

Journal of Pediatric Sciences

*Some tropical viral diseases that can mimic
swine flu in pediatrics*

Viroj Wiwanitkit

Journal of Pediatric Sciences; 2009; 1; e7

How to cite this article:

Wiwanitkit V. Some tropical viral diseases that can mimic swine flu in pediatrics. Journal of Pediatric Sciences 2009; 1: e7

REVIEW ARTICLE

Some tropical viral diseases that can mimic swine flu in pediatrics

Viroj Wiwanitkit

Abstract: Swine flu is an important emerging infection that is presently pandemic around the world. The pediatric population is an important group that can be infected with swine flu. Generally, common presentations of swine flu include fever and respiratory presentations. However, there are several infections that can have similar presentations to swine flu. In this specific article, the author will briefly discuss on some tropical viral diseases that can mimic swine flu in pediatrics.

Key words: pediatrics, swine flu, tropical, mimic
Received: 17/11/2009; Accepted: 19/11/2009

Introduction

Swine flu is an important emerging infection that was firstly described in early 2009. After the outbreak in Mexico, this disease rapidly spread around the world. It is accepted that the swine flu pandemic becomes the hot issue in global public health system [1]. Thousands of infected cases were accumulated from several countries and many death cases are reported. The diagnosis of this disease is still difficult for some poor countries due to the standard diagnostic tool is based on molecular diagnostic tool. For treatment, antiviral drugs are available for management of infected cases but might be not affordable by some poor settings [2]

The pediatric population is an important group that can be infected with swine flu. Virologically, swine flu virus is a respiratory virus, a novel variant of H1N1 influenza virus. Based on its nature, the pathogenic virus can be easily transmitted from an infected case to the others via respiratory mode and become problematic for infection control [3]. In pediatric population who has to live in crowded area such as school, the infection can easily spread. Generally, common presentations of swine flu include fever and respiratory presentations. However, the clinical features of high fever, myalgia, sore throat, running nose, sneezing, coughing and respiratory difficulty are not specific. There are several infections that can have similar presentations to swine flu. In this specific article, the author will briefly discuss on some

tropical viral diseases that can mimic swine flu in pediatrics.

Seasonal influenza: the most problematic infection for differential diagnosis

Classical seasonal influenza due to H1N1 influenza virus infection should be firstly mentioned. Although this infection is not an actual tropical infection, it is very common in tropical countries. Due to the fact that swine flu is a variant of classical H1N1 influenza infection, the very similar clinical presentations can be seen. It is very hard to differentiate between the two infections. However, the observation of non respiratory manifestations might help lead to highly suspicious case of swine flu [4 – 6]. Based on simple flu test, such as point of care testing kits, it can help separate only influenza A infection from other infections but this does not reach the step that can differentiate swine flu from classical flu. The use of molecular based diagnosis is required for definite diagnosis. However, the necessity of this procedure is still discussed. This practice might lead to

Corresponding Author:
Professor Viroj Wiwanitkit
Wiwanitkit House, Bangkhuae, Bangkok Thailand 10160
Phone: 6624132436
Email: wviroj@yahoo.com

get the exact epidemiological data and might help plan for further infectious control. However, the cost of the practice based on molecular diagnosis is very high. For treatment, it has no clinical impact since either classical flu or swine flu can be effectively treated by the same antiviral drugs.

Dengue

Dengue infection is an arboviral caused by dengue virus. This mosquito borne infectious disease can present with acute febrile fever. A classical complaint of high fever, nausea vomiting and malaise can be seen. In the tropics, especially for Southeast Asia, dengue infection is common and tourniquet test is a widely used helpful test in screening and diagnosis [7]. However, in pediatric cases, positive tourniquet test can be seen in non dengue infection and this is due to the fragile nature of the children. Due to similar acute febrile presentation, high fever and flu like symptoms, dengue might mimic swine flu. Indeed, it is confirmed that dengue is an important differential diagnosis for flu in the tropics [8]. On the other hand, the positive tourniquet test can be seen in pediatrics with swine flu. This might be due to the fragile vessels as previously noted. In addition, the thrombocytopenia, which is an hallmark sign of dengue, can also be observed in blood test in swine flu [6]. As a conclusion, it is recommended to think of swine flu in positive tourniquet test case in the present situation of pandemic swine flu.

Chikungunga virus infection

Chikungunga virus infection is another arboviral infection that is common in tropics. The clinical presentation of this infection is very similar to dengue. The acute febrile illness and flu like symptoms can be seen in Chikungunya virus infection. In addition, myalgia is very common in this disease. It is no doubt that it might be misdiagnosed as flu [9]. In addition, the positive tourniquet test can also be seen in Chikungunya virus infection. These might lead to the mimicking between swine flu and Chikungunya virus infection.

Conclusion

There are several tropical infections that can mimic the swine flu. The seasonal influenza poses very similar presentations to swine flu and might not be easily differentiated based on simple clinical assessment. Sometimes, the difficulty can also be observed in dengue and Chikungunya virus infections due to the common features of high fever and thrombocytopenia. Indeed, there are also other tropical infections that might have mimicking appearance to

swine flu but it is not common in pediatrics and does not occur in the season that influenza reach to the peak.

REFERENCES

1. Wiwanitkit V. Swine flu: the present pandemic infectious disease. *Kulak Burun Bogaz Ihtis Derg.* 2009;19:57-61.
2. Wiwanitkit V. Antiviral drug treatment for emerging swine flu. *Clin Ter.* 2009;160:243-5.
3. Scalera NM, Mossad SB. The first pandemic of the 21st century: a review of the 2009 pandemic variant influenza A (H1N1) virus. *Postgrad Med.* 2009; 121:43-7.
4. Chang LY, Shih SR, Shao PL, Huang DT, Huang LM. Novel swine-origin influenza virus A (H1N1): the first pandemic of the 21st century. *J Formos Med Assoc.* 2009 ;108:526-32.
5. Novel Swine-Origin Influenza A (H1N1) Virus Investigation Team, Dawood FS, Jain S, et al. Emergence of a novel swine-origin influenza A (H1N1) virus in humans. *N Engl J Med.* 2009 ;18;360(25):2605-15
6. Shinde V, Bridges CB, Uyeki TM, et al. Tripple-reassortant swine influenza (H1) in humans in the United States. 2005 – 2009. *N Eng J Med* 2009 18; 360 (25): 2616 – 25.
7. Wiwanitkit V. The tourniquet test is still a good screening tool for dengue illness. *Trop Doct* 2005; 35: 127-8.
8. Tsang KW, File TM Jr. Respiratory infections unique to Asia. *Respirology.* 2008 ;13:937-49.
9. Laudati F, Zaratti L, Franco E. Chikungunya: a new epidemic for Europe. Is there a new vaccine coming soon? *Ig Sanita Pubbl.* 2007;63:599-606.