



BOTULISM CASE REPORT SUMMARY, 2010

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Five suspected botulism cases were reported in 2010 in Los Angeles County and only one was confirmed; this excludes infant botulism cases. The confirmed case was a male injection drug user with a recent history of subcutaneous injection of black tar heroin. He had no acute wounds noted on admission and no recent consumption of suspicious foods, but did give a history of recent skin popping. Type A botulinum toxin was detected in serum, confirming the diagnosis of wound botulism. He recovered after treatment with antitoxin.

An elderly female developed progressive descending paralysis and ophthalmoplegia and was diagnosed with Guillain-Barré syndrome (GBS), Miller-Fisher variant. When she failed to respond clinically to treatment with intravenous immune globulin, her physician consulted Public Health to rule out botulism. There was no history of recent wounds or consumption of suspicious foods. Antitoxin was authorized and administered, without improvement. Tests on serum, gastric, and stool specimens showed no evidence for botulism. The final diagnosis was GBS.

A young male presented with descending weakness and difficulty with speech and swallowing. He gave no history of recent injections, wounds, or suspicious food items. Trivalent antitoxin was administered after collection of serum, gastric, and stool specimens, all of which were negative for indicators of botulism. The patient responded to plasmapheresis with return of lost motor functions, making the diagnosis of GBS, Miller-Fisher variant.

A homeless middle age male injection drug user complained of neck pain and weakness, trouble swallowing, and weakness in both arms; he also gave a history of a boil on his arm. On examination he had cellulitis of the neck. Although Public Health authorized release of botulinum antitoxin, his physician withheld its administration after noticing clinical response to antibiotic treatment of the cellulitis. No clinical specimens were submitted to the Public Health Laboratory (PHL), and the patient made a full recovery.

Another elderly female was reported as a possible case of botulism after presenting with ophthalmoplegia and areflexia. Antitoxin was not administered, but tests were performed on stool, which was negative on culture and toxin screen. The final diagnosis was viral meningitis.

The PHL was consulted regarding identification of an anaerobic Gram positive rod from a culture obtained during a gall bladder operation. The patient had no neurological symptoms or findings whatsoever. The submitting laboratory made the presumptive identification of *Clostridium sporogenes*, a non-toxigenic organism. The PHL showed the organism to be negative for toxin production by culture and mouse bioassay, and negative by polymerase chain reaction for any toxin genes, confirming the preliminary identity.

The California Infant Botulism Program reported four confirmed Los Angeles County cases of infant botulism in infants ranging from seven weeks to seven months of age. Three were female; two were Hispanic white, one was non Hispanic white, and one was Asian. There were three cases with type A intoxication and one case with type B.

In 2010, the Centers for Disease Control and Prevention (CDC) initiated a research study nationwide titled "Use of an Investigational New Drug, Heptavalent Equine-Based Botulinum Antitoxin (IND 6,7.50). Heptavalent botulinum antitoxin (H-BAT) consists of equine-derived antibody to the seven known botulinum toxin types (A-G). It replaces bivalent (AB) and monovalent (E) antitoxins previously used for treatment in the US. State and local public health agencies, along with the treating physicians, are monitoring the clinical efficacy and adverse events associated with this product.

Botulinum antitoxin for treatment of naturally occurring noninfant botulism is available only from CDC. BabyBIG (botulism immune globulin) remains available for infant botulism through the California Infant



Botulism Treatment and Prevention Program. BabyBIG is an orphan drug that consists of human-derived botulism antitoxin antibodies and is approved by FDA for the treatment of infant botulism types A and B.