

عنوان مقاله:

Molecular detection of AdeFG efflux pump genes in clinical isolates of *Acinetobacter baumannii* and their role in antibiotic resistance in Tehran

محل انتشار:

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

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خلاصه مقاله:

Introduction and Objectives: *Acinetobacter baumannii* is one of the most important causes of hospital bacterial infections in the world. recently antibiotic-resistant strains of *A. baumannii* have proliferated, which may be due to the efflux pumps. **Materials and Methods:** In this study, 200 clinical Isolates from ulcer, pus, sputum, and blood were collected in Mostafa Khomeini, Tohid and Motahari hospitals in Tehran, and their identity was verified by conventional standard biochemical tests. Then, the antibiotic-sensitivity pattern was determined by the disc diffusion method in the presence and absence of efflux pump inhibitors in samples according to the CLSI instructions. AdeFG efflux pump genes in samples were identified by PCR method. **Results:** In this study, 60 isolates of *A.baumannii* bacteria were identified based on biochemical differential tests. The identity of all samples was verified by PCR and blaOXA-51-like gene amplification methods. Investigation of the antibiotic-resistance of samples showed that 98.34% of the samples were resistant to the three antibiotics of ciprofloxacin, norfloxacin and levofloxacin. According to results the of PCR method, 100% of the 60 *A. baumannii* samples involved the AdeF gene and 76.66% involved the AdeG gene. **Conclusion:** The results of this study indicate that resistance to all three antibiotics of ciprofloxacin, norfloxacin and levofloxacin exists in AdelaFG gene-carrying strains due to the efflux pump and they have a significant relationship.

.The role of other factors and mechanisms involved in inducing the resistance should not be ignored

کلمات کلیدی:

Acinetobacter baumannii, efflux pump, antibiotic resistance, AdeFG

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