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A rare abdominal complication of drug-induced Prinzmetal angina

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A 47-year-old male was transferred to the intensive cardiac care unit following an out-of-hospital cardiac arrest due to ventricular fibrillation that occurred while commuting. After a prompt cardiopulmonary resuscitation, spontaneous circulation was restored within 25 minutes with ST-segment elevation in the inferior wall leads in electrocardiography. Laboratory results revealed metabolic acidosis with a pH level of 6.6 and a lactate level of 14.4 mmol/L. Although cardiac biomarkers were slightly elevated, the urine sample tested positive for amphetamine use. Cardiac catheterization demonstrated spasm of the right coronary artery, with epicardial vasoconstriction up to 95% and resolved after intracoronary nitroglycerin, indicating no significant coronary obstructions (Fig. 1A–B, **Suppl. Video 1**). In the following hours, the patient required mechanical ventilation and an up-titration of inotropes. Subsequently, he presented with a distended and tender abdomen, along with absent peristalsis. An angio-CT scan revealed normal blood flow with gas bubbles in the portal vein branches, superior mesenteric artery, and pneumatosis intestinalis. An emergency laparotomy was performed, uncovering extensive ischemic bowel necrosis (Fig. 1C), with a well-palpable pulse observed in the intestinal arteries. Consequently, resection of the distal part of the small intestine and colon was required.

According to available research, this is the first reported case of Prinzmetal angina with the coexistence of extracardiac vasospasm. Typical triggers for such an event include stress, cold weather, medications, nicotine, and illicit drugs, such as amphetamines. Thus, if a background of amphetamine use is suspected, toxicology screening is mandatory, as physicians should be aware of the potential occurrence of these rare complications.

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Supplementary data: Supplementary Video 1. Coronary angiogram before and after intracoronary nitroglycerin.

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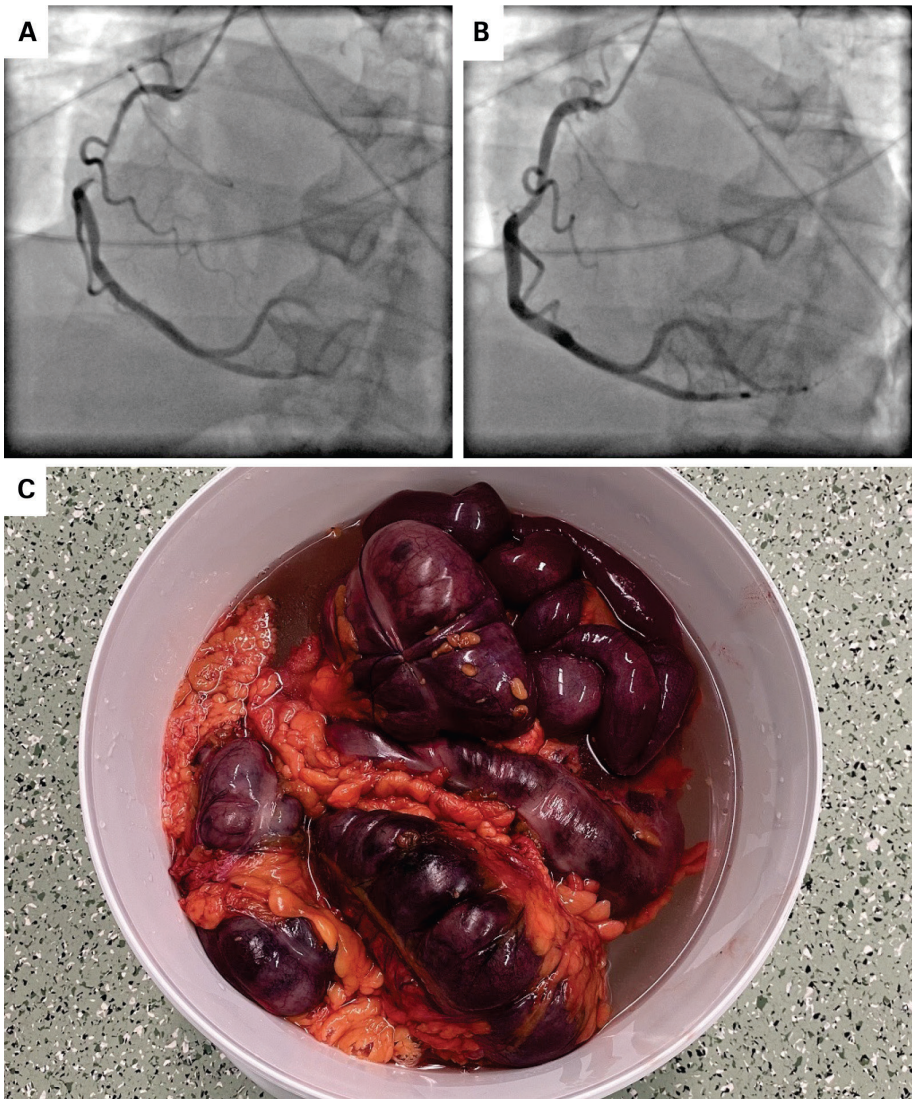

Figure 1. Coronary angiogram of the right coronary artery with 95% narrowing (**A**) and after intracoronary nitroglycerin administration, where the vasospasm resolved (**B**); Resected intestines with marked necrotic changes (**C**)