



LAC DPH Health Alert: Wound Botulism Cases Associated with Heroin Injection



March 3, 2021

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

Key Messages

- Four cases of suspected wound botulism associated with heroin injection were identified in Los Angeles County in February 2021. Despite rapid progression to respiratory failure, three of the cases had delayed recognition and reporting of suspect botulism.
- Not all wound botulism patients present with a visible abscess or wound. Clinicians should suspect botulism in patients with a history of injection drug use who have acute onset of cranial nerve palsies and descending weakness (for example, drooping eyelids, blurred or double vision, change in sound of voice, difficulty speaking or swallowing, trouble breathing).
- Patients who are suspected to have wound botulism should be referred immediately to the nearest emergency department as mild presenting symptoms can progress rapidly to respiratory failure requiring intubation.
- Prompt administration of botulism antitoxin can prevent the progression of symptoms and it is only available through Los Angeles County Department of Public Health (LAC DPH). Healthcare providers should contact LAC DPH as soon as possible if botulism is suspected.

Situation

In February there were four suspected cases of wound botulism associated with heroin injection reported to LAC DPH (this includes one out-of-county resident). Two of the cases possibly used the same heroin batch but the other two cases have no known connection to other cases. The sources of the heroin remain unknown and additional cases may occur. In 2020 in LA County there were a total of [9 reported cases](#) (4 confirmed and 5 probable) of wound botulism, more than twice the annual average.

Presenting symptoms of the four cases included diplopia, ptosis, dysphagia, slurred speech, facial paralysis, difficulty breathing, and muscle weakness. All four cases required intensive care treatment and had respiratory failure requiring intubation. Three of the four cases were intubated on the same day they presented to the hospital and the other case was intubated 2 days after the admission. The average number of days from hospital admission of the case to notification of LAC DPH was 4.5 days.

Actions Requested of Providers

- Be alert for possible cases of wound botulism. The initial presentation may be mild and there may be no obvious site of infection.
- Establish the presence of signs consistent with the descending symmetrical paralysis of botulism: e.g., acute bilateral cranial nerve palsies (ptosis, diplopia, dysarthria), progressing distally to extremities, weakness, and shortness of breath.
- Determine if the patient has risk factors for wound botulism, e.g. injection drug use, especially injecting or “skin-popping” heroin.
- Immediately refer suspect cases of wound botulism to the nearest emergency department.
- Call LAC DPH 24/7 to report a suspect case. LAC DPH will authorize botulism testing and release botulism antitoxin if indicated (*see Reporting and Consultation* for telephone numbers).
- Obtain infectious disease, neurology, and surgical consultation (for wound debridement) as indicated.

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

Clinical Presentation

Botulism typically presents with prominent bilateral cranial nerve palsies (e.g. diplopia, dysphagia, dysarthria) and then progresses to the extremities in a proximal to distal manner. This symmetrical descending paralysis can impair respiratory muscles causing respiratory failure and death. Patients may initially complain of blurred vision, double vision and difficulty speaking including slurred speech, dysphagia, dysphonia. The presentation is acute, usually bilateral, and without sensory deficits or altered mental status.

Not all IDU-associated wound botulism patients present with a visible abscess or wound. Therefore, clinicians need to have a high index of suspicion for botulism. Prompt clinical diagnosis is imperative as timely administration of botulism antitoxin may halt the progression of disease.

Diagnosis and Treatment

All testing for botulism is performed by LAC DPH.

Supportive care is the mainstay of treatment for wound botulism. Treatment with antitoxin will halt progression but not reverse symptoms. Botulism antitoxin should be administered as early as possible, prior to laboratory confirmation or wound debridement, and ideally within 12 hours of presentation to reduce the incidence of respiratory failure.

Treat any infected wound(s) with high-dose antibiotics effective against anaerobes, as indicated. Debride the patient's wound(s) if any. It is recommended that antitoxin is administered prior to wound debridement.

Consultation from LAC DPH is available 24/7 to authorize testing and release of botulism antitoxin

Reporting and Consultation

Los Angeles County DPH Acute Communicable Disease Control:

- Weekdays 8:30am–5pm: call 213-240-7941.
- After-hours: call 213-974-1234 and ask for the physician on call.

Long Beach Health and Human Services:

- Weekdays 8am-5pm: call 562-570-4302.
- After hours: call the Duty Officer at 562-500-5537.

Pasadena Public Health Department:

- Weekdays 8am-5pm: call 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 Injection Drug Use and Wound botulism webpage for public <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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