Author's response to reviews

Title: Difference of clinical features in childhood Mycoplasma pneumoniae pneumonia

Authors:

You-Sook Youn (vanco77@hanmail.net)
Kyung-Yil Lee (leekyungyi@catholic.ac.kr)
Ja-Young Hwang (HJY@catholic.ac.kr)
Jung-Woo Rhim (benign7@hanmail.net)
Jin-Han Kang (kjhann@catholic.ac.kr)
Joon-Sung Lee (leejs@catholic.ac.kr)
Ji-Chang Kim (jichang71@hotmail.net)

Version: 3 Date: 10 March 2010

Author's response to reviews: see over
Dear Dr. Norton,

We appreciate your careful review of our manuscript. We corrected and revised the manuscript according to the reviewers’ directions. Our responses to the reviewers’ comments are provided below. The revised sections of the manuscript are highlighted in yellow in the text. Thank you in advance for considering our revised manuscript. The entire manuscript has been edited by a native-English-speaking medical editor.

Kind regards,

Professor Kyung-Yil Lee, MD, on behalf of the authors
Department of Pediatrics, The Catholic University of Korea,
Daejeon St. Mary's Hospital, 520-2 Daheung-dong, Jung-gu,
Daejeon 301-723, Republic of Korea
Tel: +82-42-220-9541, Fax: +82-42-221-2925
E-mail: leekyungyil@catholic.ac.kr
Reviewer 1

1. The authors should describe in discussion section the implications for their findings. How might this help a clinician evaluating a child with possible mycoplasma pneumoniae pneumonia. The authors should state in discussion, and site as potential limitation the fact that this study was conducted during an epidemic. They should describe how these results may be generalizable to non-epidemic disease patterns.

Reply: We added new text regarding the limitations of our study and the clinical implications of the findings, including endemic cases.

Specific comments:
Page 3, paragraph 3. 1st sentence is not clear.

Reply: We added and rewrote the following sentences:

‘Although M. pneumoniae is a small bacterium that can induce pneumonia, the immunopathogenesis of this agent in humans is poorly understood. Clinical and experimental studies support the hypothesis that lung injury in M. pneumoniae is associated with the cell-mediated immunity of the host, including the temporary anergy of purified protein derivatives (PPD) and the dramatic beneficial effect of corticosteroids on severe MP in adults and children.’

Page 4 (methods): If this was a retrospective study, how was is required that patients had serology drawn at time of hospitalization and at a second point in time, and why/how was consent obtained. This sounds more like a retrospective review of patients enrolled in a prospective study. If this is this case, it should be clearly stated in methods. If not, must address consent, and standardized lab testing. Similarly, I find it hard to believe that blood culture obtained in all patients as part of routine care, considering the low yield of blood culture.

Reply: In our clinical practice, blood was collected and laboratory assays were performed at least two times (at admission and at discharge) in pneumonia patients for definitive diagnosis. Some MP patients in the epidemics who showed progression of pneumonia without response to antibiotics received earlier follow-up examination for early diagnosis and steroid treatment. Blood culture was routinely performed for all febrile patients at admission, in keeping with our clinical practice. In addition, we obtained parental consent for blood sampling for all admitted patients who were associated with the clinical study, on the advice of our hospital’s IRB. We clarified these points in the manuscript.

Page 5: Why use pediatrician rather that 3 radiologist to characterize and classify pneumonia patterns.

Reply: Pediatricians are generally able to read chest radiographs. We invited a pediatric radiologist to participate in the study to confirm our classification of pneumonias.

How were age categories selected. Any prior research defining these age categories:
Reply: In the field of Pediatrics, the childhood stages are important, being generally classified as the neonatal period (4 weeks), infancy (1 month to 1 or 2 years), the preschool period (2–5 years), the prepubertal period (6–10 years), and puberty and adolescence (11–20 years). These periods are defined because they have distinguishing characteristics such as common disease entities and laboratory findings such as WBC counts and differentials. With regard to immunological development, it may be regarded that infants have less mature immune function compared with children aged over 5–6 years, whose immune function is more mature. For example, in some immune-mediated diseases such as atopic diseases, the symptoms in a large number of wheezy or atopic infants improve until 5 years of age, and Kawasaki disease, which may be caused by a host-immunologic reaction to unknown pathogens, is rarely seen in children older than 5 years of age. Therefore, the age categories defined in this manuscript are considered to have relevance, and there are few clinical studies like our classification.

Page 6:
Statistical analyses: Why do the authors state that a p value < 0.05 was significant for non-parametric tests. These seems contradictory to prior paragraph stating that t-test were performed, implying that data were normally distributed. If this is true, then these are parametric tests for normally distributed data. Authors need to clarify.

Reply: We consulted a statistician regarding the results, and found no fault in the employed statistical method; however, a mistake in the Statistical Analysis section was identified and corrected.

Page 6: All patients had abnormal breath sounds on auscultation at time of admission. Again, very surprising- warrants clarification.

Reply: We revised this sentence as suggested.

Page 8: para on clinical and lab findings.
This paragraph is particularly poorly written and requires editing.

Reply: We revised this paragraph as requested.

Page 9 (discussion)
Paragraph 1- should state at end of this paragraph that this study was limited to hospitalized children.

Reply: We mentioned this as a limitation of our study.

Paragraph 2- take out ref to table 1. Should not be in discussion section. Same on page 10.

Reply: We removed these references, as suggested.

Paragraph 3- sentence 1. Should say perform, not performed

Reply: We rewrote this sentence.
Reviewer 2
1. Is the question posed by the authors well defined?
No not well defined, the paper is very broad looking at two overlapping groups, those diagnosed with MP serologically and differing patterns of poorly defined CXR changes. Consider two manuscripts.

3. Are the data sound?
Data are sound but described poorly in the text and confusing. The variables being tested statistically to give p values are not always carefully described. I do not feel adequately qualified to assess all the statistics.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
The hypothesis and conclusion that MP has some immunopathological component is very weak. Some of the statistically significant differences are not clinically meaningful.

Reply: We consulted a statistician regarding our results, and confirmed the validity of the data. We corrected those sentences in which the statistics were not clearly described. We corrected and revised the manuscript according to the reviewer’s directions, as far as possible.

6. Are limitations of the work clearly stated? : No

Reply: We added new text regarding the limitations of the study.

9. Is the writing acceptable?
The English is a little clumsy in places and could do with minor editorial assistance, otherwise it is fine.

Reply: The entire manuscript has been edited by a native-English-speaking medical editor.