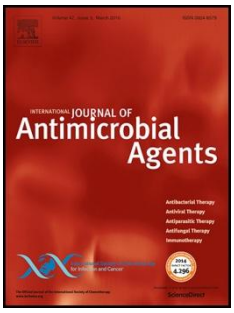
Accepted Manuscript



Title: Trends in antimicrobial resistance in *Neisseria gonorrhoeae* and molecular characteristics of *Neisseria gonorrhoeae* with decreased susceptibility to ceftriaxone in Shandong, China, 2007 to 2014

Author: Lihong Zhao, Aihua Liu, Ruiying Li, Shuping Zhao

PII: S0924-8579(17)30214-5
DOI: http://dx.doi.org/doi: 10.1016/j.ijantimicag.2017.06.004
Reference: ANTAGE 5154

To appear in: *International Journal of Antimicrobial Agents*

Received date: 19-11-2016
Accepted date: 10-6-2017

Please cite this article as: Lihong Zhao, Aihua Liu, Ruiying Li, Shuping Zhao, Trends in antimicrobial resistance in *Neisseria gonorrhoeae* and molecular characteristics of *Neisseria gonorrhoeae* with decreased susceptibility to ceftriaxone in Shandong, China, 2007 to 2014, *International Journal of Antimicrobial Agents* (2017), http://dx.doi.org/doi: 10.1016/j.ijantimicag.2017.06.004.

Trends in antimicrobial resistance in *Neisseria gonorrhoeae* and molecular characteristics of *Neisseria gonorrhoeae* with decreased susceptibility to ceftriaxone in Shandong, China, 2007 to 2014

Lihong Zhao[a], Aihua Liu[b], Ruiying Li[c], Shuping Zhao[a,*]

[a] Department of Laboratory, Tai'an Central Hospital, Tai'an 271000, China.

[b] Central Laboratory, Tai'an Central Hospital, Tai'an 271000, China.

[c] Department of Reproductive Genetics, Tai'an Central Hospital, Tai'an 271000, China.

[*]Corresponding author. Mailing address: Department of Laboratory, Tai' an Central Hospital, 29 Longtan Road, Tai' an 271000, China. Telephone number: +86-538-2138370. Fax number: +86-538-8223227. E-mail: lihongzhao70@sina.com

Highlights

- Three new substitutions of R44G, L47R, and/or H105F in MtrR were observed.
- PenA mosaic structure would possibly increase considerably ceftriaxone MICs.
- The substitutions of Ala-501 in PBP2 would possibly increase ceftriaxone MICs.
- Genetic polymorphisms in mtrR might cause decreased susceptibility to CRO.
- Genetic polymorphisms in penB and ponA might cause decreased susceptibility to CRO.