Author's response to reviews

Title: Respiratory virus in immunocompetent community-acquired pneumonia: is it real pathogen or a bystander? Comparing to influenza like illness and volunteer controls

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Author's response to reviews:

Dear Editor of BMC Pulmonary Medicine,

Thank you for your comments and suggestions.

The manuscript has been revised according to your suggestion and peer-reviewer’s comments. Point-by-point responses to the comments are listed below.

Sincerely,
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Comments and reply:
Reviewer: Ger Rijkers
Reviewer’s report:
I had serious concerns about the apparent lack of bacterial diagnostics in this patient cohort (and I saw that all other reviewers has this same comment). From the revised manuscript it appears that only from a limited subset of patients a sputum culture was performed, and no further bacteriology was performed. This
means that we now have a patient population who has little or no bacteriology, yet they are all treated with antibiotics. We have extensive virological data, but only a limited number of patients was treated with antiviral medication. This severely limits the conclusions which could be drawn from this study. I will leave it up to the editors whether or not this paper would qualify for publication.

Reply:
Thank you for your comments.
It was one of limitations of our study that bacteria pathogens were not studied. However, our study was an observational study with no attempt to intervene with clinical management.

The focus of our study was that whether respiratory virus was a real pathogen of community acquired pneumonia. However, bacterial etiology was not routinely performed, which is consistent with guideline and daily clinical practice. In the patients included in the study, bacteremia cultures were conducted in some cases, which was determined by clinician, but not as requirement of the study. Clinical course of patients were followed up to one month. Meanwhile, the results of bacterial diagnostics were recorded by our researcher. There were several possible reasons for the low yield in bacterial etiology. First, only about 50% of patients in CAP cohort presented with purulent sputum. Sputum bacterial culture was only performed according to the clinical needs in 77 hospitalized patients with CAP in our study. Second, sputum bacterial culture for clinical use has low yield in our hospital and in China. Positive rate of sputum bacterial culture is less than 10% in CAP patients in clinical use. However, it is improved and rise up to 32% in research (Reference, Liu YN, et al. Zhonghua Jie He He Hu Xi Za Zhi. 2006 Jan;29(1):3-8.[In Chinese]). Third, streptococcus pneumoniae is also rare in clinical sputum culture because streptococcus pneumoniae is a fastidious pathogen that is difficult to culture in plates routinely used. Urinary antigen detection for streptococcus pneumoniae can not be conducted in our hospital during 2009. It is one of the limitations in our study that bacteria and atypical pathogens were not detected simultaneously.

Our study was a prospective observational study. Hence, treatments were decided by the clinician, but not the researcher of our study. The viral detection results were available for clinician once the result came out. However, viral culture was conducted only twice to three times weekly and the result came out at least 4 days later. Nucleic amplification test with RT-PCR/rRT-PCR for frozen swab samples was conducted until 2010 when all samples were collected. In our observational study, viral detection was only for investigation purpose, not for reference of treatment.

According to Chinese guideline of community acquired pneumonia, antibiotics should be routinely prescribed in patients with community acquired pneumonia. It is the current standard practice that antibiotics are prescribed in CAP patients no matter what the etiology is. Furthermore, prescription of antibiotics for all patients with CAP was determined by clinician, not research requirement. The real role of
antibiotics in viral CAP demands investigation.

Reviewer: Bin Cao
Reviewer’s report:
The manuscript is important to answer the question that virus is one kind of real pathogen that can cause pneumonia in both children and adults. In the revised version, the authors have answered my questions and modified their paper according to my comments.

Reply:
Thanks for your comments.

Reviewer: Chunxue Bai
Reviewer’s report:
The authors have responded to my comments properly, but I still have some minor comments:
1. The authors should have a detailed description about the CURB-65.
2. The authors said it seemed the length of hospital stay was longer, intensive care requirement and 30-day mortality was higher in virus positive patients. But there are only few patients in the two groups, so this conclusion is not reasonable.

Reply:
1. Thanks for your suggestion. Detailed description about the CURB-65 has been added in the text (as seen in the page 5, line 139-143).
2. Thank you for your comments. It has been revised according to your suggestion (as seen in the page 9, line 258-260).