

Unit 15. Ebola Virus Disease – A Challenge to India



Ebola virus disease (EVD), formerly known as Ebola haemorrhagic fever, is a severe, often fatal illness in humans. The Ebola virus is transmitted to people from wild animals and spreads in the human population through human-to-human transmission. The Ebola virus causes an acute, serious illness which is often fatal if untreated. There are currently no licensed Ebola vaccines but 2 potential candidates are undergoing evaluation.

History of Ebola: Ebola virus disease (EVD) first appeared in 1976 in 2 simultaneous outbreaks, one in Nzara, Sudan, and the other in Yambuku, Democratic Republic of Congo. The Yambuku outbreak occurred in a village near the Ebola River, from which the disease takes its name. The current outbreak in west Africa is the largest and most complex Ebola outbreak since the Ebola virus was first discovered in 1976. The first cases were notified in March 2014. The most severely affected countries, Guinea, Sierra Leone and Liberia have very weak health systems, lacking human and infrastructural resources, having only recently emerged from long periods of conflict and instability.

Ebola Virus Strains

There are 5 species of Ebola Virus (belonging to the virus family Filoviridae) that have been identified: **Zaire**, Bundibugyo, Sudan, Reston and Tai Forest. The first 3, Bundibugyo ebolavirus, **Zaire ebolavirus**, and Sudan ebolavirus have been associated with large outbreaks in Africa. The virus causing the 2014 west African outbreak belongs to the Zaire species.

- The Ebola virus is a member of RNA virus known as 'Filoviriade'.
- The Ebola virus is the world's third deadliest infectious disease after HIV.
- The new strain of Ebola is called Ebola Tai(WHO).

Transmission of Ebola

It is thought that fruit bats of the Pteropodidae family are natural Ebola virus hosts. Ebola is introduced into the human population through close contact with the blood, secretions, organs or other bodily fluids of infected animals such as chimpanzees, gorillas, fruit bats, monkeys, forest antelope and porcupines found ill or dead or in the rainforest.

Ebola then spreads through human-to-human transmission via direct contact (through broken skin or mucous membranes) with the blood, secretions, organs or other bodily fluids of infected people, and with surfaces and materials (e.g. bedding, clothing) contaminated with these fluids.

Symptoms of Ebola Virus Disease



The Ebola virus causes hemorrhagic fever which begins its effect in 4 to 10 days after the infection. Symptoms are such as fever, chills, loss of appetite, headache etc. As the disease advances more symptoms such as vomiting, sore throat, diarrhea, chest pain and bleeding may occur. Incubation period for this virus is from two to twenty one days. People may be exposed to the Ebola virus from direct contact with the blood and secretions of infected person. It attacks every part of the human body and disrupts immune system which finally may lead to death.

Ebola Virus Disease – A Challenge to India

Ebola which is native of African continent is spreading to many other countries through the people who are affected by this virus. When affected people from countries like Guinea, Liberia, Sierra Leone moved to other countries, the virus spread. There was strict ban from the side of many countries on natives from West African nations. But the disease has already spread to non-Africans and the scrutiny became tough. All the countries near by Africa are scrutinizing in their respective airports. Medical checkup is done to the passengers from Africa. But unfortunately they may not be recognized as infected because the virus takes almost 21 days to incubate. So even if the person is affected he is not able to be identified.

India is also taking measures so that the virus should not be spread to the country. But there are thousands of Indians who are working in Ebola infected areas in Africa. If they return to their homeland – India – then chances of spreading of the virus is there. It's really a big challenge to India to tackle the virus. Although the government is making efforts to screen the people at international airports, the potential threat is still there. Dense population and poor sanitation are the main problems to tackle Ebola in India. Health care services in India are abysmal.

Measures

1. Reducing the risk of wildlife-to-human transmission.
2. Reducing the risk of human-to-human transmission.
3. Outbreak containment measures.

Currently there is no licensed vaccine to treat the disease. Healthcare workers are among the biggest segment of affected people. People who are affected by Ebola are not revealing because of the fear of isolation. Suggested measures to tackle Ebola include hospitals with isolation wards and improved surveillance. Health care workers must be trained to handle Ebola patients. Strict screening must be done at airports not only to the people who come from African countries but also to everyone as the virus has already spread to other countries. People who are identified with the symptoms of Ebola virus disease must be immediately treated by the medical personnel and should be strictly monitored from time to time. Government should provide awareness to the people about the virus so that people can be cautious and can go for medical checkup if symptoms appear.



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