

Neurological Problem in Ebola: A Topic in Neurology

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Abstract-

Ebola is a new emerging infection that cause the global public health problem at present. There are severe infected cases from the epidemic foci in Africa and the trend for worldwide expansion lead to the great concern of medical society. The neurological problem in Ebola is an interesting topic in neurology. Here, the author briefly summarize and discuss on this topic in this article.

Key Words: Ebola, neurology

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INTRODUCTION

Ebola is a new emerging infection that cause the global public health problem at present. There are severe infected cases from the epidemic foci in Africa and the trend for worldwide expansion lead to the great concern of medical society⁽¹⁾. In general, Ebola is a viral infection manifesting as an acute febrile illness with hemorrhagic complications⁽²⁾. The systemic involvement is common. The neurological problem in Ebola is an interesting topic in neurology. Here, the author briefly summarize and discuss on this topic in this article.

Neurological manifestation in Ebola: a forgotten issue

As already mentioned, there are many possible systemic manifestation in Ebola. Focusing on neurological manifestation, there are limited reports on this topic. The neuropathies and myopathies can be seen due to Ebola⁽³⁾.

However, there are few reports on this topic. Carod-Artal noted that “the incidence of neurological manifestations is unknown, but brain haemorrhages and post-infectious syndromes have been reported in other viral haemorrhagic fevers⁽⁴⁾.” West et al. noted that individuals with neurological symptoms have a higher risk of death⁽⁵⁾. In fact, in the present outbreak, there are no direct report on neurological or neurological manifestation in Ebola⁽⁶⁻⁷⁾. But headache is a basic clinical complaint in more than half of the patients⁽⁶⁾. In some previous reports, headache can be seen in upto 80%⁽⁸⁻⁹⁾. According to the report by Schieffelin et al, the interesting prevalence “headache (in 80%), weakness (in 66%), dizziness (in 60%)” can be seen in the patients⁽⁸⁾. Schieffelin et al. also found that weakness and dizziness are relating to fatal outcome⁽⁸⁾. Nevertheless, those mentioned reports did not mention for specific neurological manifestation of Ebola.

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Neuropathology in Ebola

The neuropathology in Ebola is very interesting. In animal model study, it is confirmed for finding of “the presence of viral antigen in the brain⁽¹⁰⁾.” In an ultrastructure pathology study by Larsen et al., “there was intense congestion, with erythrocyte ‘sludging’, but no inflammatory reaction⁽¹¹⁾” in the brain. This can confirm that the virus can be neuropathogenic. Focusing in human cases, there is no official report on autopsy finding. Hence, the exact neuropathology in human beings is still a myth.

CONCLUSION

Although the neurological problem is existed in the case infected with Ebola. There are few reports on its epidemiology and characteristics. Further research on this topic is recommended.

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