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Ebola virus 2014 and pregnancy

Beuy Joob^{1*}, Viroj Wiwanitkit²

¹ Sanitation Medical Academic Center, Bangkok Thailand

² Visiting professor, Hainan Medical University; visiting professor, Faculty of Medicine, University of Nis, Serbia; adjunct professor, Joseph Ayobabalola University, Nigeria; professor, senior expert, Surin Rajabhat University, Thailand; honorary professor, Dr DY Patil Medical University, India

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ABSTRACT

The Ebola virus 2014 outbreak is the big viral epidemic and cause several deaths. The infection widely spread in Africa and causes infection in thousands of people. The important concern is reproductive medicine is the infection in the pregnant. Here, the authors try to summarize on the information and evidence on this issue and also discuss on the perspective.

1. Introduction

Ebola is a deadly extremely small virus that can cause deadly disease in human beings. This is the disease with high fatality. The Ebola virus 2014 outbreak is the big viral epidemic and cause several deaths[1-3]. The infection widely spread in Africa and causes infection in thousands of people. The main clinical manifestation of infection includes acute febrile illness with severe nausea and vomiting then the hemorrhagic episodes[4]. This disease can lead to several organ failures and results in death. The specific treatment of this disease is not available at present. WHO calls for attention to manage this disease[5].

The disease can attack anyone during the epidemic. The important concern is reproductive medicine is the infection in the pregnant. Here, the authors try to summarize on the information and evidence on this issue and also discuss on the perspective.

2. Is there any case of Ebola 2014 infection in the pregnant?

Up to present, there are more than 2 thousand infected cases with Ebola virus 2014 in many countries in Africa. However, the data on the infection epidemiology is very limited[4]. For the best knowledge, there are already evidences on infection among the pregnant. According to the preliminary report from Guinea, 1 from 15 preliminary confirmed cases in early phase of the outbreak is a pregnant case[6]. The case present with a classical features of Ebola virus infection. However, in this case, the patient did not die but the important complication as an abortion occurred[6]. This can shows that a) the pregnant subject can get infection, b) the death might not be the result of infection in the pregnant subject, c) classical clinical feature of infection can be observed in the pregnant, d) there is no gynecological or obstetric presentation, e) the infection might lead to abortion.

In fact, there is a report on the Ebola virus, not the present version 2014, in the pregnant. Mupapa *et al.* reported the situation in the previous outbreak in Congo that "Fifteen (14%) of 105 women with Ebola hemorrhagic fever hospitalized in the isolation unit of the Kikwit General Hospital (Democratic Republic of the Congo) were pregnant [7]" and "in 10 women (66%) the pregnancy ended with an abortion[7]." Based on that report, it seems that the

*Corresponding author: Beuy Joob, Sanitation 1 Medical Academic Center, Bangkok Thailand 10160

E-mail: beuyjoob@hotmail.com

abortion is the important complication of infection among the pregnant.

3. What are the issues for present concern?

As a perspective on the present crisis, it is no doubt that the pregnant is considered to be a risk group to get infection, similar to other population. The infection is deadly, similar to that occurs in general population, and an important additional complication is abortion. It is wise to have a plan to protect the pregnant from getting infection. In addition, since the asymptomatic case of Ebola virus infection is possible [8], hence, this can be the problem for control of disease and transmission to the pregnant. On the other hand, the asymptomatic pregnant can be the reservoir host to the others. In those cases, the future observation on the pregnancy, fetus and newborn is required.

4. What obstetrician–gynecologists should additionally know about Ebola?

Recently, the Green journal published on the article on “What obstetrician–gynecologists should know about Ebola?” [9]. The basic conclusions on the present knowledge about Ebola virus infection and pregnancy include a) the pregnant has similar risk to general population, b) the risk for abortion and hemorrhage increased and c) all newborn do not survive [9]. In the present situation of new emerging Ebola virus infection 2014, it is no doubt that the surveillance for infection among the pregnant is required [9–10]. At present, the interesting problem is there is limited information on the problem in the pregnant. There is an interesting preliminary report from Guinea showing that the pregnant already got infected [6].

Nevertheless, in that report, the patient survived but the abortion could be observed [6]. In addition to the general clinical information, the obstetrician–gynecologists should realize additional knowledge on the basic science study of the Ebola. In view of reproductive medicine, the Ebola virus is proved to disturb the reproduction process, affecting both sperm and ovum [11]. In addition, the influx data of the efficacy of new drugs such as PMOplus[®] [12] and ZMapp [13] for fighting Ebola virus infection should be followed. Although the drugs might be successful in general population, the use in the pregnant required further following up on effect of mother and fetus.

Conflict of interest statement

We declare that we have no conflict of interest.

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