Consensus Statement

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Botulinum Toxin as a Biological Weapon Medical and Public Health Management

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Abstract

Objective The Working Group on Civilian Biodefense has developed consensus-based recommendations for measures to be taken by medical and public health professionals if botulinum toxin is used as a biological weapon against a civilian population.

Participants The working group included 23 representatives from academic, government, and private institutions with expertise in public health, emergency management, and clinical medicine.

Evidence The primary authors (S.S.A. and R.S.) searched OLDMEDLINE and MEDLINE (1960–March 1999) and their professional collections for literature concerning

use of botulinum toxin as a bioweapon. The literature was reviewed, and opinions were sought from the working group and other experts on diagnosis and management of botulism. Additional MEDLINE searches were conducted through April 2000 during the review and revisions of the consensus statement.

Consensus Process The first draft of the working group's consensus statement was a synthesis of information obtained in the formal evidence-gathering process. The working group convened to review the first draft in May 1999. Working group members reviewed subsequent drafts and suggested additional revisions. The final statement incorporates all relevant evidence obtained in the literature search in conjunction with final consensus recommendations supported by all working group members.

Conclusions An aerosolized or foodborne botulinum toxin weapon would cause acute symmetric, descending flaccid paralysis with prominent bulbar palsies such as diplopia, dysarthria, dysphonia, and dysphagia that would typically present 12 to 72 hours after exposure. Effective response to a deliberate release of botulinum toxin will depend on timely clinical diagnosis, case reporting, and epidemiological investigation. Persons potentially exposed to botulinum toxin should be closely observed, and those with signs of botulism require prompt treatment with antitoxin and supportive care that may include assisted ventilation for weeks or months. Treatment with antitoxin should not be delayed for microbiological testing.

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