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Editorial

Avian Influenza

In the Editorial of the January 2003 issue, I wrote prophetically "...emerging and re-emerging infectious diseases such as HIV and avian flu hitting the headline regularly".[1] Indeed during the past year our community has experienced a devastating outbreak of a new infectious disease, severe acute respiratory syndrome (SARS), caused by a novel coronavirus. SARS came and went during that momentous 100 days from March to June 2003. Memory is fresh and emotion still runs high. Although Hong Kong is as of now free from both SARS and avian influenza, SARS has already re-emerged in Guangdong and avian influenza in practically all countries and regions surrounding us, such as Vietnam.[2]

Hong Kong experienced the first outbreak of avian influenza (H5N1) among humans back in 1997, during which 5 of the 9 adult patients died, compared to only one of 9 children under 12 years old.[3] Human influenza A subtype H5N1 re-emerged in Hong Kong in January 2003.[4] A 33-year-old father and his 8-year-old son returned to Hong Kong after a family visit to Fujian and developed influenza-like illness. The father died and the son survived the H5N1 infection.[4]

Then during late 2003 and early 2004, there were alarming reports of large outbreaks of H5N1 among poultry throughout Asia, including South Korea, Japan, Indonesia, Vietnam, Thailand, Laos, Cambodia and China.[2]

In January 2004, there was confirmation that influenza A (H5N1) virus had caused human infections in Hanoi and Ho Chi Minh City, Vietnam through human exposure to infected poultry. As of 9 March, 33 persons had contracted H5N1 infection in Vietnam and Thailand, and 22 of them died. Ten such patients from Vietnam were detailed in a recent publication.[2] The mean age was 13.7 years (range, 5 to 24) and only 2 patients survived, aged 8 and 23 years old. Mortality was very high, even among children under 12 years old, which is dissimilar from the 1997 outbreak in Hong Kong.[3] The reasons behind this difference remain unclear but it could possibly be due to mildly symptomatic disease in community not recognised and diagnosed in Vietnam.

Nevertheless H5N1 infection is still highly pathogenic and lethal, with a mortality rate ranging from one-third during the 1997 outbreak in Hong Kong to two-thirds in Vietnam and Thailand. The high mortality rate could be due to the ability of H5N1 influenza virus to induce large amounts of proinflammatory cytokines.[4,5] At the public health level, the major concern is that inefficient human-to-human transmission of H5N1 may suddenly improve after reassortment of this virus with other circulating human

influenza A viruses and heralds a devastating influenza pandemic.[2] The threat is quite genuine as we do not yet have vaccine and availability of antiviral agents is quite limited.

Apart from H5N1, other avian influenza A subtypes, such as H9N2 and H7N7, have also caused human disease, but of a milder nature.[6,7] All these reports clearly demonstrate avian influenza A has the ability to jump between species and the global community must collaborate to get prepared for impending pandemics. Though Hong Kong is still free from avian influenza H5N1 now, this will certainly not last when human-to-human transmission becomes efficient, considering we are expecting 20 million tourists in 2004. The least we can do as paediatricians is to ensure we have the skills and knowledge to organise our paediatric infectious disease and immunology service as in United Kingdom.[8]

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