



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Document heading doi: 10.1016/S2305-0500(14)60008-7

H7N9 influenza and its impact on pregnancy

Viroj Wiwanitkit

¹Faculty of Medicine, University of Nis, Serbia²Hainan Medical University, China³Joseph Ayobabalola University, Nigeria⁴Chulalongkorn University, Thailand

ARTICLE INFO

Article history:

Received 6 June 2013

Received in revised form 12 October 2013

Accepted 13 November 2013

Available online 20 January 2014

Keywords:

H7N9

Influenza

Pregnancy

ABSTRACT

This short article specifically focuses on the new emerging H7N9 influenza which has just been observed since early 2013. As a new disease, it is lack for the knowledge on the new H7N9 influenza. Here, the author will discuss on the impact of emerging H7N9 influenza on pregnancy.

1. Introduction to new H7N9 bird flu

New emerging disease is a concern in public health. The cross species atypical H7N9 influenza virus infection originating in China is a big global problem at present [1–2]. As a new atypical influenza, the great fear is on the worldwide epidemic as previously seen in the previous outbreak on atypical influenza infections, H5N1 bird flu [3] and H1N1 swine flu [4].

Of interest, although H7N9 influenza causes respiratory illness, additional atypical manifestations can also be seen [5–7]. Since its first emerging in China, upto 130 cases has been accumulated (30 May 2013).

This short article specifically focuses on the new emerging H7N9 influenza which has just been observed since early 2013. As a new disease, it is lack for the knowledge on the

new H7N9 influenza. Here, the author will discuss on the impact of emerging H7N9 influenza on pregnancy.

2. New H7N9 influenza infection in pregnant patients

The new H7N9 influenza can infect anyone, in any age group and sex [5–6]. As a disease resulted from genetic alteration [8–9], the pathobiological process due to the infection might be different from classical influenza can be expected. It is useful to gathering the data of this specific new infection. In obstetrics, the data of this new infection is highly required.

Focusing on the pregnant, only a few reports are available for H7N9 influenza. Nevertheless, it is no doubt that pregnant patients are at risk for get severe influenza [10]. For the new emerging bird flu, the severe illness can be seen. The good example is the previous situation in outbreak of H1N1 swine flu [11] and H5N1 bird flu [12]. For the present

*Corresponding author: Professor Viroj Wiwanitkit Wiwanitkit House, Bangkhuae, Bangkok, Thailand.

E-mail: wviroj@yahoo.com

H7N9 influenza, there is only 1 pregnant patient from overall 130 cases (30 May 2013). The case is a 25 year old patient identified in Jiangsu Province in 30 March 2013. According to the record, this patient did not have serious infection and the recovery could be seen. There is no obstetrical complication. Nevertheless, there is still no data on the fetus and infant (still not birth at present).

3. Prevention of H7N9 influenza in the pregnancy

The prevention of influenza is an important in preventive obstetrics. Generally, influenza vaccination is recommended for the pregnant [13]. However, as a new infection, no vaccine for H7N9 influenza is available at present. Although the pregnant is classified as a risk group, the antiviral prophylaxis is not recommended.

Conflict of interest statement

We declare that we have no conflict of interest

References

- [1] Bush RM. Influenza as a model system for studying the cross-species transfer and evolution of the SARS coronavirus. *Philos Trans R Soc Lond B Biol Sci* 2004; **359**: 1067–1073.
- [2] Sansonetti P. How to define the species barrier to pathogen transmission? *Bull Acad Natl Med* 2006; **190**: 611–622.
- [3] Trampuz A, Prabhu RM, Smith TF, Baddour LM. Avian influenza: a new pandemic threat? *Mayo Clin Proc* 2004; **79**: 523–530.
- [4] Vincent AL, Ma W, Lager KM, Janke BH, Richt JA. Swine influenza viruses a North American perspective. *Adv Virus Res* 2008; **72**: 127–154.
- [5] Centers for Disease Control and Prevention (CDC). Emergence of Avian Influenza A(H7N9) Virus Causing Severe Human Illness – China, February–April 2013. *MMWR Morb Mortal Wkly Rep* 2013; **62**(18): 366–371.
- [6] Tang RB, Chen HL. An overview of the recent outbreaks of the avian-origin influenza A (H7N9) virus in the human. *J Chin Med Assoc* 2013; **76**(5): 245–248
- [7] Kageyama T, Fujisaki S, Takashita E, Xu H, Yamada S, Uchida Y, et al. Genetic analysis of novel avian A(H7N9) influenza viruses isolated from patients in China, February to April 2013. *Euro Surveill* 2013; **18**(15): 20453.
- [8] Bertran K, Pérez-Ramírez E, Busquets N, Dolz R, Ramis A, Darji A, et al. Pathogenesis and transmissibility of highly (H7N1) and low (H7N9) pathogenic avian influenza virus infection in red-legged partridge (*Alectoris rufa*). *Vet Res* 2011; **42**(1): 24.
- [9] Pasick J, Pedersen J, Hernandez MS. Avian influenza in North America, 2009–2011. *Avian Dis* 2012; **56**(4 Suppl): 845–848.
- [10] Cantu J, Tita AT. Management of influenza in pregnancy. *Am J Perinatol* 2013; **30**(2): 99–103.
- [11] Wiwanitkit V. Obstetrical concern on new emerging swine flu. *Arch Gynecol Obstet* 2010; **281**(2): 369.
- [12] Wiwanitkit V. No evidence of gynecological and obstetrical manifestation in H5N1 influenza virus infection. *Arch Gynecol Obstet* 2009; **279**(4): 609.
- [13] Nitsch-Osuch A, Woźniak Kosek A, Brydak LB. Vaccination against influenza in pregnant women – safety and effectiveness. *Ginek Pol* 2013; **84**(1): 56–61.