

Diagnosis and Differential Diagnosis

All suspected cases of botulism need to be reported to public health authorities immediately. Local health department and CDC laboratories can confirm the diagnosis by detecting the toxin in serum, stool, or gastric or wound aspirate specimens. Electrodiagnostic testing can also confirm the diagnosis by demonstrating persistent post-tetanic facilitation of CMAP of at least 20%, a decremental response greater than 10% with slow RNS, and increased jitter and blocking on SFEMG. Electrodiagnostic tests are also helpful in differentiating botulism from Guillain-Barré syndrome and myasthenia gravis.

Treatment

Prompt intensive care support with mechanical ventilation and parenteral feeding as needed are crucial in reducing mortality. Timely administration of equine antitoxin within the first 24 hours may arrest the progression of paralysis and decrease the duration of illness. The antitoxin is provided by the CDC through the local health departments. Children less than 12 months old should not be fed honey because it can contain *Clostridium botulinum*.

Prognosis

The proportion of patients with botulism who die has fallen from 50% to between 3% and 5% in the past 50 years. Recovery of muscle strength may take several months. Mortality in untreated botulism is 60%.

ORGANOPHOSPHATE POISONING

Organophosphorus compounds (OPs) are used as pesticides and developed for chemical warfare. Exposure to even small amounts of an OP can be fatal and death is usually caused by

respiratory failure. OPs cause inhibition of acetylcholinesterase (AChE) accumulation of acetylcholine at the cholinergic receptor sites, producing continuous stimulation of cholinergic fibers throughout the nervous system. A combination of an antimuscarinic agent (e.g., atropine), AChE reactivator, such as one of the pyridinium oximes (i.e., pralidoxime, trimedoxime, obidoxime, and HI-6), and diazepam are used for the treatment of OP poisoning in humans.

 For a deeper discussion on this topic, please see Chapter 422, "Disorders of Neuromuscular Transmission," in Goldman-Cecil Medicine, 25th Edition.

SUGGESTED READINGS

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