

LETTER TO THE EDITOR

## Risk of influenza A(nrH7N9) pandemic in the eastern Mediterranean region

The possibility of a new influenza A pandemic has alarmed health authorities worldwide. Guan et al. (1) summarized the actual situation of the novel reassortment A influenza H7N9 (nrH7N9) in China and presented the data of confirmed cases with nrH7N9 (1). Although until May 2013, only 60 cases were confirmed and virus transmission was localized in two provinces of China, we should seriously consider preparing a health plan to combat a possible new pandemic. The current available data are alarming and continuous strict epidemiological and veterinary surveillances are highly recommended because of several reasons.

First, the outcome is not known for 10 of the 60 patients reported by Guan et al., but for the other 50 patients, 40 cases (80%) were fatal or critical (1). It seems that nrH7N9 has a high case fatality rate compared with the case fatality rate of influenza A(H1N1) 2009 pandemic, which was 0.02% (2). No data were available with regard to the outcome of 10 (16.7%) patients.

Second, 36 (60%) of the confirmed patients were over the age of 60. The outcome for seven of these patients is not known. For the known 29 outcomes, eight were fatal (27.6%) and 15 (51.7%) were critical, and only seven patients (24.1%) were stable or had recovered. This indicates that influenza A(nrH7N9) affected principally aged patients, in contrary to influenza A(H1N1) where most of the patients with a fatal outcome were young, including pregnant women (2, 3). Influenza A(nrH7N9) is a novel virus subtype to the human population; therefore, there is a limited amount of protective antibody pre-existing in the general population, including the aged.

Third, transmission from avian species to humans appears to be the most reported transmission route of influenza A(nrH7N9). Surveillance indicated that pigeons, chicken, and ducks were the principal reservoirs of the virus (1). The main problem is that these birds did not display any disease symptoms or obvious increased mortality (1). Thus, infected wild birds, especially wild ducks, could migrate to other regions, such as the eastern Mediterranean region, and spread the virus.

Fourth, Guan et al. (1) reported that viral hepatitis infection, especially hepatitis B, could be a possible risk factor for influenza A(nrH7N9) infection in humans (1). Countries from the eastern Mediterranean region have

high rates of viral hepatitis infection. The World Health Organization (WHO) estimates that the HBsAg prevalence in the eastern Mediterranean region ranges from 1 to 10%, making it a region of intermediate to high endemicity (4). Egypt, with nearly 90 million habitants, has the highest infection rate of hepatitis C worldwide, with a prevalence of 10% according to the official records of the Egyptian Ministry of Health and Population (5). The risk of influenza A(nrH7N9) infection in Egypt could be high because wild birds migrate to warm regions in winter, hepatitis B and C infections are highly prevalent, and Egyptians traditionally raise birds such as pigeons, chicken, and ducks on roof-tops and in back-yards (6).

Health authorities of countries in the eastern Mediterranean region in collaboration with the regional office of the WHO should prepare health plans to enhance influenza surveillance on birds to avoid the spread of influenza A(nrH7N9) in the area before the forthcoming autumn–winter.

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