Reviewer’s report

Title: Mycoplasma hominis necrotizing pleuropneumonia in an immunocompetent adolescent

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Reviewer: Yonghong Yang

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The article presented a very interesting case with confirmed Mycoplasma hominis infection, along with a dramatic clinical course. It does come up with some important information or clues to clinicians.

This case was severe pneumonia and pericarditis due to Mycoplasma hominis in a previously healthy adolescent. Mycoplasma hominis was confirmed by specific Taqman PCR and culture, and the antibiotic susceptibility was also tested. Their observation indicates causal relationship between Mycoplasma hominis and severe infection in a healthy child.

Mycoplasma Hominis could be a very important pathogen in both immunocompetent and immunosuppressed children and adult. Sometimes it causes severe pathophysiological situation or even death. More importantly, the increasing resistance to antibiotics is significantly overlooked by clinicians, which may result in wrong judgment of the pathogen itself because of the poor response, increasing the length of stay, the severity, or even the mortality. Clinicians can not rule out Mycoplasma Hominis infection if there is no improvement after treated by macrolides.

There are still some points in the article which needs to be clarified:

1. Patient was received many kinds of antibiotics in the treatment period, such as clarithromycin, amoxicilline/clavulantate, ceftriaxone, imipenem, vancomycin, etc. However, there was no any confirmed bacteria infection. The authors should to discuss this fact and its effect to the patient, and a explanation for the variability in antibiotics data during the period is needed. For example, what is the rationale to use clarithromycin as the first regimen for a adolescent “suggestive of right sided pneumonia and laboratory tests revealed a marked leukocytosis (39800/m WBC, 89% neutrophils and 15% bands) and an elevated C-reactive protein level (>250 mg/L).”? And later for other antibiotics?

2. “In contrast to previous reports, our patient is the first case reported concerning a healthy adolescent with a disseminated Mycoplasma hominis infection in the absence of predisposing factor for extragenital infection such as trauma or mechanical ventilation” Please be prudent to say “the first” unless the author was sure all the related publications were reviewed.

3. It will be better if the author gives a brief review of the incidence, mortality and mobidity of Mycoplasma Hominis infection in Children in the discussion part.
Because less was known about the asymptomatic colonization and infection in this age group.

4. Some part of the report was not clear described, especially for the progress of the patient, the results for laboratory tests including cultures, and antibiotic use, following the course of disease. The author can not said “a few days later, the patient had fully recovered”. How may days?

5. Antibiotic misuse can causes negative culture result. Which day the patient start used antibiotics? What kind cultures the author did and when?

6. Referernces were relatively old.

7. The English needs more attention.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing