

عنوان مقاله:

Molecular Detection of ISAbat among Carbapenem Hydrolyzing Class D β -Lactamases Acinetobacter baumannii Strains Isolated from Patients in Tehran Hospitals

محل انتشار:

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خلاصه مقاله:

Background and Aims: Acinetobacter baumannii is an opportunistic pathogen that has acquired a high rate of antibiotic resistance. Identification of the major elements increasing the expression of resistance genes while having a role in their transmission, can help us control the A. baumannii infections. This study aimed to determine the prevalence of ISAbat in A. baumannii strains which include group D beta-lactamase genes among hospitalized patients. **Materials and Methods:** From August 2014 to April 2015, 105 A. baumannii strains were collected from different clinical samples of patients in 5 hospitals in Tehran. The confirmation of strains was done by phenotypical tests and existence of blaOXA-51-like gene. Antibiotic susceptibility pattern of the isolates were performed by Disc Diffusion Test (DDT) and Minimum Inhibitory Concentration (MIC) according to the CLSI. ESBL producing strains were recognized with Combined Disc Diffusion Test (CDDT) while the presence of OXA genes and ISAbat and ISAbat were analyzed using PCR reactions. **Results:** The result of this study showed that the highest and lowest rates of antibiotic resistance belonged to cefotaxim (100%) and colistin (99.05%), respectively. A total of 55 isolates (54.5%) were capable of producing ESBL. Unlike the blaOXA-51-like gene, which was not found in any of the isolates, blaOXA-51-like- was present among all the isolates. Prevalence of blaOXA-23-like and blaOXA-24-like genes were 103 (98.09%) and 68 (64.76%), respectively and the frequency of ISAbat and ISAbat were 105 (100%) and 97 (92.38%), respectively. **Conclusions:** The existence of additional elements as effective factors, can increase the expression of resistance genes and, therefore, help them to be mobile and transmitted between bacteria. Determination of these elements is, therefore, necessary for controlling infections

کلمات کلیدی:

اسینتوباکتر, Acinetobacter baumannii, Antibiotic resistance, Carbapenems, CHDLs, ISAb_a^۲, ISAb_a^۲, CHDLs, کارباپنم, مقاومت آنتی بیوتیکی

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