

Pulmonary 'mercury' embolism

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DESCRIPTION

A 35-year-old woman presented with anasarca and lower limb paraesthesias for 3 months. There was history of daily oral intake of 10–15 g of some indigenous preparation for low backache during the 2 months prior to current symptoms. On physical examination, respiratory rate was 18 breaths/min and oxygen saturation on room air was 95%. Serum creatinine was 1.4 mg/dL. Urine examination showed nephrotic proteinuria and chest radiograph demonstrated numerous small radiopaque densities (figure 1). High-resolution CT showed multiple metallic spherules diffusely scattered throughout the lungs, right ventricle and pulmonary arteries (figure 2). Radiograph of the pelvis demonstrated similar opacities along the ureters. Kidney biopsy diagnosed membranous glomerulonephritis. A possibility of mercury toxicity was considered.

Twenty-four hour urinary mercury levels were elevated, 327 µg/L (normal <20 µg/L). The patient was treated with intramuscular dimercaprol (5 mg/kg on day 1 followed by 2.5 mg/kg/day for the next 10 days). The urinary mercury level after 2 weeks of therapy was 274 µg/L. The patient was subsequently treated with oral succimer for 2 weeks. On follow-up, the anasarca improved and proteinuria reduced. Serum and urinary mercury levels were normal on follow-up at 4 months.

Mercury toxicity can result from vapour inhalation, ingestion, injection or cutaneous absorption. Mercury is often a constituent of various indigenous medications. Systemic absorption and pulmonary embolisation can occur from the gastrointestinal tract. Radiologically, small metallic



Figure 1 Posteroanterior chest radiograph demonstrating numerous small radiopaque opacities scattered bilaterally with lower zone predominance.

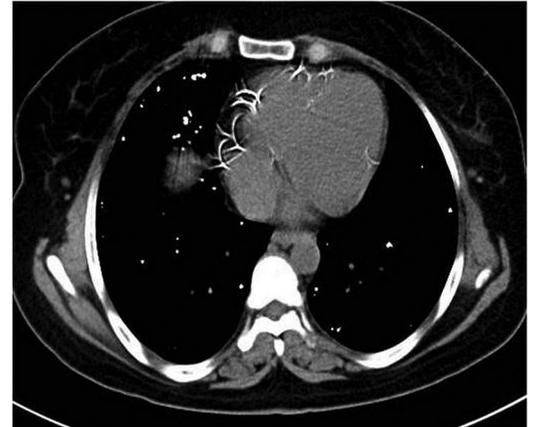


Figure 2 CT of the thorax (mediastinal window sections) demonstrating multiple small metallic deposits in the right ventricle and some following the course of the pulmonary artery.

spherules of different sizes scattered throughout either the lungs or beaded chains along the pulmonary vasculature, may be seen.¹ Twenty-four hour urinary levels of mercury provide an accurate measure of total body burden and serve as useful markers to assess chelation therapy. Dimercaprol (British Anti-Lewisite, BAL) or succimer, an orally administered analogue of BAL, are effective chelators utilised for treatment.^{2 3}

Learning points

- ▶ Mercury toxicity can present with multisystem involvement including nephrotic syndrome and non-thrombotic pulmonary embolism.
- ▶ Urinary mercury levels are useful in diagnosis and assessing response to treatment in patients with mercury toxicity.

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Competing interests None declared.

Patient consent Obtained.

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