

Merlin disease code: 98080 Arsenic Poisoning

[Paper case report form](#) required

No Merlin extended data

Clinical criteria for case classification

Arsenic intoxication may affect multiple organ systems. Acute exposure to toxic amounts of arsenic may include signs and symptoms such as vomiting, abdominal pain, diarrhea, light-headedness, headache, weakness, and lethargy. These signs and symptoms may rapidly lead to dehydration, hypotension, pulmonary edema, congestive heart failure, and shock. Different clinical manifestations might follow, including dysrhythmias (prolonged QT, T-wave changes), altered mental status, and multisystem organ failure which may ultimately lead to death.

Laboratory criteria for case classification

Elevated inorganic or total urinary arsenic levels (>50 µg/L total for a 24-hr urine) as determined by laboratory test.

If laboratory results for urine are reported in µg As/g creatinine (µg/g creat) and are >15 µg/g creat, then results must be converted to µg As/Liter of urine using the following formula and conversion factor.

$$\frac{\text{_____} (\mu\text{g As/g creat})}{\text{given}} \times \frac{\text{_____} (\text{mg creat/dL})}{\text{given}} \times 0.01 = \frac{\text{_____} (\mu\text{g As/Liter urine})}{\text{calculated}}$$

Positive total arsenic laboratory results from specimens taken within 72 hours of consumption of seafood are **not** acceptable.

Epidemiological criteria for case classification

Not applicable.

Case classification

Confirmed:

A clinically compatible illness in a person with laboratory criteria.

Probable:

A clinically compatible illness in a person with a high index of suspicion (patient's exposure history regarding location and time) or the case is epidemiologically linked to a confirmed case.

Criteria to distinguish a new case from previous reports

Not applicable.

Comments

Most cases of arsenic intoxication in humans are due to exposure to inorganic arsenic. Organic arsenic found in fish is not believed to be toxic. Total arsenic tests do not distinguish between organic and inorganic arsenic (the more toxic form). For this reason, positive total arsenic laboratory test results from specimens taken within 72 hours of consumption of seafood do not meet the laboratory criteria for diagnosis. If a person is symptomatic, recommend the health care provider retest after 3-5 days of no fish consumption. Because total arsenic tests do not distinguish between the organic arsenic and inorganic arsenic, speciation is recommended.