Author's response to reviews

Title: Using a practical molecular capsular serotype prediction strategy to investigate Streptococcus pneumoniae serotype distribution and antimicrobial resistance in Chinese local hospitalized children

Authors:

Ping Jin (yanyanab2004@aliyun.com)
Lijuan Wu (6345650@qq.com)
Shahin Oftadeh (Shahin.Oftadeh@health.nsw.gov.au)
Timothy Kudinha (tkudinha@yahoo.com)
Fanrong Kong (Fanrong.Kong@health.nsw.gov.au)
Qiyi Zeng (qiyizengshenzhen@163.com)

Version: 2 Date: 4 July 2015

Author's response to reviews:

Professor Nawsheen Boodhun
Executive editor, BMC Pediatrics
BioMed Central
236 Gray’s Inn Road
London WC1X 8HB
United Kingdom

16 June 2015

RE: Using a practical molecular capsular serotype prediction strategy to investigate Streptococcus pneumoniae serotype distribution and antimicrobial resistance in Chinese local hospitalized children

Dear Professor Boodhun,

China is one of the ten countries with the highest numbers and proportions of pneumococcal cases worldwide. But the serotype surveillance data is very limited especially from community or rural areas. Quellung serotyping is only available in a couple of big city centres. One of the aims of this study was to design a simple practical and economical pneumococcal serotype prediction strategy suitable for future Streptococcus pneumoniae serotype surveillance in China.

We applied cpsB sequetyping supplemented with selected mPCR or serotypes 6A-6D specific PCR “cocktail” strategy for identifying serotypes among 193 S. pneumoniae isolates. Sixteen serotypes from 191 isolates were identified. We built up a comprehensive cpsB sequence database compared to the original database publication, which is potentially useful for subtyping the strains. The strategy is a promising approach and should be promoted especially in regions
where it is easier to access molecular assays than the expensive option of setting up Quellung serotyping.

Antibiotic susceptibility of all isolates was determined by E-test. The prevalence rates of parenteral penicillin resistance were 1.0% in the non-meningitis isolates and 88.6% in meningitis isolates. The total rate of multidrug resistance was 86.8%. The antibiotic susceptibility results may give confidence to clinicians to choose cheaper penicillin in the treatment of pneumococcal infections for non-meningitis isolates, rather than using the more expensive broader-spectrum antimicrobials.

All authors have seen and approved the manuscript and contributed significantly to the work. The authors do not have any conflicts of interest to declare. Please find below the contact details for the corresponding author, the alternate corresponding author and suggested reviewers.

Thank you for taking the time to consider this manuscript for publication.

Yours sincerely,

Professor Qiyi Zeng,
Corresponding Author

Professor Qiyi Zeng
Pediatric Center, Zhujiang Hospital,
Southern Medical University,
Guangzhou 510282, P. R. China.
Phone: (86-20) 61643008
Fax: (86-20) 61643008
Email: qiyizengshenzhen@163.com

Alternate Corresponding Author

Dr Ping Jin
Paediatric Intensive Care Unit,
Bao’an Maternity & Child Health Hospital,
Shenzhen, P. R. China
Phone: (86) 13798432269
Fax: (86-755) 27834718
Email: yanyanab2004@aliyun.com

Suggested Reviewers

Bruno Pichon
Respiratory and Systemic Infection Laboratory
Health Protection Agency Centre for Infections
London, United Kingdom
Email: b.charalambous@ucl.ac.uk
Margaret IP
Department of Microbiology
The Chinese University of Hong Kong, Prince of Wales Hospital
Hong Kong SAR
Email: margaretip@cuhk.edu.hk

Catherine Satzke
Pneumococcal Research, Murdoch Childrens Research Institute
Royal Children’s Hospital
Parkville, Australia
Email: catherine.satzke@mcri.edu.au