Author’s response to reviews

Title: Moraxella nonliquefaciens Bloodstream Infection and Sepsis in a Pediatric Cancer Patient: Case Report and Literature Review

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Response to the review of the manuscript

“Moraxella nonliquefaciens Bloodstream Infection and Sepsis in a Pediatric Cancer Patient: Case Report and Literature Review”

Dear Dr. Cassady-Cain,

Thank you very much for the new evaluation of our manuscript and for the encouragement to submit a revised version. We are also grateful for the comments of the Reviewers. Accordingly, we have addressed all comments and included the points into the revised version of the manuscript. Please find attached a detailed item-per-item response to the comments on the manuscript. We hope that our revised manuscript is now suitable for publication in BMC Infectious Diseases. Thank you for evaluating our manuscript and your time in this matter.

Sincerely,

Carlos L. Correa-Martínez

Reviewer Reports

Reviewer 1 (Mohammed Yahaya):

No further comments.
Reviewer 2 (Oyekola Abiri):

We thank the referee for the suggestions which we have addressed below:

- Page 2 line 51: "Neutriphile" should be spelt neutrophil (without the 'e')
  Response: the suggested spelling modification has been made.

- Page 14. Figure 1: "Stemm" cell should be spelt stem cell (with a single 'm')
  Response: the suggested spelling modification has been made.

Reviewer 3 (Eric John McGrath):

Response: we thank the referee for the suggestions which we have addressed below:

- Line 48: Presented "with" fever, add "with"
  Response: the sentence has been modified as suggested.

- Line 77: this is nebulous in US. What drug/drugs are being referred to here? Please clarify throughout report whenever this medication is referenced if possible
  Response: we have now specified that an oral suspension of amphotericin B (300 mg/day) was administered to the patient. This modification has been made in the Abstract as well as in the Case Presentation section.

- Line 83: Gentamicin or Gentamycin
  Response: the word “gentamycin” has been substituted with “gentamycin” throughout the manuscript.

- Line 123: check spelling
  Response: the word “endophthalmitis” has been changed to “endophthalmitis”.

- The Line 141 also would benefit from an added statement re: in immune-compromised hosts
  Response: the paragraph has been corrected accordingly.

- Line 166, FS Planned, correct spelling
  Response: spelling has been corrected accordingly.

- Figure 1 with general comment with reference back to line 98+: The authors escalated therapy, empirically, to meropenem, teicoplanin and fluconazole on Day 9 due to clinical worsening BUT was continued for 11 more days with an antifungal. However, earlier in the report and based on a prior reviewer suggestion, the authors added that this is an institutional standard. The authors wrote in line 91 that they had confirmed that Pip/tazo was susceptible. It is not clear to this reviewer, in light of the fact that no "secondary" or "hospital acquired infection was discovered, why the patient was not placed back on pip/tazo when a new or additional infection, was ruled out. Whether teicoplanin and or fluconazole was continued or not, empirically, is up to the authors for mucositis coverage and/or "lines and tubes" in the ICU setting, etc. But M liquefaciens did not need or require meropenem coverage, after additional Gram-negative pathogens or infection was excluded, and the authors should state that in the body of the case. The reason that this should be stated is that new research is highlighting that meropenem use in the immunocompromised host may be driving the development of Carbapenem-Resistant-Only-pathogens, such as Pseudomonas, in this sub-population of neutropenic patients. And once these pathogens are present in the HEME/ONC and BMT units, treatment and empiric treatment
of Gram negative patients with febrile neutropenia may become very complicated.
Response: we agree with the referee about the uncritical use of meropenem in neutropenic patients and
the risk of inducing and introducing carbapenem-resistance in hemato-oncological and BMT-units. Use
of meropenem in this patient was a clinical decision and driven by concerns of a second bacterial
infection in the state of persistant fever in the state of profound neutropenia as stated in line 108.
Indeed, the institutional standard in high-risk patients is to start empirical antibacterial therapy with
piperacillin/tazobactam and to escalate to meropenem plus teicoplanin or vancomycin if fever persists
for more than 48-72 hours after careful re-evaluation or in the case of deterioration of the patient's
clinical status (hemodynamic or respiratory instability).