

عنوان مقاله:

The first report of *Enterobacter gergoviae* carrying blaNDM-1 in Iran

محل انتشار:

مجله علوم پایه پزشکی ایران، دوره 23، شماره 9 (سال: 1399)

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خلاصه مقاله:

Objective(s): Prompt detection of extended-spectrum β -lactamases (ESBL) and carbapenemase-producing enterobacteriaceae is crucial for infection prevention and control strategies. The present study aimed to characterize the ESBL and carbapenemase genes among *Enterobacter* isolates from an Iranian inpatient population. **Materials and Methods:** A total of 96 *Enterobacter* isolates obtained from inpatients between June 2016 and March 2017, were identified by the conventional microbiological methods and diagnostic kits. Antimicrobial susceptibility pattern was performed using the disk diffusion method. The ESBL and carbapenemase genes were screened using polymerase chain reaction (PCR). **Results:** All clinical isolates of *Enterobacter* were classified as *E. gergoviae* (52, 54.2%), *E. aerogenes* (34, 35.4%), *E. cloacae* (7, 7.3%), *Cronobacter* (*E. sakazakii*) (3, 3.1%). The highest and lowest antimicrobial resistance rates were observed against ampicillin (93.8%) and imipenem (21.9%). High prevalence of multi-drug resistance (MDR=96.9%) was substantial. Of the 96 *Enterobacter* isolates, 35 (36.5%) and 28 (29.2%) were phenotypically ESBL-positive and non-susceptible carbapenem, respectively. Overall, the frequency of evaluated genes was as follows: blaCTX-M =25 (26%), blaTEM =30 (31.3%), blaSHV =12 (12.5%), blaIMP =3 (3.1%), blaVIM =0 (0%), blaNDM =8 (8.3%), and blaKPC =0 (0%). **Conclusion:** In this study, we report for the first time the presence of *E. gergoviae* harboring blaNDM from an Iranian population. Regarding the increase of MDR *Enterobacter* spp. in our region, strict hygiene rules will be needed to control the quick spread of ESBL and carbapenemase-producing *Enterobacter* isolates in healthcare facilities of developing countries.

کلمات کلیدی:

Antimicrobial resistance β , lactamase blaNDM, 1 Carbapenems *Enterobacter*

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