

Research paper on ebola virus: implications to the human body and society

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- Timeline of Ebola Outbreaks

The world first came to know about Ebola virus in the late 1970s through a series of hemorrhagic fever outbreak in Congo and Sudan. Since then traditional quarantine methods were employed to control the outbreak from the clinics and hospitals in Africa. Research efforts on Ebola began to diminish upon the report of an isolated case in Tandala and a small outbreak in Sudan. However, ten years later (1989) Ebola virus re-emerged on cynomolgous monkeys (*Macaca fascicularis*) in a research facility in Reston, Virginia in the United States. Such outbreak prompted several laboratory studies to understand how Ebola virus operates on nonhuman primate infections since then (Peters and LeDuc, 1999).

- Ebola Virus: Pathogenicity and Transmission

Ebola virus is part of family Filoviridae that commonly occurs in the sub-Saharan region in Africa. The natural pool of the virus is still unknown. Some studies suggested that the outbreak is also related to anthropogenic activities vis-à-vis environmental degradation resulting to global warming. Other studies suspect that bats are the main carriers of the virus and such outbreaks are associated to having close contact or eating gorillas, chimps and monkeys, and bats. Since there is no specific vaccine that is developed to treat Ebola hemorrhagic fever, suspected patients are isolated and medical facilities are banking on aggressive contact tracing methods. Transfer between humans is through direct contact with blood or body fluids of those who have contracted the disease. The skin is also targeted as a direct point source of infection. Moreover, individuals could also be infected when they touched the cadaver or corpses infected with Ebola (Umeora et

al., 2014).

Some studies from experimented animals revealed that viruses from family Filiviridae to include Ebola virus may be transmitted through aerosols. In the case of humans, such transmission minimally occurs. During the outbreak in Congo, aerosol particles from medical procedures of patients infected with ebola (i. e. laparotomy) resulted in the transmission of the virus to the entire surgical team. Manifestations of infection are evident in the epithelial surfaces of the body such as the oropharynx and conjunctiva. Contaminated hands are some of the point source of transfer to the epidermal openings of the skin. Besides contaminated hands, tainted clothes and linens of an infected person may also infect other individuals (Umeora et al., 2014).

Ebola virus rapidly reproduces inside the body with an incubation period that lasts from two to twenty one days. The virus interferes with the signalling pathways of the immune system—a mechanism that allows the virus to avoid T-cell check thereby resulting into a severe infection that does not trigger the immune response of an individual. The infected white blood cells transmit the virus into different organs of the body such as the lymph nodes, liver, lungs and spleen resulting to extensive organ death. Some of the notable effects to the human body include fever and inflammatory symptoms resulting to fluid leakage, and blood vessel coagulation. Infection also results to thrombocytopenia and acute disorders such as dysphagia, sore throat, chest pain, cardiovascular shocks and organ failure (Umeora et al., 2014).

- Social Implications: Panic and Threats

The broadcasted image of Ebola virus has threatened not only the social and

cultural aspects of Nigeria but has also created panic throughout the world. The mind-set and the behavior of the people towards the Ebola viral disease have been altered. Some cultural anthropologists demonstrated that cultural practices such as the practices of traditional healers, burial of family members, and fear of taking sick family members to hospitals resulted to the outbreak of Ebola virus in Africa (Umeora et al., 2014).

Other findings suggest that Ebola viral disease carries a significant degree of fear and stigma that is also associated to witchcraft and faulty actions of victims and their families (i. e. committing a grave sin against their beliefs). Fear is further amplified when controls over infectious diseases are employed towards the carriers of Ebola virus especially those who are seen under quarantine and isolation to protect the health of other people. On the other hand, the negative experience of stigma is felt by people who come from the same region where there is a massive Ebola outbreak. Some of the stigma that survivors experienced includes exile from home, burnt clothes, and divorce. Children are also strictly told not to be in direct contact with survivors and wives were compelled to return to their villages (Umeora et al., 2014). Some family members of an infected victim also experienced discrimination and were regularly declined in the market place. Stigma amplifies marginalization that often leads to poverty and social neglect. As a consequence, the population becomes more susceptible to the infectious disease brought about by Ebola because of the huge distrust against health authorities and resistance during emergencies (Umeora et al., 2014). The stigma from the society has created a panic among citizens where politicians and leaders are taking matters in their own course. The

misappropriations of funds due to lack of pertinent information regarding the control of infectious disease and other health care needs is just one of the negative economic implications of a newsfeed blown out of proportion. The economic losses are not only attributed to health resource misappropriation but also to other businesses such as amusement parks and malls, public transportations, and the tourism industry (Umeora et al., 2014).

- Conclusions

Since the outbreak of Ebola virus, various studies illustrated the mechanism of transmission, pathogenicity and even the sociocultural implications of Ebola virus in the society. The mode of transmission, pathogenicity and control of Ebola virus as it is broadcasted by several media outfits resulted to panic and fear among the people all over the world. Because of such panic and fear, social stigma has affected the behavior and outlook of people towards Ebola viral diseases. As presented in some studies, stigma results to a negative outlook of the disease and resource misallocation. Stigma also breeds distrust to health authorities that impedes the outbreak control and further research of the study. It is therefore recommended to establish public trust between those who are directly affected and ostracized and the public government as well as the health sector.

Works Cited

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Umeora, O. U. J., N. B. Emma-Echiegu, M. C. Umeora, and N. Ajayi. " Ebola Viral Disease in Nigeria: The Panic and Cultural Threat." *African Journal of Medical and Health Sciences*, 13. 1(2014): 1-5.

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