Letter to the Editor

2009 H1N1 Influenza Virus Seroepidemiology

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TO THE EDITOR

I read the recent report of 2009 H1N1 influenza virus seroepidemiology in Shiraz with a great interest (1). Moghadami et al. concluded that "High seroprevalence of antibody against 2009 H1N1 in the sera of our subjects describes either a high level of pre-existing immunity against H1N1 in Iranian population or a high rate of asymptomatic infection in our area compared to other countries (1)." The question is whether this finding is an evidence of a pre-existing immunity or an indication of a high rate of asymptomatic infection. Indeed, some previous reports confirming the pre-existing immunity among the elderly are available (2). If there is a previous cluster of asymptomatic infection, there should be homogeneity in seroprevalence in all age groups. The elderly who have the highest prevalence of antibody should not develop more asymptomatic infections compared to the younger group since the elderly usually have poorer immune function and physiological status.

REFERENCES

1 Moghadami M, Moattari A, Tabatabaee HR, Mirahmadizadeh A, Rezaianzadeh A, Hasanzadeh J, et al. High Titers of Hemagglutination Inhibition Antibodies against 2009 H1N1 Influenza Virus in Southern Iran. Iran J Immunol. 2010; 7:39-48.

2 Pérez-Trallero E, Piñeiro L,Vicente D, Montes M,Cilla G. Residual immunity in older people against the influenza A(H1N1)--recent experience in northern Spain. Euro Surveill. 2009; 14. pii:19344.

Response to the Letter by Viroj WiWanitkit

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In reply to the interesting comments made by the respected reader concerning 2009 H1N1 influenza virus seroepidemiology, the following points are to be considered. The inhomogeneity of asymptomatic infections among younger age group and the elderly

may be a reflection of geographic region and ethnicity. As for the divergent seroprevalence among asymptomatic younger age group and the elderly, previous single or repeated exposure to an antigenically related H1N1 influenza virus (antigenic sin) in the distant past accounts for higher antibody titers in the older age group, despite their age-dependent waning of immune response. The exposure to H1N1 influenza virus in the young may contribute to both their lower seroprevalence and asymptomatic infection; hence a reason for the existing inhomogeneity among different age groups. Finally studies carried out by Perez-Tralleroe et al., in northern Spain was based on viral isolation and the results obtained cannot be compared with those of the Iranian study.

REFERENCE

1 Pérez-Trallero E, Piñeiro L,Vicente D, Montes M,Cilla G. Residual immunity in older people against the influenza A(H1N1)--recent experience in northern Spain. Euro Surveill. 2009; 14. pii:19344.