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STUDIUM PRZYPADKU / *CLINICAL VIGNETTE*

Multilevel embolic protection in a patient with acute myocardial infarction and a huge thrombus in the right coronary artery

Wielopoziomowa protekcja mikrokrążenia u pacjenta z ostrym zawałem serca i wielką skrzepliną w prawej tętnicy wieńcowej

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A 51-year-old man, a smoker with poorly controlled hypertension and obesity, was admitted to our centre with recurrent resting chest pain for the preceding 24 h. Electrocardiography showed sinus rhythm 80/min with 1-mm ST-segment elevation with negative T waves in V_1, II, III, and aVF, and troponin level was positive. After administration of unfractioned heparin, clopidogrel, acetylsalicylic acid, nitroglycerin, and morphine the patient was transported to a catheterisation laboratory for urgent coronary angiography. The procedure was performed via right radial artery and revealed 80% stenosis of medial left anterior descending artery and proximal occlusion of dominant right coronary artery with massive thrombus (Fig. 1). After right coronary artery intubation with a 6 F guiding catheter a Fielder wire (Asahi) was placed distally in the artery. Abciximab was administered intravenously and several aspirations of Eliminate thrombectomy catheter (Terumo, 6 F compatible) were performed, but with little success. Taking into consideration the persistent huge thrombus and the risk of "no-flow" phenomenon we decided to insert a Filter-Wire (Boston Scientific) for distal protection and to use a self-expanding stent Stentys-DES (Stentys) 3.5–4.5/27 mm (Fig. 2), which was successfully placed and postdilated by a 4.5/15 mm balloon to 15 atm. The result was TIMI-3 flow with clinical stabilisation (Fig. 3). Thrombus debris was evacuated from the thrombectomy catheter and from the filter (Fig. 4). Echocardiography performed 2 days later revealed akinesis of the basal segment of the inferior wall with preserved ejection fraction. The patient was discharged home 4 days after the procedure; dual antiplatelet therapy (for 12 months) and remaining standard therapy was recommended. Treatment should always be individualised according to the patient's conditions. We decided to open the artery and prevent "no-flow" phenomenon in quite an aggressive manner. Abciximab was used routinely in patients with acute myocardial infarction and huge thrombus burden. In our opinion manual thrombectomy, in spite of currently only IIb class recommendation, is very helpful in such cases as well. We also used a self-expandable stent instead of a balloon-expandable stent. These kinds of stent proved their efficacy in APPOSITION trials. They adhere closely to the vessel wall in patients with acute myocardial infarction and prevent distal embolisation of thrombi. We inserted additionally a Filter-Wire as distal protection. Although distal filters are recommended only for interventions in venous grafts, we decided to use it in this particular case, with optimal final result. We conclude that for more complex procedures heterogeneous devices should be available in high-volume catheterisation laboratories.

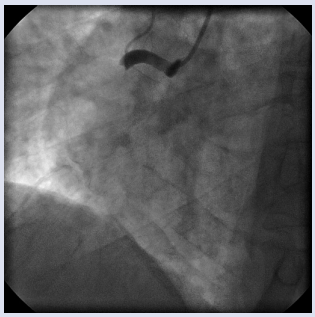

Figure 1. Right coronary artery with massive thrombus

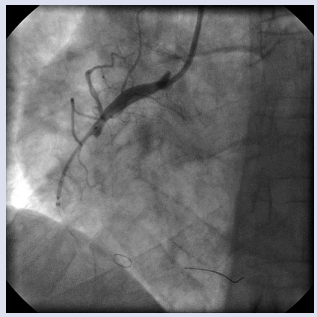

Figure 2. Self-expandable stent and Filter-Wire in right coronary artery

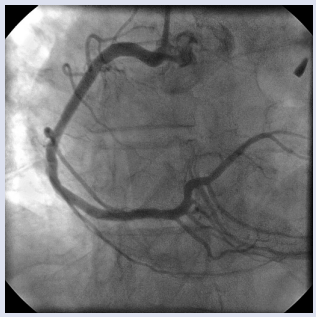

Figure 3. Final result after stent implantation

Figure 4. Thrombi from thrombectomy catheter and in the filter

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Conflict of interest: *none declared*