



A 61 year old man with anemia and abdominal pain. What is the likely diagnosis?

IMAGES IN CLINICAL MEDICINE

Burton's Line

A 61-YEAR-OLD MAN PRESENTED FOR evaluation of increasing abdominal pain of eight months' duration. The patient reported having worked in a lead-smelting company for the past 30 years. The physical examination showed a bluish discoloration of the gums (Panel A). The blood level of lead was $130 \mu\text{g}$ per deciliter ($6.3 \mu\text{mol}$ per liter [reference range, <20 [$1.0 \mu\text{mol}$ per liter]]). His hemoglobin level was 11.5 mg per deciliter, and basophilic stippling was evident in some erythrocytes on a blood smear stained with May–Grunwald–Giesma stain (Panel B). The patient was given a diagnosis of chronic lead poisoning and treated with edetate calcium disodium for 10 days and with 2,3-dimercapto-1-propanesulfonic acid sodium (Dimaval) for 4 weeks. His abdominal pain resolved, and at three months, the blood level of lead was $50 \mu\text{g}$ per deciliter ($2.4 \mu\text{mol}$ per liter). At follow-up two years later, he remained asymptomatic and his blood lead level was $38 \mu\text{g}$ per deciliter ($1.8 \mu\text{mol}$ per liter). The reaction of circulating lead with sulfur ions released by oral microbial activity may cause the deposition of lead sulfide at the interface of the teeth and gums, referred to as Burton's line.

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