

عنوان مقاله:

The Determination of Metallo-Beta-Lactamase Enzymes Prevalence in Pseudomonas Aeruginosa using Etest and their Antibigram Patterns in Kermanshah, Iran

محل انتشار:

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خلاصه مقاله:

**Background & Aims:** One of the main causes of nosocomial infection is pseudomonas aeruginosa and carbapenems is one of the most important classes of antibiotics used in the treatment of infections caused by this bacteria. Metallo-beta-lactamase (MBL) production is one of the most important mechanisms of resistance to carbapenems and their increased prevalence is a serious threat to treatment of infections caused by Pseudomonas aeruginosa. The goal of this study was the determination of MBL enzyme prevalence among clinical isolates of imipenem-resistant Pseudomonas aeruginosa. **Methods:** Antibigram pattern of Pseudomonas aeruginosa isolates from different clinical infections of patients referred to Emam Reza and Emam Khomini Hospitals of Kermansha, Iran, was determined through disk diffusion method according to the Clinical and Laboratory Standards Institute (CLSI). Isolates that were resistant to more than 3 different antibiotics were identified as multi-drug-resistant organisms (MDROs). Then, MBL enzymes production rate was determined among imipenem-resistant isolates using Epsilonometer test (Etest). **Results:** From among the 186 isolated strains from the two hospitals in Kermansha, 165 (88.7%) isolates were MDROs, of which 67 (40.6%) isolates were imipenem-resistant. Through Etest, 33 (49.2%) strains were identified as MBL producing strains. **Conclusion:** Due to the increased prevalence of MDROs and MBL-producing Pseudomonas aeruginosa in hospitals, the use of phenotypic methods to detect MBL-producing isolates in hospital labs seems necessary.

کلمات کلیدی:

(Pseudomonas aeruginosa, Metallo-beta-lactamases (MBL), Multi-drug resistance (MDR

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