

A case of chronic lead poisoning with herbal-based medication

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DESCRIPTION

A 59-year-old man, who is a known case of type 2 diabetes mellitus and hypertension for 3 years, presented to us with complaints of colicky abdominal pain, decreased appetite and generalised weakness for 3 months. There was no history of vomiting, jaundice and fever. His general examination was unremarkable apart from pallor. Systemic examination was also unremarkable. Initial investigations revealed a haemoglobin level of 10.1 g/dL (red blood cell count of 3.33×10^6 cells/ μ L), and peripheral smear showed microcytic hypochromic anaemia with mild *basophilic stippling* (figure 1). Other investigations, including abdominal ultrasound, were essentially normal. On reviewing the case, he gave a history of taking herbal-based medication for diabetes from an indigenous medical practitioner for 1 year. Examination revealed a bluish pigmentation of the gum-tooth line or the *Burtonian line* (figure 2). There was no neurological deficit. Laboratory investigations showed high blood lead levels (91 μ g/dL). He was treated as a case of chronic lead poisoning with intramuscular British anti-Lewisite 250 mg 4 hourly for 14 days (disodium calcium edetate and succimer were not available at our centre). There were no complications or side effects with therapy. Post treatment, his blood lead levels reduced to 40 μ g/dL. The Burtonian line disappeared and other symptoms alleviated.

Lead poisoning often causes colicky abdominal pain, fatigue, anaemia and neurological symptoms like foot/wrist drop and seizures. Examination commonly reveals the Burtonian line and peripheral neuropathy. Basophilic stippling¹ with microcytic hypochromic anaemia and high blood lead levels are the main laboratory features. It is treated

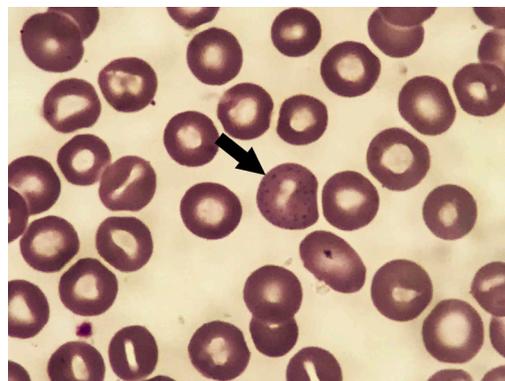


Figure 1 Peripheral smear of the patient showing a microcytic hypochromic picture with RBC showing basophilic stippling (black arrow). RBC, red blood cell.



Figure 2 Lower gum-tooth line showing bluish depositions of lead sulfide, called the Burtonian line (white arrow).

with chelation therapy² with oral dimercapto-succinic acid or intravenous/intramuscular disodium calcium EDTA or British anti-Lewisite. Common sources of lead exposure include lead paint, lead-acid batteries, soil contamination near factories, lead soldering, cosmetics and herbal-based medications.³ Incidence rate has significantly reduced as compared with that of the past due to stringent policies, so it is commonly missed by clinicians these days. The suspected source of exposure in our patient was herbal-based medication. Though toxicological analysis was not performed, absence of any other source of poisoning and circumstantial evidence of herbal-based medicinal use, which have been widely reported to cause lead poisoning, lent support to our suspicion.

Learning points

- ▶ Indigenous medicinal preparations can lead to chronic lead poisoning producing characteristic symptoms, signs and laboratory features.
- ▶ Having a high index of suspicion and eliciting history of usage of purported drugs are important for diagnosis.
- ▶ Removal of source of poisoning and chelation therapy are crucial strategies for cure.

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