عنوان مقاله:

Frequency of biofilm associated genes among S. aureus isolated from nasal carriers in two teaching hospitals in Yasuj city by PCR method

محل انتشار:

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

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خلاصه مقاله:

Introduction and Objectives: Staphylococcus aureus is one of the most commonly bacterial pathogens can colonize anterior nares. Biofilm formation is one of the most important problem in treatment of S. aureus infection. Biofilm production by S. aureus cause more colonization and also development of antibiotic resistance. The aim of this study was to investigate the frequency of biofilm related genes among S. aureus isolated from anterior nare of Health care workers of Shahid Beheshti and Imam Sajjad hospital in Yasuj city in 2016. Materials and Methods: In this cross-sectional study, 143 isolates of Staphylococcus aureus were collected from the anterior nares of HCW of Shahid Beheshti and Imam Sajjad hospitals in Yasuj city. Polymerase Chain reaction was used to detection of biofilm related genes such as: bap, clfA, fnbA and icaD.Results: The fnbA gene was the most frequent gene detected in 125 (87.41%) of S. aureusisolates. The icaD and clfA genes detected in 60.13%and 57.5% of isolates respectively. The bap gene was not detected in any isolates. In addition, none of the tested genes were identified in 16 (11.2%) of isolates. Genetic patterns showed that icaD / fnbA / clfA gene pattern with the highest frequency identified in49% of isolates and followed by the fnbA, icaD / fnbA and fnbA / clfA gene patterns detected in 20.3%, 11.2% and 7% of isolates respectively. The clfA gene pattern identified in only 1.4% of isolates. Conclusion: Regarding to the high prevalence of biofilm related genes in S. aureus isolates and also the importance of biofilm in colonization, adopting effective treatment and control protocols are necessary. Continues observation for infection control program is essential for spreading of disease and infection control.

کلمات کلیدی:

Biofilm related genes, Staphylococcus aureus, Nasal carriers