Reviewer’s report

Title: CLINICAL SPECTRUM AND FACTORS IMPACTING OUTCOME OF CANDIDA AURIS: A SINGLE CENTER STUDY FROM PAKISTAN

Version: 0 Date: 25 Jan 2019

Reviewer: Silke Schelenz

Reviewer's report:

This manuscript provides case details on patients diagnosed with Candida auris in a single hospital in Pakistan.

The data presented provides valuable information on the spectrum of infections that C. auris can cause. However there are a number of areas that need clarification and amendments before it could be considered for publication.

1. The major issue is that it appears that only 15 out of the 193 isolates were confirmed to be C. auris by internationally recognized methodology. The other isolates have been speciates using conventional culture, phenotypic morphology and API20C which are not reliable. The lack of absolute prove of speciation by approved methods for C. auris identification compromises the analysis of the entire study. This needs to be addressed.

2. Background: line 59. It would be better to point out that there are numerous misidentifications.

3. Methodology: page 5, line 91. Please specify what breakpoints have been used.

4. Page 6, line 98. Risk factors need to be listed. Who did the data collection (grade and specialty) and validation? Line 99. Please specify clinical signs and symptoms, were inflammatory markers taken into account i.e. WBC and CRP? Line 107. When assessing positive urine culture it should be stated if WBC, epithelial cells are taken into account. Throughout study catheter urines should also be stated compared to mid stream urines.

5. Methodology: it is important to provide information on whether the hospital had an antifungal policy and what the first line empirical treatment for C. auris infection was. What is considered correct dosing and in cases of voriconazole use was therapeutic drug monitoring performed to assure correct 'dosing'?

6. Page 7, line 120 spelling mistake 'pus collection'

7. Page 7, line 123. Please specify mortality: crude or attributable or both?

8. Results page 8, line 140: unfortunately the majority of C. auris isolates can only be reported as presumed unless species is confirmed by an approved method such as WGS, PCR etc.

9. Page 8, line 149. Please state what kind of antifungal group patient received, such as azole etc.

10. Page 8, line 154. Please state how many urines were catheter urines compared to MSUs.

11. Page 9, line 162. Please clarify 'exposure' keratitis. ? keratitis externa?

12. Page 9, line 163. Please specify asymptomatic candiduria. How many patients had a urinary catheter and was the catheter removed and urine re-cultured? This would be an important assessment to differentiate colonization versus asymptomatic infection.
14. Page 13, line UTI infections, please specify catheter versus mid stream urine infections.
15. Again, comment on appropriate antifungal (Page 13, line 227) it is important to state at the beginning if the hospital had an empirical treatment policy for candidaemia and UTI.
16. Page 14 line 234, it is unclear how (route of administration, dosing) amphotericin (and which formula) has been given.
17. Discussion. One important point is to make that (I assume) the hospital did not screen for C auris on admission or during hospital stay. The statement stat most patients had infection rather that colonization (page 15, line 256) should therefore be revised. It may well be that many patients are colonized on the wards but unless samples from non sterile sites and screening sites are taken the rate of colonized patients will not be known! 'colonization' assumption should also be reviewed on page 17, line 287. Unless patient were systematically screened one cannot say they were not colonized. Statement on page 18, line 308 in conclusion regarding colonization should also be revised.
18. Page 16, line 271. 'time to clearance' it has not been made clear how infections were followed up> How was 'clearance' defined? Were sequential blood cultures taken on all candidaemia patients? This is not stated in the methods.
19. Page 17, line 297. It is common knowledge that early line removal as source control is a major part for managing candidaemia, appropriate literature should be cited here.
20. It would be interesting to have some discussion on possible cross infection and whether any infection control is being implemented for positive cases in view of C auris propensity to cause outbreaks.
21. There are many tables. It would be better to summarize some data in a different form and reduce number of tables.

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

Yes

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

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Unable to assess

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript
Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal