Crimean-Congo Hemorrhagic Fever

M Yadollahie

Crimean-Congo hemorrhagic fever (CCHF) is a hemorrhagic fever caused by a tick-borne virus. The disease was first described as hemorrhagic diseases in 1944 in the Crimea and later in 1969 in the Congo, hence the current name of the disease. CCHF is endemic in many countries in Africa, Europe and Asia, and during 2001, cases or outbreaks have been recorded in Kosovo, Albania, Iran, Pakistan, and South Africa. The geographical distribution of the virus—like that of its tick vector—is widespread. Evidence of CCHF virus has been found in Africa, Asia, the Middle East and Eastern Europe.

Q1: Where is CCHF found?

CCHF is found in eastern and southern Europe, the Mediterranean region, in northwestern China, central Asia, Africa, the Middle East, and the Indian subcontinent.

Q2: How do humans become infected with CCHF and how is the disease spread?

Humans become infected with CCHF from a tick bite or direct contact with blood or other infected tissues from livestock. It is mainly an occupational disease; agricultural workers, slaughterhouse workers, veterinarians and health care workers in endemic areas are people most at risk to contract the infection. Infection occurs through the skin, aerosol and by ingestion.

Q3: What are the symptoms of CCHF?

One to three days after infection the illness started with sudden onset of high-grade fever and nonspecific symptoms such as headache, aching muscles, dizziness, neck pain and stiffness, gastric pain and vomiting. Red eyes and throat, and flushed face are common. The patient may also develop bruise (ecchymosis), yellowish discoloration of the whites of the eyes (the sclera) and the skin (jaundice or icterus), mood swings and aggressive behavior. With progression of the illness, the patient developed bleeding from the injection sites, bloody feces (due to gastrointestinal bleeding), bloody urine, nosebleeds and also gum bleeding.

Q4: Are there complications after recovery?

In the second week of the illness in hospital the mortality rate is about 30%. Those patients who get well, do not generally develop any specific complications.

Q5: How is the disease prevented?

In endemic areas, the most important preventive action to be taken is to establish measures to avoid bites from infected ticks and control direct contact with infected blood or tissues. Use of insect repellents containing DEET, wearing gloves and other protective clothing by at risk people like agricultural workers and others working with animals, are recommended. Avoiding any direct contact with the blood and body fluids of livestock or patients with signs of infection is also recommended. Unpasteurized milk should not be drunk. In meat, CCHF virus is usually inactivated by post-slaughter acidification. The virus is destroyed by cooking.

Guidelines for Filing a Competing Interest Statement

Definition: Conflict of interest (COI) exists when there is a divergence between an individual's private interests (competing interests) and his or her responsibilities to scientific and publishing activities such that a reasonable observer might wonder if the individual's behavior or judgment was motivated by considerations of his or her competing interests. COI in medical publishing affects everyone with a stake in research integrity including journals, research/academic institutions, funding agencies, the popular media, and the public.

COI may exist in numerous forms including financial ties, academic commitments, personal relationships, political or religious beliefs, and institutional affiliations. In managing COI, The IJOEM abides to the policy statement of the World Association of Medical Editors (WAME). All authors should declare their COI, if any, during the manuscript submission. Reviewers are asked to declare their COI after they accept to review a manuscript. Editors should also declare their COI during handling of a manuscript.

Managing COI depends on disclosure because it is not possible to routinely monitor or investigate whether competing interests are present. COI disclosed by authors will be presented in the Editorial Board and an appropriate action will be taken. Those reviewers and Editors with COI will be excluded from the manuscript process. If competing interests surface from other sources after a manuscript is submitted or published, The IJOEM investigates allegations of COI and depending on their nature, appropriate actions will be taken if the allegations were found to be true. If a manuscript has been published and COI surfaces later, the journal will publish the results of the investigation as a correction to the article and ask the author to explain, in a published letter, why the COI was not revealed earlier.