



EBOLA VIRUS DISEASE (EVD) OR EBOLA HEMORRHAGIC FEVER: A REVIEW

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Abstract

The present work describes Ebola virus disease (EVD), formerly known as Ebola hemorrhagic fever, is a severe, often fatal illness in humans. The virus is transmitted to people from wild animals and spreads in the human population through human-to-human transmission. The average EVD case fatality rate is around 50%. Case fatality rates have varied from 25% to 90% in past outbreaks. The first EVD outbreaks occurred in remote villages in Central Africa, near tropical rainforests, but the most recent outbreak in west Africa has involved major urban as well as rural areas. Community engagement is key to successfully controlling outbreaks. Good outbreak control relies on applying a package of interventions, namely case management, surveillance and contact tracing, a good laboratory service, safe burials and social mobilization. Early supportive care with rehydration, symptomatic treatment improves survival. There is as yet no licensed treatment proven to neutralize the virus but a range of blood, immunological and drug therapies are under development.

Keywords: - : Ebola virus disease (EVD), Ebola hemorrhagic fever, Virus

Introduction

Ebola virus causes severe viral hemorrhagic fever with a high fatality rate. Five Ebola virus species within the genus *Ebolavirus* are known, including four that cause Ebola virus disease (EVD) in humans (a fifth species has only caused disease in nonhuman primates).¹ The 2014 outbreak of EVD in West Africa, caused by Ebola virus (*Zaire ebolavirus* species), is the largest outbreak of EVD in history.² Ebola virus can be transmitted by direct contact with blood, body fluids, or skin of EVD patients or persons who have died of EVD.³ By October 8, 2014, 401 healthcare personnel in West Africa had become infected with Ebola, of whom 232 died.^{2,4} Several U.S. healthcare personnel working in West Africa have also become infected with EVD and have returned to the United States for evaluation and treatment.⁵ In addition, people in several states who have had recent travel to West Africa and have developed fever and other symptoms have been evaluated at U.S. hospitals for possible EVD, and as of October 6, 2014 one patient, a traveler from Liberia

who was visiting Texas, was diagnosed with EVD and died. On October 10, a healthcare worker at Texas Presbyterian Hospital who provided care for the index patient reported a low-grade fever and was referred for testing. The healthcare worker has tested positive for Ebola according to preliminary tests by the Texas Department of State Health Services' laboratory. The healthcare worker was isolated after the initial report of a fever. CDC confirms that the healthcare worker is positive for Ebola.

Evidence Summary

Evidence and understanding of Ebola virus transmission is based on epidemiologic and laboratory data, summarized below, including investigations of >20 African outbreaks since 1976.⁶

Epidemiologic Data

Human outbreaks of EVD are hypothesized to begin through direct contact with an infected animal or its body fluids, and human transmission chains are driven by direct contact with the blood or other body fluids of infected patients.^{3,7-13} Ebola virus RNA levels in the blood increase logarithmically during