CASE DEFINITION

Arsenic (Inorganic)

Clinical description

Acute ingestion of toxic amounts of inorganic arsenic typically causes severe gastrointestinal signs and symptoms (e.g., vomiting, abdominal pain, and diarrhea). These signs and symptoms might rapidly lead to dehydration and shock. Different clinical manifestations might follow, including dysrhythmias (prolonged QT, T-wave changes), altered mental status, and multisystem organ failure that might ultimately result in death (1-4).

Laboratory criteria for diagnosis

- **Biologic**: A case in which elevated urinary arsenic levels (>50 µg/L for a spot or >50 µg total for a 24-hour urine) exist, as determined by commercial laboratory tests. Speciation is required in all cases where total urine arsenic is elevated to differentiate the amount of organic and inorganic arsenic.

- **Environmental**: Detection of arsenic in environmental samples above typical background levels, as determined by NIOSH or FDA.

Case classification

- **Suspected**: A case in which a potentially exposed person is being evaluated by health-care workers or public health officials for poisoning by a particular chemical agent, but no specific credible threat exists.

- **Probable**: A clinically compatible case in which a high index of suspicion (credible threat or patient history regarding location and time) exists for arsenic exposure, or an epidemiologic link exists between this case and a laboratory-confirmed case.

- **Confirmed**: A clinically compatible case in which laboratory tests have confirmed exposure.

The case can be confirmed if laboratory testing was not performed because either a predominant amount of clinical and nonspecific laboratory evidence of a particular chemical was present or a 100% certainty of the etiology of the agent is known.

Additional resources