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Middle East respiratory syndrome: what to be concerned more in preparedness?

Sora Yasri^{1*}, Viroj Wiwanitkit^{2,3,4}¹KMT Primary Health Care Center, Bangkok, Thailand²Hainan Medical University, Haikou, China³Faculty of Medicine, University of Nis, Nis, Serbia⁴Joseph Ayo Babalola University, Oriade, Nigeria

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ABSTRACT

The recent problem on Middle East respiratory syndrome is a very interesting new infection emerging from the Gulf area. For practitioners in intensive care medicine, knowledge update on this new emerging infection is needed. Preparation for diagnostic tool and antiviral drug to cope with possible outbreak is suggested. In addition, the consideration of ecological factors of this new disease is important. The consideration of not only ecological but also humanistic background can be useful to manage the new disease, Middle East respiratory syndrome as well. Finally, how to improve medical service for underserved population is a big issue. The local health department must play an important role.

1. The problem of Middle East respiratory syndrome (MERS)

The recent problem on MERS is a very interesting new infection emerging from the Gulf area[1]. This new emerging disease is considered a new serious respiratory infection that has trend of worldwide pandemic. Preparedness to the possible worldwide outbreak of this disease is needed[2]. Focusing on the infection, most cases can have severe respiratory disorder and end up with respiratory failure[2]. Hence, the role of intensive care medicine can be expected. Nevertheless, there are

several considerations for practitioners in intensive care medicine. First, not all the cases with MERS have the severe infection[3,4]. According to a recent report by Memish *et al.*, MERS in pediatric population is mild and can be asymptomatic[4]. Also, the patient might have atypical clinical features (such as diarrhea and renal failure[5]). These are the possible causes for delayed or missed diagnosis of MERS. For practitioners in intensive care medicine, knowledge update on this new emerging infection is needed. Also, preparation for diagnostic tool and antiviral drug to cope with possible outbreak is suggested.

*Corresponding author: Sora Yasri, KMT Primary Health Care Center, Bangkok, Thailand.

Tel: 66878923467

E-mail: sorayasri@outlook.co.th

2. Consideration of ecological factor is required

In addition, the consideration of ecological factors

of this new disease is important. Generally, ecological factor is the usually forgotten facet in managing of the problematic disease. For example, the recent report on ecological factors related to tuberculosis in China can be a good idea^[1]. Li *et al.* concluded that ecological factors that were found predictive of tuberculosis prevalence in China are essential to take into account in the formulation of locally comprehensive strategies and interventions aiming to tailor the tuberculosis control and prevention program^[6]. In fact, the consideration on ecological factor is very important in management of any infectious diseases. Based on the concept of geographical pathology, the ecological factor can affect the epidemiology of the disease. However, another important factor to be considered is the underlying humanistic and social factors. Since any infectious diseases are based on three important factors—host, agent and environment, the holistic approach is required. To focus on host factor, the humanistic and social factors have to be managed. As Sukhova noted, social values should be well assessed to plan for a good management to reach the need of the patients^[7]. In this world, which consists of millions of populations from several ethnic and social background, the consideration of not only ecological but also humanistic background can be useful to manage the new disease, MERS as well.

3. How to improve the medical service to combat new emerging MERS

Finally, how to improve medical service for underserved population is a big issue. The local health department (LHD) must play an important role. In fact, this is very important in coping with any new diseases. For example, the situation on the recent outbreak of another respiratory viral infection, influenza infection, can be shown. Haley reported that to improve childhood immunization rates, policy-makers should encourage adequate and appropriate funding for LHDs to adopt service delivery factors that are associated with higher-performing LHDs^[8]. In fact, to manage the problem of underserved population is an important issue in public health. Generally, the failure of the service is related to many factors and finding the problem is very important. The focus should be not only on the LHD but also on

the local people who are the target of the program. To increase the medical service rates, the use of the most possible simplified service should be considered. A good example is the use of the drive-through clinic^[9]. According to the recent report by Banks *et al.*, the drive-through influenza clinic could significantly help increase the number of vaccine recipients^[10]. And this concept might be applicable for fighting the new possible pandemic MERS.

Conflict of interest statement

We declare that we have no conflict of interest.

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