LETTER TO THE EDITOR

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Renal insufficiency on presentation of bird flu infection: is it correlated to outcome?

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To the Editor

Bird flu or avian flu, caused by the H5N1 virus, is a new emerging infectious disease. There has been a worldwide situation regarding avian influenza infections in poultry since 1997. Recently, H5N1 caused severe disease with high mortality in humans in Vietnam and Thailand.¹ Most infected patients usually developed progressive pneumonia with acute respiratory distress syndrome and consequently died. It is postulated that, in fatal human infections with this avian subtype, the initial virus replication in the respiratory tract triggers hypercytokinemia complicated by other organ involvement.² Renal involvement of bird flu infection has been reported. To et al.² recently reported the autopsy findings of acute renal failure (ARF) in fatal human bird flu infection. However, the pathogenesis underlying the renal involvement is still not clarified. Wiwanitkit³ recently noted that hypercreatinemia could be an important manifestation of human bird flu infection.

Here, the author reports a ministudy carried out in order to assess the correlation between the presence of renal insufficiency and the outcome among reported Thai patients. The operative definition of renal insufficiency in this study is serum creatinine equal to or more than 1.5 mg/dl. The author performed a literature review of reports of human bird flu infection in Thailand, from a database of published works cited in the Index Medicus and the Science Citation Index. The author also reviewed the published works in all 256 local Thai journals, which are not included in the international citation index, for reports of human bird flu infection in Thailand. Reports that contained incomplete data were excluded from the analysis.

According to this review, there were six reports^{4–9} covering 12 Thai patients with a confirmed diagnosis of bird flu. However, complete data were available for only 9 patients. Of these 9, renal insufficiency was detected on presentation in 4 patients (44.4%). In all 4 of these patients with renal insufficiency, acute respiratory distress syndrome (ARDS) was detected, and all died. Concerning the other 5 patients without renal insufficiency, ARDS was detected in 4, and there were 2 fatalities. Although the fatality rate in the patients with renal insufficiency was higher than that in those without, there was no significant correlation between the presence of renal insufficiency and the development of ARDS ($P > 0.05$) or fatality ($P > 0.05$).

There are some reports on the clinical presentation and outcome of severe bird flu infection. Wiwanitkit¹⁰ recently proposed that diarrhea could be noted as an important presentation of bird flu and could imply a severe outcome. Here, the author has tried to assess whether there was a correlation of renal insufficiency with the infection outcome. The author hereby concludes that the presence of renal insufficiency showed no clinical correlation with the outcome of infection among the subjects reviewed.

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