Reviewer’s report

Title: Multiplex PCR of bronchoalveolar lavage fluid in children enhances the rate of pathogen detection

Version: 1 Date: 28 Jul 2018

Reviewer: Hossein Zarrinfar

Reviewer's report:

In the manuscript entitled "Multiplex PCR of bronchoalveolar lavage fluid in children enhances the rate of pathogen detection" (PULM-D-18-00124R1).

The authors describe a case of PCR of bronchoalveolar lavage fluid in children. This case is interested and educational but it need a basic revision!

This issue should be considered in any revised manuscript.

In addition, there are some grammatical and spelling errors that should be correct by a person expert.

The following comments should be considered.

Abstract:

1. The diagnostic gold standard refers only to histopathology documents not culture!
2. SF is abbreviation of ??
3. "S. pneumoniae (27/28; 96%) and S.aureus (11/16; 69%)" the numbers what means?
4. "Severe bacterial and fungal infections in critically ill patients require immediate anti-infective treatment to reduce mortality [1,2]" needs another references. You should add them:

5. "Bronchoalveolar lavage (BAL) is frequently performed in patients with severe pneumonia for microbiological workup." needs a reference. You can add: Mycological Microscopic and Culture Examination of 400 Bronchoalveolar Lavage (BAL) Samples. Iranian J Publ Health. 2012; 41(7): 70-76.

6. Line 58: "gold standard" should be revised.

7. Lines 58-59: The sentence is not clear and the English needs revision.

8. Line 60: "invasive" should be semi invasive.

9. Lines 65-66: The sentence is not clear and the English needs revision.

10. Lines 70-72: The sentence is not clear and the English needs revision.


12. Lines 82-84: The sentence is not clear and the English needs revision.

13. Lines 87-89: The sentence is not clear and the English needs revision.

14. Lines 91-92: "defined as immunosuppressed (59%), 36 from patients (51%) under". The percent has become 110% !

15. Line 96: "previously" what means now??

16. Table 1 and 2 has not been mentioned in the text!!

17. In Table 1, 29/70 (41%) has mentioned only in hematologic patients!!

18. In Table 1, "Haematologic" what means!!

19. In Table 1, "Gender" should be "Gender (f/m) and 12f/17m should be 12/17 and ..".

20. In Table 1, "Immunosuspension [patients]\) should be "Immunosupresive patients (%)".

21. In Table 1, "Anti-infective pre-treatment [No. of patients]\) should be "Patients with anti-infective pre-treatment (%)"

22. Lines 106-110: The sentence is not clear and the English needs revision.
23. Lines 111-112: The sentence is not clear and the English needs revision.

24. Lines 113-114: "Enterococcus faecium" should be E. faecium, and "Streptococcus pneumonia" be S. pneumonia.

25. Lines 115-118: The sentence is not clear and the English needs revision.

26. Lines 115: "and BAL" should be deleted.

27. Lines 118: "BAL" should be Bronchoscopy.

28. Lines 120-122: The sentence is not clear and the English needs revision.

29. Lines 123: What about direct examination!! Done? PCR details ??

30. Lines 129-131: The sentence is not clear and the English needs revision.

31. Lines 132: The details of DNA extraction!! What protocol??

32. Lines 135-140: The genus and species should be written C. glabrata … and the same for all organisms.

33. Lines 143-145: The sentence is not clear and the English needs revision.

34. Line 151: "Frequency of pathogen detection " should be omitted.

35. Lines 152-154: The sentence is not clear and the English needs revision.

36. Table 2 and 3 should be combined together.

37. Lines 159-160: The sentence is not clear and the English needs revision.

38. Lines 161-162: The sentence is not clear and the English needs revision.

39. Lines 163-167: The sentence is not clear and the English needs revision.

40. Line 172: The sentence is not clear and the English needs revision.

41. Lines 172-178: If the data exist in the tables, they shouldn't be in the text again.

42. Table 4, "both correspondingly" is unclear!!

43. Lines 186-193: The sentence is not clear and the English needs revision.

44. Line 193: "He was known to be colonized with Aspergillus" to be omitted.

45. Be careful for all organisms, line 194, be P. variotii

46. Lines 198-199 should be omitted.
Line 200: The numbers at the beginning of the sentence must be written in alphabetical order.

Tables of 5 and 6 should be as graphs.

Lines 219-221: The sentence is not clear and the English needs revision.

Line 250: "(SF)" be SF.

Lines 252-255: The sentence is not clear and the English needs revision.

Lines 256-258 should be omitted.

Lines 272-274: The sentence is not clear and the English needs revision.

Be careful for all organisms, line 281, be A. fumigatus.


Line 285: "Relevance of data and assessment of results:" should be omitted.

Lines 285-289: The sentence is not clear and the English needs revision.

Line 285: "Method" should be omitted.


**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

No
Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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I recommend additional statistical review

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