

Correspondence

Clinical Profile of Pneumonia and Its Association with Rain Wetting in Patients Admitted at a Tertiary Care Institute During Pandemic of Influenza A (H1N1) pdm09 Virus Infection

To the Editor: Sir, the recent report on “pneumonia and its association with rain wetting in patients during pandemic of influenza A (H1N1) pdm09 virus infection” is very interesting.¹ Singh *et al* noted that “more pneumonia patients are admitted during the periods of greater rainfall and rain-wetting may be an important risk factor for the occurrence of pneumonia.”¹ In fact, the relationship of underlying climatic factor to the occurrence of disease is very interesting. Focusing on influenza A (H1N1) pdm09 virus infection, Storms *et al* noted that “peak pandemic activity occurred during the fall-winter period.”² However, the pattern might be slight different in each setting. In tropical world, there are usually two peaks, in rainy season and winter.³⁻⁴ The assessment and monitoring of underlying climate can be useful in planning for influenza vaccination in each setting.

Viroj Wiwanitkit

Professor

Wiwanitkit House, Bangkok

Bangkok Thailand 10160

E-mail: wviroj@yahoo.com

References

1. Singh V, Sharma BB, Patel V, Poonia S. Clinical profile of pneumonia and its association with rain wetting in patients admitted at a tertiary care institute during pandemic of influenza A (H1N1) pdm09 virus infection. *Indian J Chest Dis Allied Sci* 2014;56:21-26.
2. Storms AD, Van Kerkhove MD, Azziz-Baumgartner E, Lee WK, Widdowson MA, Ferguson NM, *et al*. Worldwide transmission and seasonal variation of pandemic influenza A(H1N1)2009 virus activity during the 2009-2010 pandemic. *Influenza Other Respir Viruses* 2013;7:1328-35.
3. Chittaganpitch M, Supawat K, Olsen SJ, Waicharoen S, Patthamadilok S, Yingyong T, *et al*. Influenza viruses in Thailand: 7 years of sentinel surveillance data, 2004-2010. *Influenza Other Respir Viruses* 2012;6:276-83.
4. Yamaoka M, Palilingan JF, Wibisono J, Yudhawati R, Nidom RV, Alamudi MY, *et al*. Virological surveillance of human influenza in Indonesia, October 2008-March 2010. *Microbiol Immunol* 2011;55:514-17.

The Author's reply: We are highly thankful to the reader for showing keen interest in our article.¹ Our study highlighted the importance of rain-wetting as a risk factor for occurrence of pneumonia during the pandemic. We agree with the reader and have highlighted in our study that underlying seasonal and other environmental factors may be responsible for pandemic spread of the virus.

We also agree with the reader that epidemic and clinical pattern of the disease may vary according to difference in geographic location. Broor *et al*² in their study, which was done geographically very near to our study area, have also shown that the second wave of influenza A(H1N1)pdm09 in 2010 coincided with monsoon season.

Similarly, trend of outbreaks of other influenza viruses like H5N1 shows a clear seasonality. Meteorological factors may be important in such outbreaks. The air temperature along with relative humidity is especially important in this regard.³ Here lies the importance of post pandemic surveillance for respiratory illnesses attributed to viral epidemics in order to better understand the nature of seasonality and other important epidemiological factors.

It has been reported that vaccine coverage is directly linked to hospitalisation rates of high risk groups, especially the elderly people.⁴ In India, influenza vaccine with updated antigenic strains of virus is available only during end of a year. Health planners in any country should make this vaccine available according to the first peak seasonal activity of a year. This will help in better overall control of the disease.

Virendra Singh

Professor

and

Bharat Bhushan Sharma

Associate Professor

Department of Medicine

SMS Medical College Hospital, Jaipur

E-mail: drvirendrasingh@yahoo.com

References

1. Singh V, Sharma BB, Patel V, Poonia S. Clinical profile of pneumonia and its association with rain wetting in patients admitted at a tertiary care institute during pandemic of influenza A (H1N1) pdm09 virus infection. *Indian J Chest Dis Allied Sci* 2014;56:21-6.
2. Broor S, Krishnan A, Roy DS, Dhakad S, Kaushik S, Mir MA, *et al*. Dynamic patterns of circulating seasonal and pandemic A(H1N1)pdm09 influenza viruses from 2007-2010 in and around Delhi, India. *PLoS One* 2012;7:e29129.
3. Biswas PK, Islam MZ, Debnath NC, Yamage M. Modeling and roles of meteorological factors in outbreaks of highly pathogenic avian influenza H5N1. *PLoS One* 2014;9:e98471.
4. Cruzeta AP, Schneider IJ, Traebert J. Impact of seasonality and annual immunization of elderly people upon influenza-related hospitalization rates. *Int J Infect Dis* 2013;17:e1194-7.