

عنوان مقاله:

Molecular Study of csu AB operon Responsible for the biofilm Formation in Acinetobacter baumannii Isolates in Qom

محل انتشار:

سیزدهمین کنگره بین المللی میکروب شناسی بالینی استاد البرزی (سال: 1398)

تعداد صفحات اصل مقاله: 1

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خلاصه مقاله:

Background and Objectives: Acinetobacter baumannii, gram-negative cocobacillus, negative oxidase, non-motility and obligate aerobic are widely distributed in nature. The low requirement of this bacterium for its nutrients and its ability to use different carbon sources have increased its presence in different parts of the hospital. Acinetobacter baumannii, as an opportunistic pathogenic bacterium, is responsible for a variety of nosocomial infections, such as bacteremia, pneumonia, urinary tract infections, etc., and is widely known to cause infections in hospitalized patients, especially in ICU, surgery and burn wards. The ability of biofilm formation in Acinetobacter baumannii is considered as one of the main virulence factors of this bacterium which has the ability to grow in a variety of natural, clinical and environmental conditions, increasing bacterial resistance to antimicrobial agents and antibacterial agents. According to the latest WHO report in September 2017, Acinetobacter baumannii is considered one of the most important public health threatening bacteria. One of the important factors related to biofilm in Acinetobacter baumannii is the expression of the csu AB system, which is regulated by a two-component B fm S / B fm R system. In the present study, we have tried to investigate the expression of this gene in clinical isolates .
Materials and Methods: 108 clinical isolates were collected from the hospitalized patients in different wards of Qom hospitals by Ms. Zohreh Sariikhani from 2012 to 2013. Clinical specimens included: urine, blood, burn wounds, surgical wounds, stools, and respiratory secretions. Diagnostic tests (Gram stain, McCann, TSI, catalase, oxidase, citrate, MR / VP, oxidative - fermentative (OF) and SIM) were performed to confirm the isolates. The confirmed isolates were then screened for the presence of csu A and B genes by PCR. The primers of the target genes were designed and used for molecular diagnosis. The biofilm formation ability of the isolates was determined by microplate method and the results were evaluated by Elisa Reader. The read absorption rates were strong ($0.27 <$), moderate ($0.27 > \rightarrow 0.13$) and weak ($0.13 > \rightarrow 0.07$) and very poor (0.07), respectively.
Results: Of 108 Acinetobacter baumannii isolates, 65 (60%) had csuA gene, and 53 (49%) had csuB gene. Also, 49 isolates (45.3%) produced strong biofilm, 27 isolates (25%) produced moderate biofilm, 28 isolates (26%) produced weak biofilm and 4 isolates (3.7%) had no biofilm forming ability. **Conclusion:** The results ... showed that on average at least 50% of the isolat

کلمات کلیدی:

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