

Increases in Crimean-Congo Hemorrhagic Fever Case Detection – Country of Georgia, 2014

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Summary: Cases of Crimean Congo Hemorrhagic Fever, a high-priority bioterrorism agent naturally transmitted by ticks, appear to be increasing in the country of Georgia. But is this hemorrhagic fever really on the rise?

Abstract:

Background: From January to September 2014, the country of Georgia's National Centers for Disease Control and Public Health (NCDC) identified 22 cases of Crimean-Congo hemorrhagic fever (CCHF), a high-priority bioterrorism agent naturally transmitted by infected ticks and animal blood. Although endemic, the highest annual case count previously reported was 13, suggesting transmission above baseline since surveillance initiation in 2009. We conducted an investigation to identify the source, mode of transmission, and risk factors for each case.

Methods: We extracted 22 cases from NCDC's Electronic Disease Surveillance System. Cases were defined as temperature $>38^{\circ}\text{C}$, at least one hemorrhagic sign (petechial or purpurral rash, bleeding, and/or thrombocytopenia), and positive polymerase chain reaction or anti-CCHF IgM titer. We interviewed NCDC and national reference laboratory staff to elucidate modifications potentially affecting the system's sensitivity.

Results: Mean patient age was 45 years (range: 4–77 years); 13 (59%) were male. Most (91%) cases occurred from May to August; 18 (82%) occurred in rural villages. Fourteen (64%) patients reported a tick bite or removal, and three (14%) animal blood exposure, before illness. The mean incubation period was 4 days (range: 1–17). Patients presented with fever (90%), thrombocytopenia (77%), and bleeding (59%). The case fatality rate was 14%. Staff interviews revealed that a 2013 nationwide CCHF educational campaign for physicians was conducted. Additionally in 2013 and 2014, two studies conducted CCHF testing for acute febrile illness workup.

Conclusions: The increase in 2014 CCHF cases may be an artifact of improved surveillance system sensitivity. As most patients reported a known CCHF risk factor, future public health interventions in the country of Georgia should target these exposures.