

# Pandemic Influenza A: H1N1 2009 Vaccine: A Concern on Neurological Adverse Effect

Sir,  
Emerging pandemic Influenza A: H1N1 2009 is still the hot issue in global public health system at present. Luckily, new pandemic Influenza A: H1N1 2009 vaccines has been processed and registered for coping with the pandemic situation. An important concern for pandemic Influenza A: H1N1 2009 vaccination is the safety of pandemic Influenza A: H1N1 2009 vaccine. For classical H1N1 influenza virus infection, neurological adverse reaction relating to influenza vaccination is mentioned.<sup>(1)</sup> Meningoencephalitis, an important adverse effect due to immunological response to foreign protein in the past when the recombinant technology is not developed is the well described adverse effect.<sup>(2)</sup> For pandemic Influenza A: H1N1 2009 vaccine, the new technology is used hence this adverse effect is not expected to occur. However, the more important adverse effect to be concerned is Guillain-Barré syndrome. This is the present discussed issue in pandemic Influenza A: H1N1 2009 vaccination,<sup>(3,4)</sup> Black *et al.* noted that "if a cohort of 10 million individuals was vaccinated in the UK, 21.5 cases of Guillain-Barré syndrome and 5.75 cases of sudden death would be expected to occur within 6 weeks of vaccination as coincident background cases."<sup>(3)</sup> This reflects the possible rate of 2.15 per million of Guillain-Barré syndrome and further death rate of 0.58 per million death due to new pandemic Influenza A: H1N1 2009 vaccination. The high death rate should be considered and be weight comparing to the existed death rate in the pandemic situation. For example, in

Thailand, a country with about 60 millions population and a very high number of death due to emerging pandemic Influenza A: H1N1 2009, the recorded death is about 70 cases in the pandemic period (middle trimester 2009) giving the death rate of 1.17 per million. The described death rate due to pandemic Influenza A: H1N1 2009 infection in pandemic period in Thailand is about two times higher than the possible death rate due to Guillain-Barré syndrome as an adverse effect of pandemic Influenza A: H1N1 2009 vaccination. Hence, the vaccination seems to have a clinical benefit. However, the appraisal of the usefulness in other setting where the death rate is significantly low, weighting between utility and risk of vaccination should be carefully performed. Administration of vaccine routinely for general population is not done now so high mortality outcry is not that appropriate at current situation. The vaccine was developed at short interval with an urgency to prevent deaths during pandemic. Of interest, the recent metanalysis on the clinical trials of the new vaccine still notes for the problem of adverse effects and the need for further development.<sup>(5)</sup> In the situation of policy making for universal administration to general population probably authors worries needs to be looked into and more safe vaccine needs to be considered.

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