Author’s response to reviews

Title: High prevalence of diarrheagenic Escherichia coli carrying toxin-encoding genes isolated from children and adults in southeastern Brazil

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Version: 1 Date: 05 Sep 2017

Author’s response to reviews:

September, 2017

Ralf-Peter Vonberg
Journal Editorial Office
BMC Infectious Diseases

Dear Ralf-Peter,

Enclosed you will find the revised manuscript entitled “High prevalence of diarrheagenic Escherichia coli carrying toxin-encoding genes isolated from children and adults in southeastern Brazil”.

Thank you very much for your consideration

Sincerely,

Isabel Scaletsky

We would like to thank each of the reviewers for their comments and suggestions, which have greatly improved the manuscript.
REVIEWER 1

Thank you for your helpful comments and suggestions.

Major comments

In this work, in addition to the E. coli pathotypes, the presence of Salmonella, Shigella and some parasites was also investigated. However, they are not mentioned in the title, in the abstract, in the introduction or in the results discussion. Furthermore, the methodology used for their isolation and identification is not described. It is necessary to include in the article all the information that corresponds to these pathogenic organisms.

On the other hand, there was not discussion of the results of antibiotic resistance or its implications or importance. All this must be approached from the Introduction section and discussed in detail in the article, and considered in the conclusion.

Answer: We have included text to describe the methodology used for isolation and identification of Salmonella and Shigella pathogens. We have also included text to discuss the antibiotic results.

Minor comments

Lines 88-91- the reference was added as suggested

Lines 94-100- In the revised manuscript, we have added information about the procedure that was used to isolate, identify and confirm the presence of Salmonella and Shigella in samples, as well as the procedure to identify the parasites.

Lines 127-129- the origin of the strains was added as suggested.

Lines 134-137- the origin of the strains was added as suggested.

Lines 150 – 159- a brief description of the method of disc diffusion method was added in the revised manuscript.

Lines 212-214- the text has been modified in the revised manuscript.

REVIEWER 2

Thank you for your helpful comments and suggestions.

Major comments
1) I think that the main aim of this study is to reveal the situation of DEC isolation among adults in a poor sanitation area comparing to that among children. However, this study lacks information to compare strains isolated from both groups. Most of the EAEC stains isolated from adults did not possess aatA, aap, and aggR, which means that those strains lacks AA plasmid. These results infer a different clone of EAEC may be prevalent among adults comparing to children. Authors tried to demonstrate this discrepancy by additional experiments such as serotyping and PFGE.

Answer: In the revised this point was addressed.

2) Authors should discuss why AA plasmid negative EAEC was dominant among adults and AA plasmid positive EAEC was dominant among children. Two hypotheses would be proposed: one is that there are different routes of infection to adults and children in the area, another is that AA plasmid negative EAEC could survive adaptively in adults, though children and adults are equally infected by both AA plasmid positive and negative EAEC.

Answer: In the revised manuscript this point was addressed in the text according your suggestion.

3) Similarly, authors should try to elucidate the difference in DAEC and aEPEC strains isolated from children and adults serotyping and PFGE as well.

Answer: We examined plasmid carriage of 10 strains of DAEC and aEPEC, and different plasmid profiles were seen in DAEC and aEPEC strains isolated from both children and adults.

4) Authors described that significant difference in number of aEPEC isolation between children and adults; however, the difference never be observed when P < 0.01 was considered as significance. As well as that the number of positive for aEEPC isolation was small. These situations could lead a suspicion that such the difference would be disappeared when more samples were investigated. If authors want to insist the difference, authors should demonstrate the difference by other ways such as serovar, PFGE, and intimin typing.

Answer: We agree with your observation. Please note the P < 0.01 has been removed.

5) Authors should provide detail hygiene conditions in the area. This journal considers articles on all aspects of the prevention, diagnosis and management of infectious diseases; however, authors did not provide any information about the sanitary conditions of the area which is needed for readers to know which factors are important to prevent diarrheal disease in such a poor condition.

Answer: In the revised manuscript, we have included information about the sanitary conditions of the study area.