Reviewer's report

Title: Accuracy of IgM antibody testing, FQ-PCR and culture in diagnosis of acute infection by Mycoplasma pneumoniae in adults and adolescents with community-acquired pneumonia

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Reviewer: Naoyuki Miyashita

Reviewer's report:

The manuscript of Qu JX et al. describes the diagnostic values of IgM serology, FQ-PCR and culture for early diagnosis of community-acquired M. pneumoniae pneumonia in adults and adolescents, with a fourfold or greater increase of IgG antibody titers of paired sera as the “gold standard”. The authors found that specificity and negative predictive values of all three methods were high, around 90% in specificity and around 80% in NPV, but sensitivity was low.

Major comments:

1. The authors found that IgM serology is not suitable for the diagnosis of M. pneumoniae pneumonia and FQ-PCR and culture are still needed to be improved. Because of the low sensitivity and non-rapid diagnostic methods, many researchers are using the clinical diagnostic methods. Recently, from China, Yin Y-D et al. demonstrated the good sensitivity and specificity of scoring system for the early presumptive diagnosis of M. pneumoniae pneumonia (Respirology 2012; 17: 1131-1136). Thus, the authors should include and discuss the clinical diagnosis.

2. How many patients determined the causative pathogens in patients without M. pneumoniae pneumonia. The authors should enroll and compare the pneumonia patients who were determined causative pathogens.


4. The included number of patients characterized as M. pneumoniae pneumonia are low to clarify the conclusions. The authors should enroll more patients.

5. The authors should shortened the Discussion section.

Minor comments:

6. As the authors noted in the manuscript, it is well known that IgM antibody usually does not appear within 7 days. Please include the days after onset at the
IgM antibody testing in Table 1.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.