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Aortic Dissection Following Methamphetamine Abuse: A Case Report

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BACKGROUND: Previous case reports suggest a relationship between methamphetamine abuse/dependence and aortic dissection. Acute aortic dissection is an uncommon disorder which can have fatal results in the event of treatment delay or misdiagnosis. Methamphetamine is a sympathomimetic amine that affects multiple organ systems. Cardiovascular complications are the second most common cause of death in methamphetamine abusers.

CASE: A 51-year-old man presented in hospital with chest pain following methamphetamine abuse. He was referred to the acute unit in the emergency department with suspicion of acute coronary syndrome. The patient has a 20 year history of methamphetamine abuse and hypertension. He had been prescribed losartan for hypertension. Upon examination, the patient's blood pressure was 160/100 mmHg, pulse rate was 90 beats per minute, respiratory rate was 17 breaths per minute and his temperature was 37.2OC. A reduced pulse was observed in the left femoral, popliteal and dorsalis pedis arteries. His electrocardiogram revealed only sinus tachycardia without any changes. A portable transthoracic echocardiography was performed and revealed a dilation of the root aorta. D-dimer was detected (10,000 unit). Urine analysis was positive for methamphetamine. CT angiography was carried out and revealed an aortic dissection (Type A). An emergency operation was performed and the patient made a successful recovery.

DISCUSSION: This case demonstrated the importance of conducting a thorough physical examination and establishing an accurate medical history. Failure to recognize the reduced leg pulse, or history of methamphetamine use, could have led to a fatal misdiagnosis.