عنوان مقاله:

Frequency of higBA and relBE Toxin-Antitoxin System in multiple drug resistant Acinetobacter baumannii, isolated from burn wound infections

محل انتشار:

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

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خلاصه مقاله:

Introduction and Objectives: Acinetobacter baumannii is an opportunistic pathogen which due to the development of multi-drug resistant infections and the ability to form biofilms, especially in patients with burn wound infections. TA systems are combined of a protein toxin and its cognate antitoxin, which may be an RNA or a protein. type II TA systems were first discovered on plasmids in the mid-1980s.One of the most effective genes in the production of biofilms and antibiotic resistance is higBA and relBE. These genes are located on the plasmids in the A. baumannii, where antibiotic-resistant genes are also present. The study aims to determine the frequency of the higBA and relBE genes in the bacteria that isolated from burn wound infections which are multi-drug resistant. Materials and Methods: Biochemical and molecular tests were used for identification of the A. baumannii and antibacterial susceptibility test was performed using disk diffusion methods. The higBA and relBE toxin-anti toxin gene was detected in the isolates by PCR molecular method. Result: The results of PCR on higBA gene showed that 7.91%of the isolates possess the gene. The results of PCR on relBE gene showed that 94.96% of the isolates possess the gene. Of the 11 isolates with higBA gene, only two cases did not have the relBE gene. Conclusion: Our results reflect the high frequency of higBA and relBE genes in antibiotic resistance in bacteria.

کلمات کلیدی:

toxin-antitoxin system, higBA, relBE, multi drug resistant

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