CLINICAL VIGNETTE

Complex case of rotational atherectomy with the new RotaPro system in a heavily calcified coronary artery

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An 81-year-old man was admitted to our center to undergo elective percutaneous coronary intervention in a heavily calcified lesion of the circumflex artery (Cx). Past medical history revealed a coronary artery bypass graft surgery carried out 22 years ago (saphenous vein grafts to the right coronary artery and left anterior descending artery), arterial hypertension, persistent atrial fibrillation, and hypercholesterolemia. Three months before admission, the patient sustained a non–ST-segment elevation myocardial infarction followed by 2 unsuccessful percutaneous coronary interventions with rotational atherectomy in the medial Cx. The first procedure performed via radial artery access was unsuccessful due to insufficient backup support of an extra backup 3/5/6F guiding catheter (Medtronic, Santa Rosa, California, United States), which made it impossible to cross the lesion with a 1.25 mm burr. Therefore, the patient was referred for rotablation carried out via femoral artery access. The second procedure was complicated by a dissection in the distal left main artery, intermediate branch artery, and proximal Cx, which was managed with implantation of 2 drug-eluting Orsiro stents (Biotronik, Berlin, Germany) in the left main artery/Cx and intermediate branch artery. For the patient's safety, the procedure was terminated at that point. Both procedures described above were performed with the use of the Rotablator system (Boston Scientific, Marlborough, Massachusetts, United States).

Due to persistent exertional angina (Canadian Cardiovascular Society classification, class III), closed grafts, and persisting 90% stenosis of the medial Cx (FIGURE 1A), the patient was qualified to another elective rotablation procedure with the new RotaPro system. It was performed via the right femoral artery. After the left coronary artery was intubated with a 4.0/6F extra backup guiding catheter (Medtronic), a Fielder guidewire (Asahi Intecc, Aichi, Japan) was placed distally in the Cx. The RotaWire Floppy Guidewire (Boston Scientific) was introduced into the target vessel with the Finecross MG microcatheter (Terumo, Tokyo, Japan). Subsequently, the rotablation in the medial Cx was performed using a 1.25 mm RotaPro burr (Boston Scientific).[1] Seven runs at 145 000 rpm were performed, which allowed the burr to pass through the lesion. This strategy enabled smooth delivery and full expansion of a 2.0/12 mm noncompliant NC Solarice balloon (Medtronic) and safe implantation of a 2.5/18 mm drug-eluting Orsiro stent (Biotronik). Postdilatation with a 2.5/12 mm noncompliant NC Solarice balloon (Medtronic) and applying proximal optimization technique with a 3.0/8 mm non-compliant NC Solarice balloon (Medtronic) provided optimal angiographic results (FIGURE 1B).

The presented case shows that rotablation remains the treatment of choice in patients with uncrossable lesions. However, it requires the proper technique. As the procedure is discouragingly complex, it is underutilized. In this case, we used the new RotaPro system for the first time in Poland. In our opinion, the device is operator-friendly and easier to use in comparison with its previous model. It does not require the use of foot pedals, as a control panel is placed on an advancer. Therefore, the system

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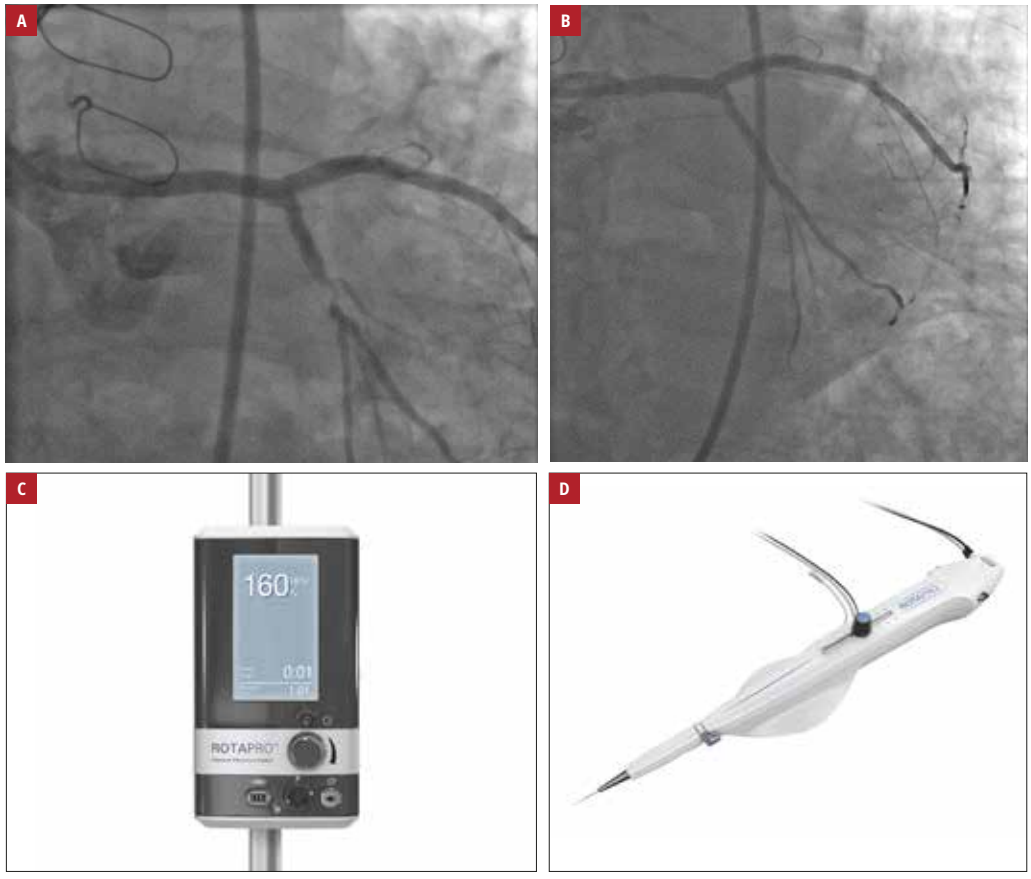

FIGURE 1 **A** – left coronary artery before the procedure; **B** – the final result of percutaneous coronary intervention; **C** – RotaPro console (source: Boston Scientific); **D** – RotaPro advancer (source: Boston Scientific)

is more accessible for less experienced operators. Experienced operators can also benefit from the new system, which allows them to fully concentrate on the patient and undertake even more complex procedures. We believe that a tried and tested, reliable device equipped with the new user-friendly console (FIGURE 1C and 1D) will allow operators to preserve good procedural results and simultaneously flatten the learning curve. The main benefit of the new RotaPro system is the simplification of the procedure, which may encourage interventional cardiologists to perform rotablation more willingly and, therefore, improve patients' access to the treatment of complex lesions.

ARTICLE INFORMATION

CONFLICT OF INTEREST KR and Boston Scientific concluded a proctoring agreement with regard to rotablation procedures.

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