In 14 cases (36.8%) a perianastomotic stenosis was treated. During the follow-up (mean duration 14.3 months, range 2-33) 19 patients (50%) developed a new restenotic lesion at the target lesion with an estimated 2-year freedom from target lesion restenosis of 32.8%. Mean time BA-DCB was 6.4 months, and the mean time DCB-restenosis was 7.9 months with a statistically significant difference at T-test (P<0.001). Estimated 2-year rates of primary patency, primary assisted patency, and secondary patency were 40.8%, 73.1%, and 82.5%, respectively.



CONCLUSIONS

In our experience DCBs were safe and effective in the treatment of recurrent stenosis in hemodialysis patients with failing arteriovenous fistula. During the follow-up, half of patients had no new restenotic lesion. Furthermore, in patients with a new restenosis the time was longer respect to that necessary to have a new restenosis after BA.

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