

## Accidental Ingestion of Traces of Cyanide: A Clinical Experience

Sir,

A 23-year-old male, goldsmith by occupation, was brought to the emergency department with the alleged history of accidental ingestion of a minute quantity of cyanide. He was fully conscious but complained of dizziness and severe nausea. The patient had been to a temple en route his home after working in the gold polishing workshop using cyanide. In the temple, he accepted the holy water (Theertham) from the priest in his palm and sipped it as usual. Within seconds of sipping the holy water, he felt very dizzy and started having severe nausea. He could recognize the vague smell of the cyanide and also remembered that he had not washed his hands after working with the cyanide.

On examination, he was fully conscious, his vital signs and all the systemic examinations were essentially normal; there was no cyanosis or cherry red discoloration of the skin. The patient was managed with intravenous fluids and parenteral ranitidine and ondansetron. He was administered 100% oxygen using face mask and was decontaminated with gastric lavage using a nasogastric tube. His total hemogram, renal and liver functions tests, electrocardiogram, and chest X-ray were normal. The patient was discharged later after 8 h as he did not have any more problems.

Cyanide is one of the most lethal poisons known to human. Oral ingestion of cyanide salts is not so common and it could result from accidental, homicidal, or suicidal intentions. Clinical manifestations vary depending on the dose and route of exposure. There have been several reports of fatal and near-fatal cases of cyanide poisoning among the jewelry industry workers from India and other countries.<sup>[1,2]</sup> The jewelry workers who use potassium cyanide to polish silver and gold are at a risk of ingesting cyanide which is otherwise not easily available to the general public either with suicidal intention or by accident. In a study on acute cyanide poisoning among jewelry and textile industry workers, Coentrão and Moura<sup>[3]</sup> have reported many instances of victims surviving following cyanide poisoning due to accidental ingestion.

The lethal dose of hydrocyanic acid is 50–100 mg and potassium cyanide is about 250 mg by the oral route. Soon after the inhalation or ingestion of cyanide, the victim would experience severe headache, dizziness, vertigo, confusion, palpitations, and hyperventilation. The patient may quickly deteriorate into deep coma, hypotension, bradycardia, convulsions, and finally cardiorespiratory arrest as the result

of dysfunction of the medullary centers in <30 min.<sup>[1,4]</sup> The diagnosis and treatment of cyanide poisoning is mostly based on the circumstantial evidence as very little time is available for the clinicians to react.<sup>[1,2]</sup> It is documented that at much lower concentrations of cyanide, the patient could present with numbness, weakness, vertigo, nausea, and rapid pulse as seen in our patient.<sup>[5]</sup>

In Hindu tradition, the devotee at the temple accepts the holy water (Theertham) in the cup of the hand and sips a very small portion of it and sprinkles the rest over the head. However, it is because of this unique step in the ritual, the cyanide present at the tips of the fingers of the patient did not get mix with the holy water and only a very minute quantity which was present in the palm was able to get dissolved in the holy water. Overall, the patient did get to ingest a very minute quantity of cyanide which was not sufficient to produce any serious clinical problems, hence the lucky escape of the patient.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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### Conflicts of interest

There are no conflicts of interest.

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