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Lead Poisoning: A Neglected Potential Diagnosis in Abdominal Pain

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BACKGROUND AND OBJECTIVE: We aimed to evaluate lead toxicity in inpatients and outpatients referring to Loghman Hakim Hospital emergency department and GI clinic with the chief complaint of abdominal pain.

METHOD: In the second six months of 2017, patients who referred to emergency department and the gastroenterology clinic of Loghman Hakim Hospital with abdominal pain of unknown cause or resistant to treatment were enrolled. Those with blood lead levels (BLLs) higher than 30 µg/dL and concomitant gastrointestinal symptoms such as abdominal pain were considered to be lead-poisoned. Data was collected prospectively using questionnaires filled after taking verbal consents. Outpatients were followed after discharge by phone calls.

RESULTS: Of 125 patients admitted, 28 (22.4%) had BLL higher than 30µg/dL. Correlations were detected between the high BLLs and the history of addiction (OR 1.482- 95% CI 1.276-1.721), duration of addiction more than 12 years (OR 2.720- 95% CI 1.037-7.132), oral opium use (OR 16.059- 95% CI 2.026-127.270), and daily amount of opium use more than 2.75 gr (OR 5.257- 95% CI 1.577-17.526). There was also a correlation between lead toxicity and pain consistency and intensity (OR 2.744- 95% CI 1.119-6.724), constipation (OR 7.464-95% CI 2.720-20.487), and paresthesia (OR 7.455- 95% CI 1.725-32.2.15). Anemia (OR 6.253- 95% CI 2.175-17.975), leukocytosis with cell count more than 9050/mm3 (OR 8.095- 95% CI 3.043-21.536), and abnormal liver enzyme tests (OR 4.911- 95% CI 1.636-14.743) were among laboratory findings associated with lead toxicity. From total number of 125 patients with abdominal pain, 121 were discharged and 4 died, one of whom was diagnosed with lead toxicity.

CONCLUSION: In the gastroenterology and emergency departments, attention should be paid to lead toxicity as a potential differential diagnosis of abdominal pain if a positive history of opium abuse exists.