

The successful treatment of cardiogenic shock with primary percutaneous coronary intervention (T-stenting) of total occluded unprotected left main performed during cardiopulmonary resuscitation

Skuteczne leczenie wstrząsu kardiogenego z zastosowaniem pierwotnej przezskórnej interwencji wieńcowej (założenie stentu T) w całkowicie zamkniętym pniu lewej tętnicy wieńcowej niezabezpieczonym pomostem, przeprowadzone w trakcie resuscytacji krążeniowo-oddechowej

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A 61-year-old male with no previous cardiovascular history was admitted to the coronary care unit suffering from acute angina. On presentation the patient was conscious, the heart rate was 100 bpm, and the blood pressure was 80/60 mm Hg. Standard electrocardiogram displayed prominent ST-segment elevation in the anterolateral leads. The initial treatment was 300 mg of aspirin, 600 mg of clopidogrel, and intravenous bolus of unfractionated heparin, all given in the ambulance. In the catheterisation laboratory, sudden cardiac arrest occurred and the patient was subsequently defibrillated. The patient needed defibrillation because of ventricular fibrillation followed by pulseless electrical activity. A cardiopulmonary resuscitation (CPR) was started. Through the left femoral artery a balloon for intra-aortic balloon counterpulsation (IABP) was introduced. The coronary angiogram of the left coronary artery (LCA) selectively engaged with a 6 French EBU-4 guiding catheter revealed an acute total occlusion of the left main stem (LMS) (Fig. 1A). During the CPR, a manual thrombectomy was performed and the blood flow in left anterior descending artery was restored (Fig. 1B). The left circumflex artery (LCX) was opened after a second thrombectomy (Fig. 1C). The patient received a subsequent intracoronary bolus of abciximab. Finally, the culprit lesion localised in the distal portion of the LMS was treated with a second-generation everolimus eluting stent 3.5/18 mm deployed at 20 atmospheres (Fig. 1D), and post dilated with a 4.0/15 mm non-compliant balloon. The final kissing-balloon inflation was complicated with a dissection of the ostial portion of the LCX (Fig. 1E). It was subsequently covered with a 3.0/18 mm drug eluting stent using a "T and protrusion" technique (Fig. 1E, inset). As percutaneous coronary intervention of the LCA was accomplished, the angiography of the right coronary artery showed no significant disease. After the procedure, the patient was transferred to the coronary care with catecholamine infusion and IABP 1:1 support. On the third day of hospitalisation, the patient received a red blood cell transfusion due to the large local haematoma and severe anaemia. IABP was removed 6 days after baseline; the patient was weaned from the respirator and extubated. In 4-month follow-up the patient remained asymptomatic with New York Heart Association class II. The control angiography revealed a good result in both left main and left circumflex arteries with no signs of in-stent restenosis (Fig. 1F).

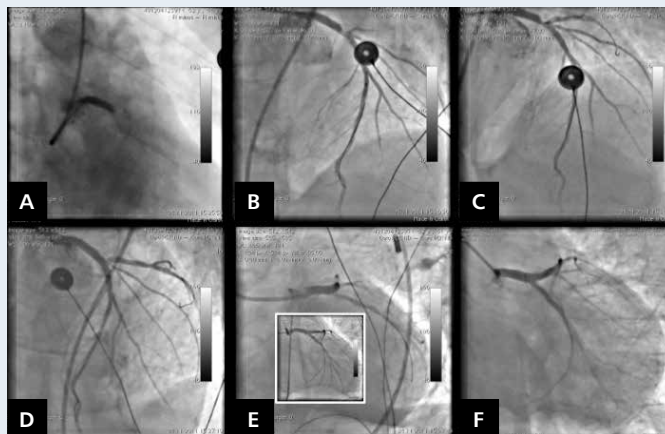


Figure 1. **A.** Acute occlusion of the left main coronary artery; **B.** The angiographic result after manual thrombectomy in left anterior descending artery; **C.** The angiographic result after manual thrombectomy in left circumflex artery (LCX); **D.** The angiographic result after implantation of drug eluting stent to the left main; **E.** Ostial dissection in LCX after kissing balloons and the final angiographic result; **F.** The angiographic follow-up after 4 months

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