

عنوان مقاله:

Identification of Metallo-beta-lactamase (MBL) producing in Escherichia coli by phenotypic methods and PCR

محل انتشار:

بیستمین کنگره بین المللی میکروب شناسی ایران (سال: 1398)

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خلاصه مقاله:

Introduction and Objectives: Among urine pathogens, Escherichia coli causes 80% of urinary tract infections. Due to destruct nature of penicillins, cephalosporins and carbapenems (with the exception of manobactam, such as aztreonam), carbapenemase enzymes have created many problems for treating infectious diseases. The study aim was to investigate the phenotypic and molecular characterization of MBL genes produced by E. coli isolates in an educational hospital 2016-17. **Materials and Methods:** In this cross-sectional study, 80 UTI samples affected by E. coli were investigated. To identify MBL enzyme producing strains, phenotypic tests containing Modified Hodg Test, EDS Test and AmpC Disk were performed. The frequency of VIM and IMP genes were determined by PCR. **Results:** Between 80 E.coli samples, phenotypic tests including, Modified Hodg Test, EDS Test and AmpC Disk Test showed the positivity of 15(18.75%), 15 (18.75%) and 8(10%) isolates, respectively($P<0.001$). PCR test result for VIM gene was 19 (23.75%) positive isolated from E. coli, but IMP gene was not observed in any of the isolates($P<0.001$). **Conclusion:** The emergence of E. coli producing MBLs enzymes is a serious threat amongst clinical infections. The findings of this study indicated the presence of E.coli producing MBL. These enzymes can degrade carbapenems .antibiotics, the last class current treatment of MDR infections

کلمات کلیدی:

E.coli, drug resistance, VIM, IMP

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