



Letter to the Editor

No gynecological manifestations in death cases with swine flu

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To the Editor:

Swine flu, pandemic strain of swine-origin influenza A virus (H1N1), is currently reported from 207 countries throughout the world. As of 29 November 2009 at least 8768 deaths were occurred [1]. After the first report on April 2009 in Mexico, World Health Organization (WHO) raised its pandemic alert to the highest level, phase 6, on June 11, 2009 [2].

WHO considers pregnant patients are among the specific risk groups [3]. Infection during pregnancy was associated with significantly higher morbidity and mortality in previous influenza pandemics. Compared with 1918 and 1957 pandemics maternal mortality is lower in the current infection. However, pregnant women are still at risk that up to one third of documented infection needs hospitalization in the current pandemic. The most important complication that needs hospitalization is the maternal respiratory distress [4].

There is limited evidence about the influenza A virus and increased fetal loss. Focal trophoblastic necrosis, diffuse villitis, and necrotizing deciduitis were reported as autopsy findings in avian influenza virus (H5N1) [5, 6]. Influenza A virus infection may cause spontaneous abortion and stillbirths [7].

Prenatal exposure to influenza virus was shown to disrupt programmed maturation of brain in animals and there is still ongoing debate about intrauterine influenza infection and the increased incidence of schizophrenia in human pregnancies [8].

In animals, widespread involvement is seen in infection. In humans, the most important sites of viral replication, shown by positive-stranded viral RNA as a marker for viral replication, are lungs and intestines [9]. However, viral antigen was also detected in the spleen, hematopoietic cells in the bone marrow, glial cells and neurons of the brain, and lymphocytes [9, 10]. In gynecological perspective,

although the gynecological involvement was not shown, it is interesting that, in animal models, influenza virus infection of uterus is used to study antiviral immunity in female genital tract [11].

In conclusion, despite great obstetrical concern of the infection, there is limited information about the gynecologic manifestations of the infection and influenza virus is not considered a pathogen of female genital tract [11]. There were 30 female deaths among a total of 65 death cases in Thailand (official report on July 31, 2009). No gynecological manifestation was reported among these cases. Similarly, no gynecologic manifestation was reported among a total of 8,877 infected cases in Thailand. According to current evidence, gynecologic involvement of swine flu is not existent or very rare.

Sincerely,

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References

1. World Health Organization. *Pandemic (H1N1) 2009 - update 77*. Global Alert and Response (GAR) [webpage]. Available from: http://www.who.int/csr/don/2009_12_04/en/index.html. Last update: 4 Dec 2009 [cited 6 Dec 2009].
2. Chan M. *World now at the start of 2009 influenza pandemic*. World Health Organization Statement [webpage]. Available from: http://www.who.int/mediacentre/news/statements/2009/h1n1_pandemic_phase6_20090611/en/index.html. Last update: 4 Dec 2009 [cited 6 Dec 2009].
3. Wiwanitkit V. Obstetrical concern on new emerging swine flu [Epub ahead of print]. *Arch Gynecol Obstet* 2009.
4. Satpathy HK, Lindsay M, and Kawwass JF. Novel H1N1 virus infection and pregnancy. *Postgrad Med* 2009; 121(6): 106-12.
5. Gu J, Xie Z, Gao Z, et al. H5N1 infection of the respiratory tract and beyond: a molecular pathology study. *Lancet* 2007; 370(9593): 1137-45.
6. Lu M, Xie ZG, Gao ZC, et al. [Histopathologic study of avian influenza H5N1 infection in humans]. *Zhonghua Bing Li Xue Za Zhi* 2008; 37(3): 145-9.
7. Stanwell-Smith R, Parker AM, Chakraverty P, Soltanpoor N, and Simpson CN. Possible association of influenza A with fetal loss: investigation of a cluster of spontaneous abortions and stillbirths. *Commun Dis Rep CDR Rev* 1994; 4(3): R28-32.
8. Ebert T and Kotler M. Prenatal exposure to influenza and the risk of subsequent development of schizophrenia. *Isr Med Assoc J* 2005; 7(1): 35-8.
9. Uiprasertkul M, Puthavathana P, Sangsiriwut K, et al. Influenza A H5N1 replication sites in humans. *Emerg Infect Dis* 2005; 11(7): 1036-41.

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10. Zhang Z, Zhang J, Huang K, *et al.* Systemic infection of avian influenza A virus H5N1 subtype in humans. *Hum Pathol* 2009; 40(5): 735-9.
11. Renegar KB, Menge A, and Mestecky J. Influenza virus infection of the murine uterus: a new model for antiviral immunity in the female reproductive tract. *Viral Immunol* 2006; 19(4): 613-22.
12. Strauman TJ, Coe CL, McCrudden MC, Vieth AZ, and Kwapil L. Individual differences in self-regulatory failure and menstrual dysfunction predict upper respiratory infection symptoms and antibody response to flu immunization. *Brain Behav Immun* 2008; 22(5): 769-80.

