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Outbreak of Acute Gastroenteritis Associated with Norwalk-Like Viruses Among British Military Personnel — Afghanistan, May 2002

In the United States, Norwalk-like viruses (NLVs) cause an estimated 23 million episodes of illness, 50,000 hospitalizations, and 300 deaths each year. NLVs can be transmitted by fecally contaminated food and water (*1*) and by direct person-to-person contact or through droplets of infected persons. Outbreaks of NLV-associated gastrointestinal illness are common in military settings. During May 13–19, 2002, a total of 29 British soldiers and staff of a field hospital in Afghanistan became acutely ill after a short incubation period with vomiting, diarrhea, and fever. This report summarizes the investigation of this outbreak and underscores the importance of the diagnostic capacity for NLVs.

The first three patients presented with severe acute illness characterized by headache, neck stiffness, photophobia, obtundation, and gastrointestinal symptoms, which made the initial diagnosis elusive. The third patient's illness was complicated by disseminated intravascular coagulation. Two of these patients required ventilatory support in the field hospital's intensive care unit. All bacteriologic studies performed at the field hospital's laboratory were negative. Because the cause of the illness was unknown, the field hospital was closed to all but patients with gastrointestinal symptoms. Because of the field conditions at the base and the severity of illness in the initial patients, one patient was evacuated to a U.S. military hospital in Germany, and 10 were evacuated to England. Two medical staff who treated the patients on the flight to England and a third contact at the hospital in England subsequently developed gastroenteritis; two of these persons were hospitalized for several days. All patients recovered rapidly and were discharged. The field hospital has since reopened with enhanced infection-control precautions.

In England, fecal specimens were tested for NLVs by electron microscopy (EM), a new antigen-capture enzyme-linked immunosorbent assay (ELISA), and reverse transcription-polymerase chain reaction (RT-PCR). By EM, clumps of small, round-structured viruses were observed and considered to be consistent with NLVs. This finding was confirmed by ELISA and RT-PCR in specimens from five patients. Partial sequence analysis of the polymerase gene identified the virus as belonging to genogroup II (*2*), the most common NLV genogroup in the United Kingdom and the United States (*3*).

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Editorial Note: Outbreaks of NLV-associated gastrointestinal illness are common, particularly in military deployments. NLVs were the most common cause of disability among soldiers in Operations Desert Storm and Desert Shield, have caused outbreaks aboard aircraft carriers (*4*), and have been a common problem in the Israeli military (*5*). NLVs are extremely contagious because of their low infectious dose (<100 viral particles), prolonged asymptomatic shedding (up to 2 weeks after recovery), ability to resist chlorination (10 ppm chlorine), and stability in the environment (stable with freezing and at 140° F [60° C]). Secondary cases and

INSIDE

the differential diagnosis of any mammal with unexplained neurologic illness. Possible human and pet exposures to rabies should be evaluated by public health officials on an individual basis. Bites from small rodents that are unlikely to survive an encounter with a rabid animal rarely require rabies postexposure prophylaxis; however, bites from large rodents should be considered as possible rabies exposures, especially in areas where rabies is endemic (*9*). Persons should avoid any mammal exhibiting aggressive or unusual behavior. Persons who suspect that they have been exposed to a rabid animal should contact a health-care provider immediately.

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Public Health Dispatch

Update: Cutaneous Anthrax in a Laboratory Worker — Texas, 2002

On April 5, 2002, CDC reported a case of suspected cutaneous anthrax in a worker at laboratory A who had been processing environmental samples for *Bacillus anthracis* in support of CDC investigations of the 2001 bioterrorist attacks in the United States (*1*). Since the initial report, the worker had serial serology performed at the CDC laboratory. A greater than fourfold rise from baseline in the concentration of immunoglobulin G to protective antigen was demonstrated. The peak antibody level was observed 7–8 weeks after the onset of symptoms, and the time course and levels of detectable antibodies were consistent with those seen in other cases of cutaneous anthrax. On the basis of case definitions developed during the recent investigation, these additional findings confirm this as a case of cutaneous anthrax (*2*). This case brings the number of anthrax cases identified in the United States since October 3, 2001, to 23, including 11 inhalation and 12 cutaneous (eight confirmed and four suspected). This is the first laboratory-acquired case of anthrax associated with the recent investigation.

The epidemiologic and environmental investigation of this case indicated that the probable source of exposure was the surface of vials containing *B. anthracis* isolates that the worker had placed in a freezer. The storage vials had been sprayed with 70% isopropyl alcohol, which is not sporicidal, instead of a bleach solution because bleach had caused labels to become dislodged. The worker did not wear gloves when handling the vials. A culture of the vial tops performed at laboratory A tested positive for *B. anthracis*. The vial top specimen was confirmed positive for *B. anthracis* at CDC. Multiple-locus variable-number tandem repeat analysis found this isolate to be indistinguishable from the culture of the worker's clinical specimen. This case underscores the importance of safe laboratory procedures and anthrax vaccination for workers routinely handling *B. anthracis* isolates (*3*).

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