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## Emerging infectious diseases in coastal countries: examples from different countries on different situations

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### ABSTRACT

The aim of this article is to discuss and comment on the previous published work on different emerging infectious diseases epidemiological trend in different countries. Here, the examples on dengue, new influenza and rabies in different coastal countries (Oman, Australia and Taiwan of China) are discussed. Several aspects adding to the reported situations should be considered.

## 1. Introduction

Emerging infectious disease is the present public health concern. It is an interesting issue that new emerging and re-emerging diseases occur elsewhere in our world in each year. The specific situation in coastal country can be a good knowledge in coastal life medicine. The aim of this article is to discuss and comment on the previous published work on different emerging infectious diseases epidemiological trend in different countries. Here, the examples on dengue, new influenza and rabies in different coastal countries (Oman, Australia and Taiwan of China) are discussed. Several aspects adding to the reported situations should be considered.

## 2. Emerging dengue in Oman and imported cases

Oman is a coastal country lying on the Gulf. Interestingly, it is also a country with deserts. However, emerging dengue

is the problem of this country. The recent report studied on “dengue epidemiological trend in Oman and imported cases[1]”. Awaity *et al.* noted that “all the patients contracted the disease during their visit to South-East Asian countries[1]” and “the most effective measure for travellers is taking precautions to avoid mosquito bites[1].” In fact, dengue is a common tropical disease with high prevalence in Southeast Asia. Nevertheless, dengue is presently observed in many non-endemic settings. The present report trend in Oman can be a good example. Similar, the previous report by Wiwanitkit showed that most of returning western travelers to their hometown with dengue usually got the infection after visiting to Southeast Asia[2]. The problem in diagnosis in returning travelers to the non-endemic countries should be mentioned[3]. In fact, the clinical presentation of dengue in any setting is the same, but the difference in mortality due to the delayed diagnosis might be possible.

## 3. Emerging influenza in Australia: concern on hospital capacity

Australia is a very big island as well as a continent of

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the world. The recent new emerging influenza also attacked Australia and the big concern is the “hospital capacity and management preparedness for pandemic influenza[4]”. Dewar *et al.* reported that “hospitals across Victoria demonstrated different levels of influenza pandemic preparedness and planning[4]” and “if a more severe influenza pandemic than that of 2009 arose, Victorian hospitals would struggle with workforce and infrastructure problems, particularly in rural/regional areas[4].” In fact, as an island country, the control of new emerging influenza might be more easily confined than non closed area. However, the biggest issue is the air transportation. The problem reaches Australia by air travel and the control of air travel during epidemic of influenza seems to be an important point. However, the existed problem was reported by Gunaratnam *et al.* that “airport screening was ineffective in detecting cases of influenza A(H1N1)pdm09[5].”

#### 4. Emerging rabies in Taiwan of China: the revisit of old disease

The rabies is problematic in many tropical and non-tropical countries. The patients usually die and no effective treatment is available. The disease control is an important concern. Taiwan was previously considered free from rabies[6]. However, emerging and invasion of rabies into Taiwan is a serious issue that requires good discussion in clinical neurology. Weng *et al.* mentioned for the importance of illegal importation of domestic animals that can be source rabies in Taiwan[7]. Emerging rabies has just been seen in animal in Taiwan. The infection was firstly found in ferrets, which is a wildlife reservoir. It becomes a big topic to be considered[8,9]. In fact, since the discovery of first case in 2012 and confirmation in 2013, it has been concluded that the possible source of rabies in Taiwan of China might be from mainland. The remained question is whether the infected ferrets in Taiwan were wild or from specific ferrets in fur trade. The present prevention applied in Taiwan of China is the rabies vaccination for all imported dogs, cats and ferrets.

#### 5. Conclusion

In this article, we can see that emerging infectious diseases can be seen in several coastal countries with different underlying backgrounds. Many examples are hereby present. For the case of dengue in Oman, the introduction of dengue to a new setting, where there has never been report on dengue is an extremely interesting issue. Travel medicine can be highlighted. For the case of new influenza in Australia, the control of

immigrant should be discussed. In a country with many air travels such as Australia, a good management plan during the epidemic of new infectious disease is needed. Finally, the case of emerging of rabies in Taiwan of China, the tracing for the exact root cause of infection is an actual challenge. Urgent plan to correspond to the remerging of disease that has already been controlled for many years should be highlighted.

#### Conflict of interest statement

We declare that we have no conflict of interest.

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