## THREAT OF EBOLA VIRUS DISEASE FOR PAKISTAN

## Habibullah Khan<sup>1</sup>, Iftikhar Ahmad<sup>2</sup>

<sup>1</sup>Department of Medicine and <sup>2</sup>Department of Community Medicine, Gomal Medical College, D.I.Khan, Pakistan

Ebola virus disease (EVD) is one of the viral hemorrhagic fevers with very high mortality. According to WHO the case fatality rate may reach up to 90%.<sup>1</sup> Its usual symptoms are fever, headache, body aches, and rash. It can present with unexplained internal or external bleeding /bruising. Thrombocytopenia and leucopenia are important features and liver and kidney functions may get seriously impaired.<sup>1</sup>

Primary cases of EVD have been known to arise from direct human contact with blood and body fluids of infected animals like bats, rodents, monkeys, gorillas and chimpanzees. Secondary cases belong to broken skin or mucous membrane contact of humans with body fluids (blood, urine, feces, saliva, sweat and semen) of symptomatic patients, dead bodies or via contaminated needles and used articles of cases. High risk groups include health care workers not following proper control measures, close contacts and mourners. Its incubation period ranges from 2 to 21 days, during which there is no risk of any transmission. WHO advises disease notification and keeping the patient in hospital under strict isolation. There is no specific drug or vaccine but early supportive fluid and electrolyte replacement improve survival.2

Currently, it has seriously stuck the West African countries including Guinea, Liberia constituting its largest outbreak in the history. Its initial two simultaneous outbreaks occurred in a village near Ebola River in Congo and Sudan in 1976. Other past outbreaks have occurred in Congo, Gabon, South Sudan, Ivory Coast, Uganda and South Africa.<sup>3</sup>

Health care workers looking after suspected or confirmed cases of Ebola virus infection need to practice specific precautions in addition to the standard ones. Personal protective equipment (PPE) including gloves, gown, shoes, face-masks and faceshields to prevent from accidental splashes must be worn. Hand hygiene using soap, alcohol-based hand rub, single use towel, before, during and after donning the PPE is of utmost importance. Environmental sanitation at home and hospitals with hypo-

Corresponding Author: Dr. Habibullah Khan Department of Medicine Gomal Medical College D.I.Khan, Pakistan E-mail: habibgmc@hotmail.com chlorite solution is essential. Infected clothes need separate transportation and machine washing in laundry. Solid and sharp wastes from patients must be incinerated.<sup>4-7</sup>

Keeping in view the danger of spread of this deadly infection to Pakistan, the Federal Ministry of Health has issued an advisory to take precautionary measures against it. It has warned that it may affect Pakistan due to frequent movement of persons to the African countries and this risk of import of virus needs immediate precautionary measures. The Government of Pakistan has arranged the facility of screening people coming from Africa at the airports.<sup>8</sup>

It is also important to note that while preparing for EVD we should not forget the Crimean-Congo hemorrhagic fever sometimes called the "Asian Ebola virus" which is endemic in certain parts of Pakistan with mini epidemics from time to time.<sup>9</sup>

## REFERENCES

- 1. Lefebvre A, Fiet C, Belpois-Duchamp C, Tiy M, Astruc K, Aho Glele LS. Case fatality rates of Ebola virus diseases: a meta-analysis of World Health Organization data. Med Mal Infect 2014; 44:412-6.
- 2. Centers for Disease Control and Prevention. Ebola outbreaks 2000-2014. 2014. http://www.cdc.gov/ vhf/ebola/resources/outbreaks.html
- 3. Li YH, Chen SP. Evolutionary history of Ebola virus. Epidemiol Infect 2014; 142:1138-45.
- A Reporter. Health Minitry issues Ebola Virus advisory. Dawn Newpaper. August 19<sup>th</sup> 2014. http:// www.dawn.com/news/1126274
- PAHO /WHO. Ebola virus disease (EVD): implications of introduction in the Americas. Corrigendum-1, 13 August, 2014.
- Jeffs B. A clinical guide to viral haemorrhagic fevers: Ebola, Marburg and Lassa. Trop Doct 2006; 36:1-4.
- Parkes-Ratanshi R, Elbireer A, Mbambu B, Mayanja F, Coutinho A, Merry C. Ebola outbreak response; experience and development of screening tools for viral haemorrhagic fever (VHF) in a HIV center of excellence near to VHF epicentres. PLoS One 2014; 9:e100333.
- Crowcroft NS, Morgan D, Brown D. Viral haemorrhagic fevers in Europe - effective control requires a co-ordinated response. Euro Surveill 2002; 7:31-2.

9. Smego RA Jr, Sarwari AR, Siddiqui AR. Crimean-Congo hemorrhagic fever: prevention and control limitations in a resource-poor country. Clin Infect Dis 2004; 38:1731-5.

CONFLICT OF INTEREST Authors declare no conflict of interest. GRANT SUPPORT AND FINANCIAL DISCLOSURE None declared.