



LAC DPH Health Alert: Wound Botulism Cases Associated with Heroin

July 2, 2018



*This message is intended for emergency departments, first responders, urgent care providers, emergency medical services, infectious disease, neurologists, and other health care professionals and facilities that care for patients who inject drugs.
Please distribute as appropriate.*

Key Messages

- Be alert for suspect cases of wound botulism, especially in injection drug users.
- Symptoms consistent with botulism include drooping eyelids, blurred or double vision, change in sound of voice, difficulty speaking or swallowing, and trouble breathing.
- Patients can present with mild symptoms but can also progress rapidly to respiratory failure requiring intubation.
- Patients who are suspected to have wound botulism should be referred to the nearest emergency room immediately.
- Immediately report suspected cases to Los Angeles County Department of Public Health (LAC DPH). See reporting section below.
- Obtain infectious disease, neurology, and surgical consultation (for wound debridement) as indicated.

Situation

Since June 2018, three suspected cases of wound botulism associated with heroin injection have been reported in Los Angeles County and apparently are unknown to each other. They presented with wound infections or abscesses and a recent history of injecting heroin.

Presenting symptoms included diplopia, ptosis, dysphagia, slurred speech, and muscle weakness. All required intensive care treatment and two had respiratory failure requiring intubation. All patients were treated with Botulism Antitoxin Heptavalent (BAT[®]) released by LAC DPH Acute Communicable Disease Control Program (ACDC). The sources of the heroin remain unknown and additional cases may occur.

Supportive care is the mainstay of treatment for wound botulism. Treatment will halt progression but not reverse symptoms, therefore, to reduce the incidence of respiratory failure, botulism antitoxin should be administered as early as possible, prior to laboratory confirmation or wound debridement, and ideally within 12 hours of presentation. Antibiotics are also recommended (e.g., penicillin or metronidazole). Diagnostic studies and antitoxin can only be provided by LAC DPH so providers suspecting botulism should call the number provided below for consultation. More

information about botulism and guidance for clinicians are available on the Centers for Disease Control and Prevention (CDC) [botulism website](#).

Between 2013-2017, fourteen confirmed cases of wound botulism have occurred in Los Angeles County (average 2.8 /year, range 1-6/year). Of these 14, 8 cases were associated with black tar heroin, 4 with heroin, and 2 were associated with injection of cocaine and methamphetamine. In 2018 to date, there has been 1 confirmed case of wound botulism, which was associated with black tar heroin.

On April 10, 2018, the San Diego Health Department had issued a [health advisory](#) regarding several recent cases of wound botulism associated with black tar heroin use in San Diego County.

Background

Botulism is a rare, potentially fatal paralytic illness caused by the neurotoxins produced by *Clostridium botulinum*. Wound botulism occurs when a wound is contaminated by *C. botulinum* spores that germinate and produce toxin inside the wound. Wound botulism in drug abusers occurs in dermal abscesses from subcutaneous or intramuscular injection (skin or muscle “popping”).

Actions Requested of Providers

- Determine if the patient has risk factors for wound botulism, e.g. injection drug use, especially injecting or “skin-popping” heroin
- Establish the presence of signs consistent with the descending paralysis of botulism: e.g. cranial nerve palsies (ptosis, diplopia, dysarthria), progressing distally to extremities, weakness, and shortness of breath.
- Call LAC DPH 24/7 for consultation, botulism testing, and treatment with BAT® if indicated (see reporting section for telephone numbers).

Clinical Presentation

Toxin-induced weakness typically begins in the cranial nerves (e.g. diplopia, dysphagia, dysarthria), then progresses to the extremities in a proximal to distal manner. This descending paralysis can impair respiratory muscles causing respiratory failure and death.

Early clinical diagnosis is critical because paralysis can progress quickly to respiratory failure and early administration of antitoxin may prevent progression of paralysis and respiratory failure. The initial presentation may be mild and there may be no obvious site of infection.

Transmission and Infection Control

Person-to-person transmission does not occur. Standard precautions are indicated.

Laboratory/Specimen Collection

All testing for botulism requires approval by LAC DPH.

Diagnosis and Treatment

Consultation by the LAC DPH is available 24/7 to authorize testing and release of BAT[®] which can prevent further paralysis or respiratory compromise if administered early in the course of illness.

Look for infected wound(s) and treat with high-dose antibiotics effective against anaerobes, as indicated. Debride the patient's wound(s) if any. CDPH recommends hanging antitoxin prior to wound debridement. Some patients with wound botulism may not have an obvious site of infection.

Prevention

To reduce the risk of wound botulism, people are advised to seek urgent medical attention for any infected wounds and to avoid injecting street drugs. People who inject illicit drugs, such as black tar heroin, are more likely to get wound botulism than people who do not inject drugs. It is not known how heroin becomes contaminated, but because *Clostridium botulinum* spores live in soil, it may occur when the drug is produced, transported, cut or mixed with other substances, or prepared for use.

Reporting

Reporting suspect cases in Los Angeles County:

- **Los Angeles County DPH Acute Communicable Disease Control Program:**
 - Weekdays 8:30am-5pm: call 213-240-7941
 - After hours: call 213-974-1234 and ask for the physician on call.

Reporting suspect cases in the cities of Long Beach or Pasadena, contact the local health department:

- **Long Beach Health Department:**
 - Weekdays 8am-5pm: call 562-570-4302
 - After hours: call 562-500-5537 and ask for the Communicable Disease Officer.
- **Pasadena Health Department:**
 - Weekdays 8am-5pm (closed every other Friday): call the Communicable Disease Control Program 626-744-6089
 - After hours: call 626-744-6043.

Additional Resources

- LAC DPH Botulism webpage (including posters for patients in English and Spanish) <http://publichealth.lacounty.gov/acd/Diseases/Botulism.htm>
- CDPH Botulism webpage <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Botulism.aspx>
- CDC Wound botulism webpage <https://www.cdc.gov/botulism/wound-botulism.html>

This Health Alert was sent by Dr. Sharon Balter, Director, Division of Communicable Disease Control and Prevention, Los Angeles County Department of Public Health

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