Author's response to reviews

Title: A Retrospective Study of Contributing Factors for Prognosis and Survival Length of Cryptococcal Meningoencephalitis in Southern Part of China (1998-2013)

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Version: 3 Date: 10 June 2014

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Dear Editor-in-Chief,

We are submitting to *BMC infectious diseases* our manuscript entitled “A Retrospective Study of Contributing Factors for Prognosis and Survival Length of Cryptococcal Meningoencephalitis in Southern Part of China (1998-2013)”.

Cryptococcus neoformans can infect almost all organs in the human body, but the infection site of serious consequence is the central nervous system. Despite this observation, there have only been a few studies analyzing clinical characteristics as well as cerebrospinal fluid (CSF), electroencephalograph (EEG), and magnetic resonance imaging (MRI) features in CM patients of all ages. In this manuscript, we investigated the epidemiology with clinical features, including analysis of CSF, EEGs, and MRI of Chinese patients of various ages. We observed that:

1) CM is more likely to infect adult ages younger than 60 years old, with 71.3% of the CM patients being male.
2) 4.63% children with CM had clear exposure with bird/bird droppings before CM onset, lower than a previous study in CM children.
3) Unlike data from other countries, chronic use of corticosteroids or other immunosuppressants (17.59%) rather than HIV infection (1.85%) was the most frequent risk factor in CM patients.
4) Patients with brain tissue damage (P=0.021) and decreased CSF/blood glucose ratio (P=0.008) were significantly associated with death, but only the decreased CSF/blood glucose ratio was the contributing factors of prognosis (odds ratio, 0.047; P=0.025).
5) Decreased CSF/blood glucose ratio was significantly related to the survival length of CM (odds ratio, 0.134; P=0.033).

In summary, these results support that CM has predilection for the young male adult, and chronic use of corticosteroids or other immunosuppressants rather than HIV infection or bird/bird droppings exposure was the most frequent risk factor in CM patients in our study. Decreased CSF/blood glucose ratio was both an independent contributing factor to death and was significantly related to the survival length of CM patients. The more decreased the CSF/blood glucose ratio was, the worse prognosis and shorter survival length CM patients had. Our finding should have important implication in the clinical retrospective study for cryptococcal meningoencephalitis in China.

Finally, I would like to suggest a number of internationally renowned expert reviewers who have strong credentials in cryptococcal meningoencephalitis and infectious diseases:

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Thank you very much for your consideration!

Sincerely yours,

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