Editorial

H5N1 Influenza: is it still a threat?

Recently, the fear for H5N1 influenza has been replaced by the 2009 pandemic H1N1 influenza that spread rapidly to all over the world. The question is: do we have to pay more attention to the 2009 H1N1 influenza pandemic?

There are 2 recent articles concerning H5N1 influenza in this journal, one in the previous issue and the other in this issue,[1,2] which suggest that H5N1 is still a problem. Though human cases have decreased, H5N1 influenza remains a public health problem, as outbreaks in poultry continue to occur, especially in Indonesia that has the highest number of human cases and case fatality rate.[1]

The study published in previous issue suggested that early treatment with oseltamivir - an antiviral drug – might play an important role to prevent fatal cases. As early treatment needs early diagnosis, techniques to differentiate H5N1 from other type of influenza should be established, and a clear policy should be implemented.[1] However, early diagnosis is not always available, as many of the poor and people living in remote areas do not have access to health facilities. Moreover, some policies that were aimed to restrict the spread of infection faced resistance from certain population.[3]

One of the hurdles in early diagnosis is low clinical suspicion, especially in cases without contact with poultry or specific symptoms, which most likely leads to negligence of antiviral treatment.[1] Therefore, development of simple diagnostic tools is very important.

Another study published in this issue dealt with anti-H5N1 antibody detection in healthy high risk population. The study compared the result of haemeagglutination inhibition assay (HI) using A/ck/Banten/05-1116/05 H5N1(Balitvet) antigen and viral neutralization test (NT) using A/Indo/05/H5N1/IBCDC-RG virus to detect anti-H5N1 antibody. The result showed that poultry collection facility workers were 1% dan 12% positive for anti-H5N1, by HI and NT respectively, suggesting high incidence of H5N1 infection among the poultry collection facility workers, and NT is a better method to detect anti H5N1 antibody. However, some people in close contact with infected poultry may remain asymptomatic due to their anti-H5N1 antibody. This fact pointed out the importance of vaccination as infected poultry is in circulation for consumption, and people, such as house wives, servants or others who buy and handle the infected poultry may be at risk.

In contrast to the 2009 H1N1 virus, which became a pandemic in a relatively short time, H5N1 human cases are very limited. This fact might be due to the nature of the H5N1 infection, which mostly causes severe disease in human.[4] According to Morens et al: "a virus that kills its hosts or sends them to bed is not optimally transmissible,[5] thus H5N1 influenza virus is most likely not a candidate of a pandemic virus. It is not easily transmissible to humans, as millions of poultry have been infected, while human cases are very limited. Many farmers in close contact with poultry remain healthy, while some confirmed for H5N1 infection reported no contact with poultry. Moreover, the presence of cluster cases lead to a supposition that host genetic factor may play a role in the susceptibility to the disease.[6] This necessitate research in this area to predict the susceptible individuals for the purpose of target group vaccination.

Finally, the most frightening event is when reassortment of H5N1 and the 2009 pandemic H1N1 virus occurs, produces highly transmissible viruses and causes severe manifestation as H5N1. Considering the conditions in Indonesia, where some populations resisted Government policies in restricting the spread of H5N1,[3] while the 2009 H1N1 virus still exists, Indonesia might be the source of a new pandemic. Indonesian Government should make implementable policies that are accepted by the population to prevent further disaster.

References

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