

عنوان مقاله:

Survey of plasmid born Colistin-resistant genes in *Pseudomonas aeruginosa* clinical strains

محل انتشار:

پنجمین کنگره باکتری شناسی پزشکی ایران (سال: 1397)

تعداد صفحات اصل مقاله: 1

نویسندگان:

Leila Azimi - *Pediatric Infections Research Center, Research Institute for Children Health, ShahidBeheshti University of*

Mahla Asadian - *Division of Microbiology, Department of Pathobiology, School of Public Health, Tehran University of Medical Sciences , Tehran, Iran*

Reza Alaghebandan - *Medical Sciences, Tehran, Department of Pathology, University of British Columbia, Royal Columbian Hospital, Vancouver, BC, Canada*

Abdolaziz Rastegar Lari - *Department of Microbiology, Iran University of Medical Sciences, Tehran, Iran*

خلاصه مقاله:

Background: *Pseudomonas aeruginosa* is one of the important Gram-negative bacteria in nosocomial infections. Multi- Drug resistance (MDR) strains can cause very serious problem for treatment of infections that cause with this strains. Colistin is currently the only effective antibiotic in some *Pseudomonas aeruginosa* MDR cases (to all tested antibiotics even carbapenem). Colistin resistance due to chromosomal mutations is the only mechanisms to colistin resistance up to some years ago. But unfortunately plasmid born genes that can cause resistance to colistin were defined from 2016 in *E. coli*. Appearance of plasmid born colistin resistant is very important because horizontal transmission in bacterial population and may be lead to presence of bacteria that are resistant to all presence antibiotics. This study aims to detect plasmid born colistin resistance genes in colistine resistant *P. aeruginosa*. Methods: in this study 40 *P. aeruginosa* isolated from clinical specimens were collected from two teaching hospitals in Iran. Resistance to colistin was determined by E. test. *P. aeruginosa* ATCC 27853 was used as a control for all tests. DNA extraction was done by boiling method and stored in -80 oC for PCR. *mcr-1* and *mcr-2* as plasmid born colistin resistant genes were investigated by PCR assay. Primers used in this study were shown in table 1. Table1. Primers sequencing used in the study Results: The results of E. test indicated that 25 strains susceptible to colistin and 15 of them in the group according to CLSI guidelines. The two plasmid born colistin-resistant genes (*Mcr-1* and *mcr-2*) were not detected in anycolistin-resistant strains Conclusion: Fortunately, our findings showed that plasmid born colistin resistance genes did not detect in our colistin resistant *P. aeruginosa* and this antibiotic resistant cannot .transfer horizontally

کلمات کلیدی:

Pseudomonas aeruginosa, colistin resistant, *Mcr-1*, *mcr-2*

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