Poster Abstracts

PO-12

IMAGING STUDIES AND DIAGNOSIS OF LEAD TOXICITY WITH INGESTION SOURCE

Hossein Hassanian-Moghaddam[1] ,Nasim Zamani [1], Hooman Bahrami-Motlagh [2], Sara Ahmadi [2]

[1] Department of Clinical Toxicology, Loghman-Hakim Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran, [2] Department of Radiology, Loghman-Hakim Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran

Objectives: The aim of this study was to compare abdominal X-ray with abdomino-pelvic computed tomography (CT) scan in those who had blood lead levels and either abdominal X-ray or abdominal CT available.

Methods: All patients with available blood lead level and confirmed diagnosis of lead toxicity (with elevated BLLs and clinical manifestations of lead poisoning) and aged 12 or older who had undergone abdominal X-ray or non-contrast abdomen and pelvic CT scan in their imaging profile were included.

Results: During an ongoing lead outbreak from March to June 2016 and in a prospective observational study a total of 80 lead-poisoned male patients were included. All patients were addicted to oral opium. X-ray and non-contrast CT files reviewed by a single radiologist, who was asked to search for possible lead particles in imaging studies. Of whom, 51 (63.7%) underwent CT scanning with 34 (66.7%) positive CTs and 42 (36.3%) X-rays with 20 (47.6%) positive X-rays. The most significant independent variables predicting CT finding were constipation and daily dose of the ingested opium. There was a significant correlation between two deaths and abdominal pain (p= 0.021, r=-0.258)

Conclusion: Adding prognosticate factors, it can be concluded that in male suspected cases of lead toxicity due to opioids who usually refer with abdominal pain, a positive imaging result can guide us to start decontamination and chelating therapy if blood lead level is not readily available.