Reviewer's report

Title: Development of Fluconazole Resistance in a Series of Candida parapsilosis isolates from a Persistent Candidemia Patient with Prolonged Antifungal Therapy

Version: 1 Date: 25 January 2015

Reviewer: Diego Rodrigues Falci

Reviewer's report:

The authors present an interesting case report about fluconazole resistance in Candida parapsilosis. It is indeed a rare phenomenon and the resistance mechanism was well investigated and described. However, general structure and clinical presentation must be revised to warrant a publication in BMC Infectious Diseases.

Major Compulsory Revisions

1. Abstract: it is not formatted as requested in BMC Infectious Diseases ‘Instructions for authors’ – Case Reports.

   Background is too short. Too much emphasis in laboratory methods, and these tests must be mentioned after clinical presentation, in the case report section. Please re-write the abstract following instructions provided.

2. Manuscript, General Structure:

   Please suppress ‘Methods’ and ‘Results’ sections to adequate the manuscript to the Case Report type of article. Investigation of resistance mechanism is a very important merit of this work, however it should be shortened, with focus on its results. Put it into the ‘Case Report’ section, after the clinical presentation.

3. Manuscript, Case Report: The clinical description has some uncommon aspects:

   What is the hospital protocol to initiate antifungal therapy? Patient had not received antifungal after a positive blood culture, and had received antifungal after a sputum smear with yeast forms. Did the sputum culture yield any fungi? Did the patient have any pulmonary radiographic abnormalities, or an abnormal neutrophil count? Please clarify antifungal indication in the 66th week.

   Are there any restrictions on polyene (any formulation) use at the hospital? An amphotericin (preferably a lipid formulation) would be the choice for treating a breakthrough infection, or for savage therapy.

   Please describe how central nervous system infection was diagnosed – how could it be distinguished from sepsis-associated encephalopathy. Did a lumbar puncture was performed? Did cerebrospinal fluid culture yield any fungi?
4. Manuscript, References: Reference #6 is repeated in #28. Please correct it.

Minor Essential Revisions

1. Figure 1. The timeline is a good way to understand temporal clinical aspects, but I recommend to reconsider to use “Drug doses” in the ordinate axis. Comparison of dosing of different drugs (fluconazole, itraconazole and caspofungin) is somewhat inappropriate.

Discretionary Revisions

1. Ethics statement: a mention to ethical aspects is appropriate, but detailing on that could be suppressed.

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

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 interests.