Author’s response to reviews

Title: Molecular Characterization and Epidemiology of Carbapenem Non-susceptible Enterobacteriaceae Isolated from the Eastern Region of Heilongjiang Province, China

Authors:

XUE GONG (291135155@qq.com)
Jisheng Zhang (zhangjisheng215@126.com)
Shanshan Su (827691363@qq.com)
Yanjun Fu (fuyanjun1981@163.com)
Mingjia Bao (cmubmj@163.com)
Yong Wang (15331878255@163.com)
Xiaoli Zhang (jmszxl123@163.com)

Version: 1 Date: 25 Apr 2018

Author’s response to reviews:

Dear Iris Spiliopoulou, Ph.D.

First of all, thank you, Myrto Christofidou and Matthaisos Papadimitriou-Oliverakis for your suggestions on this article. Through my revision, I hope that this manuscript will be more rigorous. The following is my reply to the editorial comments one-by-one. Revised manuscript I have marked with different colors.

Manuscript "Molecular characterization and epidemiology…" by Gong Xue et al, is not suitable for publication unless extensively edited.

Reply: This manuscript has been carefully modified by a friend whose native language is English.
Minor revisions

Please note,

1…you need the same words in the same paragraphs many times

Reply: It has been revised.

2…do not start a sentence by number

Reply: It has been revised.

3…put in order all phenotypic, all genotypic and all clinical characteristics

Reply: The content of the manuscript has been written in the order of phenotype, genotype, and clinical characteristics.

4…that, bla-genes are currying while β-lactamases are producing

Reply: It has been revised.

5…in Methods write the references respectively and keep an order writing sensitivity, phenotypic and genotypic characteristics

Reply: The primers used in the method were cited in References 3-6, all other methods used in the study were self-designed. The manuscript has been written in the order of drug sensitivity, phenotype, and genotype.

6… Results: the Text must be rewritten

Reply: According to the characteristics of the results of this publication, the results have been revised.

7.…Table 1 and 2: you can summarize and grouped the results of the 53 isolates as many of them are the same. Thus a reader of manuscript could understand the conclusions easily.

Reply: According to the comprehensive consideration of the form proposal by the two reviewers, the duplicated part of the form is now deleted and a summary table is made.

Technical Comments:

- Please remove duplicate tables and figures.

Reply: Delete the duplicate part of the form.
Matthaios Papadimitriou-Olivgeris (Reviewer 2): The present article presents the epidemiology of carbapenem non-susceptible Enterobacteriaceae in an eastern region of China from 2015 to 2017 with predominance of KPC-producing isolates.

Major issues

Since you included isolates with non-susceptibility to carbapenems you should change the "carbapenem resistant Enterobacteriaceae" to carbapenem non-susceptible

A limitation paragraph is needed

Reply: This manuscript defines the non-sensitive enterobacteriaceae of carbapenems (imipenem, meropenem, and ertapenem) as carbapenem-resistant Enterobacteriaceae, since it is not rigorous. So I redefine the experimental strain and rename it.

Minor issues

Substitute "carbapenem antibiotics" by "carbapenems"

Reply: "carbapenem antibiotics" has been replaced by "carbapenems"

Define abbreviations at their first mention (like KPC, NDM, ESBL, MHT, mCIM, etc)

Reply: Abbreviations have been defined when first mentioned

Add the duration of the study in the first sentence of the Methods

Reply: I had added study time in the first sentence of the Methods

Include the types of statistic tests used in the present study

Reply: The statistical methods used in this study have been supplemented

I believe the term used "recovered" in Table 2 can be substituted by "survived"

Reply: It has been revised.

The mention of the mortality rate in the "mCIT and MHT" paragraph is not appropriate

Reply: It has been deleted.
Transfer the phrase "3 patients were excluded, including … in-patients" from the first paragraph of the Discussion to Results

Reply: It has been revised.

Delete the mention of the aims from the first paragraph of the Discussion

Reply: It has been deleted.

Did you do colistin and tigecycline susceptibility testing. Since they remain the last treatment options the resistance rate against these antibiotics is important

Reply: We have done a disc susceptibility test on tigecycline by some strains. According to 2010 FDA criteria: the result was that 39 strains were sensitive. Because the data is incomplete, there is no analysis in the discussion. For polymyxin, firstly, some studies have reported that polymyxin rarely spreads into agar, which may lead to inaccurate product diffusion methods and E-test results, and has certain limitations. Secondly, we performed amplification of the mcr-1 gene and were all negative, so no susceptibility testing of polymyxin was performed.

The seven paragraph of the Discussion (starting as "At the start of the epidemic…") should be shorten to include only pertinent information

Reply: It has been revised.

You do not discuss infection control practices

Reply: Modified as required. Increased hand hygiene, active monitoring, disinfection and isolation measures.

Did you do active surveillance of high risk patients

Reply: We conducted active surveillance of the CNSE strains and reported on the resistance gene carrying status and epidemiological characteristics of patients with CNSE so as to isolate them early to prevent further spread of resistant bacteria.

In addition, we performed susceptibility testing with ertapenem and meropenem by disk diffusion to screen CNSE strains. However, due to space limitations, the data is not listed.

I Look forward to your positive reply.

Best wishes,

Xiaoli Zhang