



Ebola Outbreak 2014: Measures for Prevention and Control

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Dear Editor-in-Chief

Ebola virus disease (EVD), previously named as Ebola haemorrhagic fever, is often a highly fatal illness (1). The disease occurs in outbreaks mostly in Sub-Saharan Africa and the largest of the outbreaks is the ongoing 2014 West Africa Ebola outbreak. The disease has a mortality rate of upto 90% and so far 1711 cases & 932 deaths (till 6 Aug, 2014) have been reported in four African countries (2). The virus is being transmitted from wild animals to human beings and the disease can spread from person to person. Fruit bats are considered to be the natural hosts of the virus. There is no specific treatment or vaccine for the disease and ill patients usually require intensive supportive care (1).

EVD outbreaks were first reported in 1976 in Sudan and Congo. Every year till 2013, around 1000 cases were being reported (1). In the current outbreak, cases are being reported in Guinea (495 cases & 393 deaths), Liberia (516 cases & 282 deaths), Sierra Leone (691 cases & 286 deaths) and Nigeria (9cases & 1 death) (2). Ebola virus belongs to the Filoviridae family and has 5 species of which only three are associated with outbreaks. In Africa, fruit bats, particularly species of the genera *Hypsignathus monstrosus*, *Epomops franqueti* and *Myonycteris torquata*, are considered possible natural hosts for Ebola virus (3). The disease is transmitted to humans through contact with blood and other body fluids of infected animals such as chimpanzees, gorillas, fruit bats, por-

cupines, etc. Then, the infection spreads in the community by human to human transmission, where the virus spreads by direct contact with infected body fluids (1).

The incubation period of the virus varies from 2 – 21 days and the person may remain infective for more than 7 weeks even after recovery from the illness. EVD is characterized by sudden onset of fever, sore throat, severe muscle pain, weakness and head ache. The initial phase is followed by vomiting, diarrhoea, skin rashes, impaired renal & liver functions and severe hemorrhage (both internal & external). Healthcare workers are at high risk of getting the infection when infection control precautions are not followed strictly (4). The infection can be diagnosed by detecting the viral RNA by polymerase chain reaction, detecting proteins by enzyme-linked immunosorbent assay or by virus isolation using culture (5).

The treatment is primarily supportive and includes isolation of the patient, correction of dehydration, prevention of disseminated intravascular coagulation using anti coagulants, pain relief and antibiotics in case of any secondary bacterial infections. Early treatment increases the chances of survival. But the disease has a high mortality, often between 50% - 90%. The disease closely resembles Marburg virus disease and other diseases which have to be ruled out include malaria, typhoid, leptospirosis, shigellosis, rickettsiosis and other viral haemorrhagic fevers. Till date no vaccines are li-

censed for prevention of EVD, but several vaccines are under trials (4).

Due to the absence of any effective treatment or vaccine, the only way to prevent the disease is to raise the awareness about the risk factors and protective measures to be followed in order to reduce the human infection and mortality. The disease transmission can be prevented by avoiding contact with infected body fluids of animals and humans. Health workers should follow standard precautions such as basic hand hygiene, respiratory hygiene, the use of personal protective equipment, safe injection practices and safe burial practices (1). Level 2 alert has been given for travelers to affected countries, advising them to practice enhanced precautions (2). To conclude, the current outbreak of EVD can be effectively controlled by following strict aseptic precautions both in the community as well as in the healthcare settings.

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