

ST elevation myocardial infarction in a 26-year-old man after the use of mephedrone

26-letni mężczyzna z ostrym zespołem wieńcowym (STEMI) po zastosowaniu mephedronu

Maciej Janiszewski¹, Małgorzata Strojek², Joanna Syska-Sumińska², Mirosław Dłużniewski², Marek Kuch¹

¹Division of Heart Failure and Cardiac Rehabilitation, Department of Cardiology, Hypertension, and Internal Diseases, 2nd Medical Faculty, Medical University of Warsaw, Warsaw, Poland

²Department of Cardiology, Hypertension, and Internal Diseases, 2nd Medical Faculty, Medical University of Warsaw, Warsaw, Poland

In recent years there has been an increase in the number of acute coronary syndromes (ACS) as a direct consequence of the use of psychoactive drugs. While knowledge of cardiovascular complications after the use of 'classic narcotics' is quite extensive, knowledge about the harmful effects of new psychostimulants, so-called 'bath salts', is little. 'Bath salts' is a colloquial name for different kinds of products that contain psychoactive substances that are consumed in order to give effects characteristic of narcotics. A 26-year-old man with a medical history of hypertension and smoking was transferred to our Department from a District Hospital, presenting with severe retrosternal chest pain. The pain had begun at night immediately after drinking alcohol and insufflating mephedrone. His blood pressure (BP) was 190/120 mm Hg and his heart rate was 90 bpm. The electrocardiogram revealed sinus rhythm with 2 to 3-mm ST-segment elevations in leads V₂-V₅ (Fig. 1). In the emergency room he received aspirin, clopidogrel and 5,000 U of heparin IV. The patient was taken for an emergent cardiac angiography, which revealed total occlusion of the midsegment of the left anterior descending (LAD) artery. Circumflex and right coronary artery were patent (Fig. 2). Primary percutaneous coronary intervention was performed. The initial restoration of patency of the artery revealed a small atherosclerotic plaque with thrombus in the place of the previous occlusion (Fig. 3). The patient was given abciximab, and a drug-eluting stent was deployed in the midsegment of the LAD. The result of the procedure was good and TIMI 3 grade flow was restored (Fig. 4). The rest of his hospital course was unremarkable. Echocardiography revealed hypokinesis of the anterior wall and left ventricular ejection fraction of 55%. The patient was discharged after 6 days. Mephedrone is an organic derivative of cathinone used as a stimulant and empathogen. It has been illegal in the European Union since 2010 but is still available on the black market in the form of crystals, powder, tablets, or capsules. The typical side effect of mephedrone is activation of the sympathetic nervous system, characterised by increased BP and tachycardia. Case reports exist of cerebrovascular accident, aortic aneurysm rupture, and sudden deaths in association with mephedrone use. So far there have been no publications proven by coronary angiography of ACS being the immediate consequence of the use of mephedrone. Our case highlights the potential health hazards associated with mephedrone. Taking into account the growing popularity of psychoactive substances, in the coming years we can expect more cardiovascular complications in people who use "bath salts". People with asymptomatic atherosclerosis are in a particularly high-risk group.

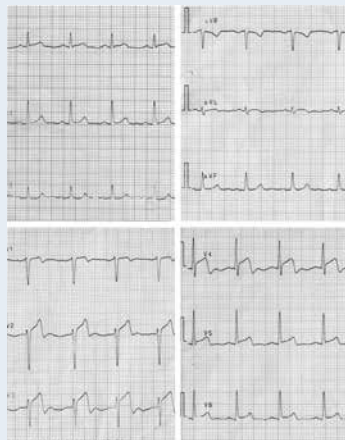


Figure 1. Electrocardiogram on admission

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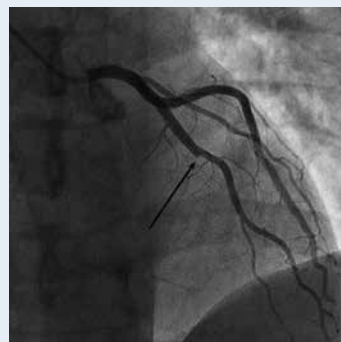


Figure 2. Total occlusion (arrow) of the midsegment of the left anterior descending artery

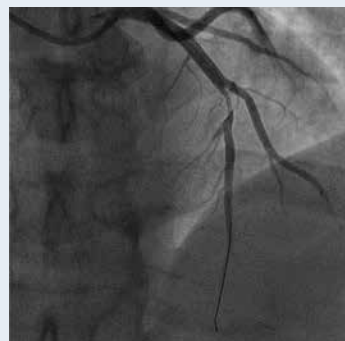


Figure 3. Left anterior descending artery after balloon predilatation

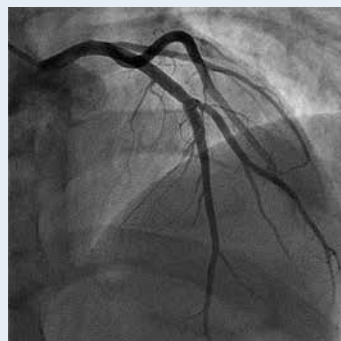


Figure 4. Final result after stent implantation

Address for correspondence:

Maciej Janiszewski, MD, PhD, Division of Heart Failure and Cardiac Rehabilitation, Department of Cardiology, Hypertension, and Internal Diseases, 2nd Medical Faculty, Medical University of Warsaw, ul. Kondratowicza 8, 03-001 Warszawa, Poland, e-mail: m.janiszewski@3med.pl

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