Reviewer’s report

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

Version: 0 Date: 17 Jul 2017

Reviewer: E Yokoyama

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Authors conducted a survey of causative agents of diarrhea among children and adults in an area of Brazil whose hygiene condition is poor. DEC strains were dominantly isolated, and EAEC strains were most frequently isolated from both children and adults. DAEC strains were secondly frequently isolated from both children and adults. Meanwhile, aEPEC strains were more frequently isolated from children comparing to adults.

This study includes some interesting points; however, it is difficult for readers to understand the importance of this study. I recommend revising entire this manuscript, and I will review the revised manuscript.

Major point

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.

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.

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

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.

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.

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.

Yes

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?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
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Needs some language corrections before being published

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