Ebola Pandemic

Lurajean Cravens

*Otterbein University, lurajean.cravens@otterbein.edu*

Follow this and additional works at: [https://digitalcommons.otterbein.edu/stu_msn](https://digitalcommons.otterbein.edu/stu_msn)

Part of the [Medical Pathology Commons](https://digitalcommons.otterbein.edu/medical/), [Public Health and Community Nursing Commons](https://digitalcommons.otterbein.edu/nursing/), and the [Virus Diseases Commons](https://digitalcommons.otterbein.edu/viruses/)

**Recommended Citation**

Cravens, Lurajean, "Ebola Pandemic" (2014). Master of Science in Nursing (MSN) Student Scholarship. 44.

[https://digitalcommons.otterbein.edu/stu_msn/44](https://digitalcommons.otterbein.edu/stu_msn/44)
Ebola virus (EBOV) is a single-stranded RNA virus that enters the body through mucous membranes or breaks in the skin. After viral replication in the body, the virus continues to spread systemically as inflammatory interferon is released, causing cellular apoptosis and leakage of viral particles into the extracellular fluid. Macrophages and dendritic cells are infected, as well as adrenal cortical cells and epithelial cells. The virus then replication occurs, causing cellular apoptosis and leakage of viral particles into the extracellular fluid. Macrophages and dendritic cells are infected, as well as adrenal cortical cells and epithelial cells. (Yen et al., 2011, CDC 2014).

The release of cytokines, chemokines, and other inflammatory mediators such as tumor necrosis factor, interleukins, and cyclooxygenase 2 result in a systemic inflammatory response (Bray et al, 2014). Clinical manifestations of Ebola infection result from the body’s response to the infection rather than toxicity caused by the virus (Bray et al., 2014). Infected macrophages with additional stimulation by inflammatory cytokines may release interferon and interleukins in high levels, causing systemic inflammation. (Bray et al., 2014).

The pathophysiology of Ebola infection results from the body’s response to the infection rather than toxicity caused by the virus (Bray et al., 2014). There can be serious, even fatal risks with experimental therapies and prospective recipients would need to be evaluated on a case by case basis to determine if the treatment is safe and effective. (Bray et al., 2014). The CDC states the rapid identification of Ebola infection is critical in preventing the spread of the virus. “Contact tracing” is currently a method used by the CDC to trace down infected persons and is described in the following chart from the CDC website (2014).

There is currently no known cure or definitive vaccination. Currently the best treatment is supportive care in maintaining hemodynamic stability, intravenous treatment for fluid and electrolyte imbalances, respiratory support, blood product replacement and signs of hemorrhage, coagulopathy and administering antibiotics for infection (Turner, 2014). Healthcare workers and hospital personnel in direct contact with an infected patient must follow strict protocol to prevent personal exposure and further spread of infection. Universal precautions should be followed diligently, including gowning, gloves, shoe covers, eye protection, face masks, and negative pressure airways. (Bray et al., 2014). There is currently no known cure or definitive vaccination. Currently the best treatment is supportive care in maintaining hemodynamic stability, intravenous treatment for fluid and electrolyte imbalances, respiratory support, blood product replacement and signs of hemorrhage, coagulopathy and administering antibiotics for infection (Turner, 2014). Healthcare workers and hospital personnel in contact with an infected patient must follow strict protocol to prevent personal exposure and further spread of infection. Universal precautions should be followed diligently, including gowning, gloves, shoe covers, eye protection, face masks, and negative pressure airways. (Bray et al., 2014). There is currently no known cure or definitive vaccination. Currently the best treatment is supportive care in maintaining hemodynamic stability, intravenous treatment for fluid and electrolyte imbalances, respiratory support, blood product replacement and signs of hemorrhage, coagulopathy and administering antibiotics for infection (Turner, 2014). Healthcare workers and hospital personnel in contact with an infected patient must follow strict protocol to prevent personal exposure and further spread of infection. Universal precautions should be followed diligently, including gowning, gloves, shoe covers, eye protection, face masks, and negative pressure airways. (Bray et al., 2014). There is currently no known cure or definitive vaccination. Currently the best treatment is supportive care in maintaining hemodynamic stability, intravenous treatment for fluid and electrolyte imbalances, respiratory support, blood product replacement and signs of hemorrhage, coagulopathy and administering antibiotics for infection (Turner, 2014). Healthcare workers and hospital personnel in contact with an infected patient must follow strict protocol to prevent personal exposure and further spread of infection. Universal precautions should be followed diligently, including gowning, gloves, shoe covers, eye protection, face masks, and negative pressure airways. (Bray et al., 2014).