

In addition to the need for special media, the laboratory should always be informed when tularemia is suspected because of the potential hazard to laboratory personnel. Suspected isolates should be confirmed by the CDC or USAMRIID through local or state health departments.

Effective therapy includes streptomycin, gentamicin, tetracycline, and chloramphenicol; postexposure prophylaxis with tetracycline or doxycycline may be considered. The benefits of tetracycline therapy may outweigh the risks for children younger than 8 years in select clinical situations, including tularemia.<sup>16</sup> A live-attenuated vaccine for preexposure use is available through USAMRIID.

### BOTULISM

There are seven distinct but related neurotoxins, A through G, produced by different strains of *Clostridium botulinum*, an anaerobic gram-positive rod. Classic neuromuscular disease is acquired through ingestion of preformed neurotoxin. Other forms include localized infection (wound botulism) and *C botulinum* intestinal colonization in infants with in vivo toxin production (infant botulism). Botulism is most often seen in the United States in small clusters or single cases associated with home-canned foods. Although airborne transmission of botulinum neurotoxin does not occur naturally, aerosolization of preformed toxin would be the most likely route of transmission in a bioterrorism event.<sup>3</sup> Sabotage of food supplies is also possible. Botulism is not transmitted from human to human. Standard Precautions are recommended for hospitalized patients.

The incubation period for foodborne botulism is generally 12 to 36 hours (range, 6 hours to 8 days). Clinical manifestations of disease acquired by inhalation would be the same as those for foodborne botulism. Early manifestations include blurred vision, diplopia, and dry mouth.

Later clinical features indicative of more severe disease include dysphonia, dysarthria, dysphagia, ptosis, and symmetrical, descending, progressive muscular weakness, with respiratory failure. Clinical suspicion is critical, since a recognized source of exposure may be absent in a biological attack. Botulism is a reportable disease.

A toxin neutralization bioassay in mice is used to identify botulinum toxin in serum, stool, or food. *C botulinum* also may be isolated from stool and food. Electromyography can be helpful diagnostically. Botulinum antitoxin of equine origin available from the CDC and state or municipal health departments should be administered as soon as possible to patients symptomatic with botulism (after testing for hypersensitivity to equine sera).

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## HCV Common Among US Veterans

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Among veterans who received routine outpatient care at San Francisco Veterans' Affairs Medical Center, the prevalence of hepatitis C virus (HCV) infection is 18.8%, according to the results of a recent screening study presented by Wright and colleagues at the 50th annual meeting of

the American Association for the Study of Liver Diseases. The single greatest risk factor for HCV was intravenous drug abuse. Other risk factors included tattooing, needlestick associated with service as a medical-team member, and incarceration in jail lasting more than 48 hours.

It was reported that the Veterans' Administration has developed preliminary plans to conduct a national study designed to determine the incidence

of HCV among veterans and has approved the use of combination therapy with interferon and ribavirin for treatment of HCV-infected veterans.

FROM: Wright TL, Briggs ME. Hepatitis C virus infection common among US veterans. Presented at the 50th Annual Meeting of the American Association for the Study of Liver Diseases; November 5-9, 1999; Dallas, Texas.