Stars in Abdomen

Ramesh Kumar¹, Divendu Bhushan², Mukesh Kumar²

A 24-year-old male who presented to our emergency department with the history of having ingested mercury due to accidental breakage of the tip of mercury thermometer. He had 3 bouts of vomiting following ingestion; however, mercury beads were not seen in the vomitus. On admission, the patient was clinically stable, and his physical and systemic examinations were unremarkable. His routine investigations which included complete blood count, liver function test, kidney function tests, coagulation profiles, blood glucose, and electrocardiogram were normal. A chest x-ray revealed no evidence of inhaled mercury in the respiratory tract. His plain abdominal x-ray revealed scattered beads of mercury throughout the small intestine (Figure 1a). A repeat x-ray on day-2 revealed confinement of most of the mercury beads in the region of right hemicolon (Figure 1b), while x-ray on day 4 revealed near complete disappearance of mercury beads (Figure 1c). Following hospitalization, patient did not show any untoward symptoms or complications, and he remained well till discharge.

Mercury is the only metal that is liquid at room temperature. The likelihood of mercury intoxication varies according to the type of mercury, type of exposure, and individual sensitivity. Simple elemental mercury in liquid form is not poisonous.¹ ² Because it is not absorbable through mucus membrane, most of ingested liquid mercury is expected to be excreted right away from gastrointestinal tract. In our case, the ingested mercury beads traversed through stomach and small bowel rapidly and were retained in the colon during most of time before being excreted out. In a similar case of mercury ingestion by a broken thermometer, no signs of intoxication were seen.³ Elemental mercury is only hazardous in vapour form.⁴ Around 80% of the inhaled mercury vapor is absorbed through alveolar membrane. It may cause harmful effects to the nervous, digestive, respiratory, renal, and immune systems.¹ Though ingestion of liquid mercury does not cause direct harm, the mercury once released into the environment can remain for a longer period, and can cause both acute and chronic toxicity. Mercury, when metabolized into methyl mercury becomes highly toxic.⁴ Healthcare activities are believed to contribute the substantial part of the mercury found in the environment. The World Health Organization has issued guidelines for all health care sectors to become mercury free. Several types of non-mercury thermometers are now available which use non-toxic and biodegradable liquid. Some of them have additional safety feature such as teflon coating which help to prevent contamination in case of accidental breakage.

References


¹Department of gastroenterology, Institute of Gastrosciences, ²Department of Medicine, Paras Hai Medical Research Institute, Patna, Bihar
Received: 07.09.2016; Accepted: 02.02.2017