Percutaneous angioplasty with drug eluting balloon for infra-inguinal venous bypass stenosis

Kerzmann A., Boesmans E., Van Damme H., Alexandrescu V., Defraigne J.-O.

Dept. of Cardiovascular and Thoracic Surgery, CHU Liège, Belgium

Infra-inguinal bypasses have better results with saphenous vein graft¹.

There are 3 types of venous bypass failure: thrombosis, intimal hyperplasia and atherosclerosis. Most of the time intimal hyperplasia occurs between the third and the eighteenth month after the of drug eluting balloons to treat infra-inguinal venous bypass stenosis. bypass operation.

Open surgical repair is still the best way to treat infra-inguinal venous bypass stenosis. Conventional percutaneous angioplasty doesn't show high primary patency rates at short-term².

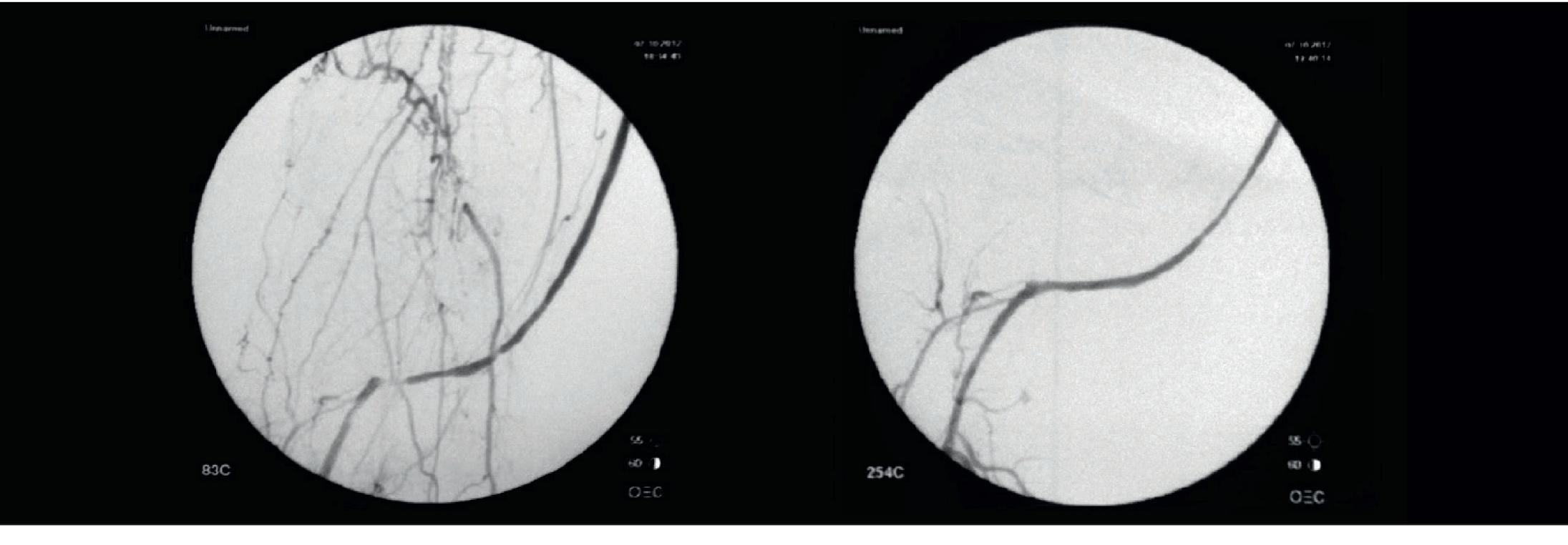
The recent studies about paclitaxel coated balloons in peripheral arterial disease (PAD) reveal the benefits of such balloons compared to not coated balloons³. We report our experience about use

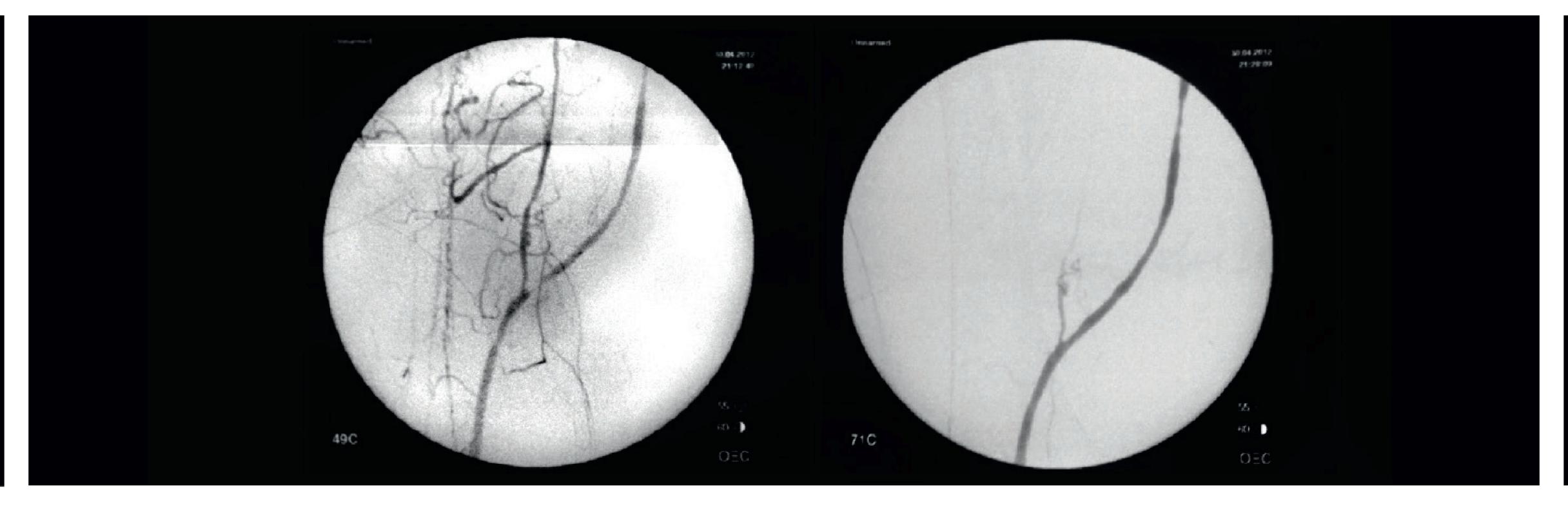
¹ Saphenous vein versus PTFE for above-knee femoropopliteal bypass. A review of the literature. Klinkert P & al. Eur J Vasc Endovasc Surg. 2004 Apr;27(4):357–362. ² Surgical and endovascular revision of infrainguinal vein bypass grafts: analysis of midterm outcomes from the PREVENT III trial. Berceli SA & al. J Vasc Surg. 2007 Dec;46(6):1173-1179.

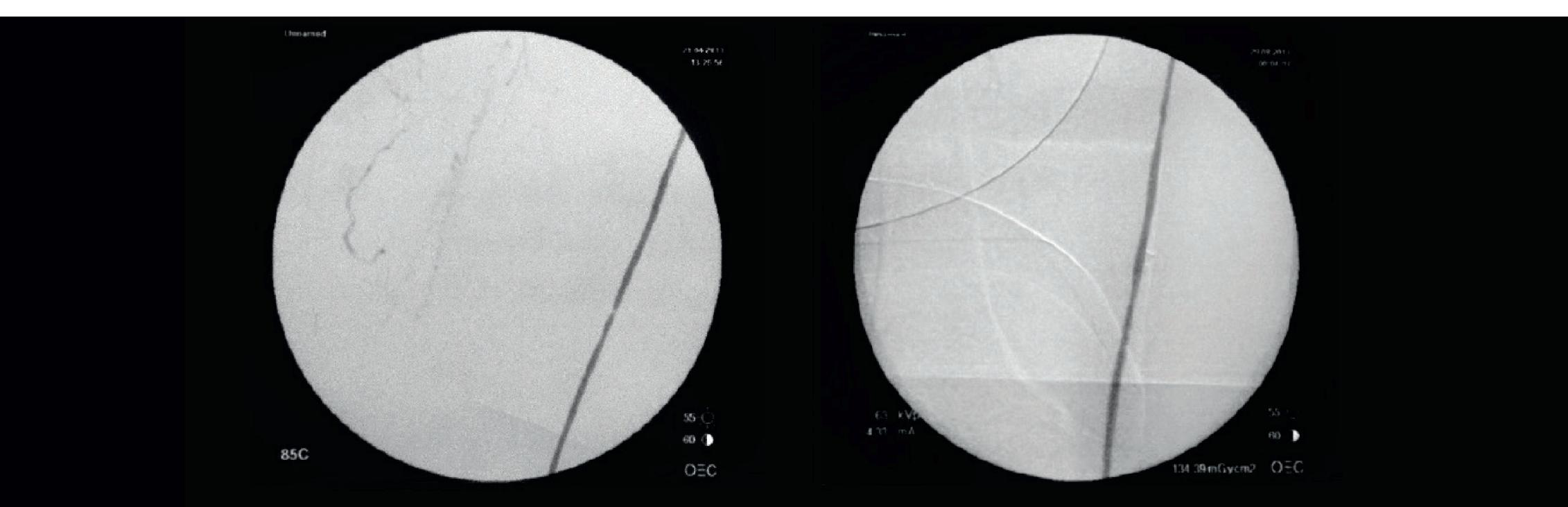
³ Trial of a paclitaxel-coated balloon for femoropopliteal artery disease. Rosenfield K & al. N Eng J Med. 2015 Jul 9;373(2):145–153.

From November 2012 to April 2018, 10 patients with 12 infra-inguinal venous bypass stenosis had 14 dilatations with paclitaxel coated balloons. They were reviewed prospectively.

	Gender & age	Bypass	Previous PTA	Age of bypass (months)	Rutherford stage	Puncture side	Stenosis location	Predilatation	Dilatation with paclitaxel coated balloon	Follow-up (months)	Results
1	51	popliteal above knee	yes	7	3	same as bypass	distal anastomosis	Ω	4 mm – 12 cm	65	M15: new dilatation M24: thrombosis
2 0	57*	popliteal below knee	yes	13	3	controlateral	distal anastomosis	3 mm – 4 cm	4 mm – 8 cm	65	M33: thrombosis
3	3 62	posterior tibial	yes	3	3	controlateral	middle third	3 mm - 4 cm	3,5 mm - 4 cm	56	good
4	7 72	popliteal above knee	yes	10	5	same as bypass	distal anastomosis	4 mm – 4 cm	4 mm – 6 cm	30	M30: death (bronchopneumonia)
5	72	popliteal below knee	NO	2	1	same as bypass	distal anastomosis	Ω	5 mm - 6 cm	53	good
6	87	peroneal	NO	20	5	controlateral	distal anastomosis	2 mm - 4 cm	2,5 mm - 8 cm	50	good
7	70**	popliteal above knee	ΠΟ	4	3	controlateral	proximal anastomosis	Ω	5 mm - 8 cm	12	M12: death (myocardial infarction)
8	56	popliteal above knee	ΩΟ	9	6	same as bypass	distal third	4 mm – 4 cm	5 mm - 15 cm	34	good
9	3 57*	popliteal below knee	NO	52	2	controlateral	distal third	2 mm - 4 cm	4 mm - 8 cm	30	good
10	57	popliteal above knee	NO	21	3	same as bypass	proximal third	4 mm – 2 cm	6 mm - 6 cm	29	M29: new dilatation
11	71**	popliteal above knee	NO	9	3	same as bypass	distal anastomosis	3 mm - 10 cm	3,5 mm - 12 cm	0	D1: death (myocardial infarction)
12	3 64	posterior tibial	no	9	3	controlateral	proximal anastomosis	3 mm – 4 cm	4 mm - 10 cm	4	good













No conflict of interest