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### Lead poisoning from adulterated opium

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**Objective:** To describe the first reported Australian case of lead poisoning from adulterated opium, complicated by cardiomyopathy.

**Case Report:** A 39-year-old Iranian female presented to the emergency department (ED) with a primary complaint of severe abdominal pain. This was associated with nausea, vomiting, constipation and lethargy. She had no prior medical history of note. On examination, she was hypertensive (158/81 mmHg) with a normal temperature and heart rate. Abdominal examination revealed diffuse abdominal tenderness without peritonism. A finding of normocytic, normochromic anaemia was noted on her full blood count. A CT scan of the abdomen reported marked faecal loading and the patient was admitted for supportive pain management. Her blood film eventually demonstrated extensive basophilic stippling, launching a cascade of investigations. Day two into her admission, the whole blood lead level (BLL) returned a reading of 125 mcg/dL (normal range <10 mcg/dL). Further drug history determined that the patient was a regular opium user after which a sample of the substance was sent for laboratory analysis. The patient was commenced on dimercaptosuccinic acid (succimer), and discharged with an outpatient view on opioid substitution therapy. Two days after discharge, the patient represented to the ED with severe chest and abdominal pain. She was compliant with her succimer therapy but unsurprisingly, continued to ingest her opium. On examination, she was found to be tachycardic (130 bpm) and hypertensive (182/104 mmHg). ECG demonstrated sinus tachycardia and widespread ST depression with high sensitivity troponin peaking at 1382 ng/L (normal range <17 ng/L). She was commenced on dual antiplatelet therapy, unfractionated heparin and methadone. A coronary angiogram revealed normal coronary arteries but echocardiography demonstrated severe left ventricular impairment with an ejection fraction (EF) of 31%. BLL was noted to have increased to 188 mcg/dL. Laboratory analysis of the substance showed a lead concentration of 5400 mg/kg. Three days into her second presentation, a gated heart pool scan noted an improved EF of 50%. Her symptoms gradually improved and she was discharged with outpatient follow up.

**Conclusion:** To our knowledge, this is the first reported case of opium associated lead toxicity in Australia, complicated by cardiomyopathy. Health practitioners need to be vigilant when dealing with patients who use opium given the potential for serious lead poisoning. There is paucity of literature regarding lead toxicity and cardiomyopathy.