



CASE DEFINITION

Saxitoxin

Clinical description

Exposure to saxitoxin might cause numbness of the oral mucosa within 30 minutes after ingestion. In severe poisoning, signs and symptoms typically progress rapidly, including parasthesias, a floating sensation, muscle weakness, vertigo, and cranial nerve dysfunction. Respiratory failure and death might occur from paralysis (1-5).

Laboratory criteria for diagnosis

- *Biologic*: A case in which saxitoxin in urine is detected, as determined by a commercial laboratory.
- OR-
- *Environmental*: Detection of saxitoxin in ingested compounds or seafood, as determined by a commercial laboratory 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 saxitoxin 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

1. Gessner BD, Middaugh JP, Doucette GJ. Paralytic shellfish poisoning in Kodiak, Alaska. *West J Med* 1997;67:351-3.
2. Janiszewski L. The action of toxins on the voltage-gated sodium channel. *Pol J Pharmacol Pharm* 1990;42:581-8.
3. Rodrigue DC, Etzel RA, Hall S, et al. Lethal paralytic shellfish poisoning in Guatemala. *Am J Trop Med Hyg* 1990;42:267-71.

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4. Shoff WH, Shepherd SM. Scombroid, ciguatera, and other seafood intoxications. In: Ford MD, Delaney KA, Ling LJ, Erickson T, eds. Clinical toxicology. Philadelphia, PA: W.B. Saunders; 2001:959-69.
5. Tunik MG, Goldfrank LR. Food poisoning. In: Goldfrank LR, Flomenbaum NE, Lewin NA, Howland MA, Hoffman RS, Nelson LS, eds. Goldfrank's toxicologic emergencies. 7th ed. New York, NY: McGraw-Hill; 2002:1085-99.

This document is based on CDC's best current information. It may be updated as new information becomes available. For more information, visit www.bt.cdc.gov/chemical, or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).

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