عنوان مقاله:

Prevalence of erm Gene among Clinical Isolates of Staphylococcus aureus in Shahrekord, Iran

محل انتشار:

مجله دانشگاه علوم پزشکی کرمان, دوره 25, شماره 1 (سال: 1397)

تعداد صفحات اصل مقاله: 10

نویسندگان:

Kourosh Naderi - *Department of Microbiology, School of Medicine, Shahrekord University of Medical Sciences, Sharekord, Iran*

Fahimeh Ghanbari - *Ph.D. student, Department of Genetic, School of Medicine, Shahid Saddoghi University of Medical Sciences, Yazd, Iran*

Farzad Khademi - *Assistant of Professor, Department of Microbiology, School of Medicine, Ardabil University of Medical Sciences, Ardabil, Iran*

Behnam Zamanzad - *Professor, Department of Microbiology, School of Medicine, Shahrekord University of Medical Sciences, Sharekord, Iran*

خلاصه مقاله:

Background: Development of drug resistance to Staphylococcus aureus (S. aureus) has led to the use of older antibiotics such as macrolide-lincosamide-streptogramin B (MLSB) for the treatment of infections. MLSB resistance can be caused by several mechanisms, however, one of the predominant reasons is target modification mediated by erm genes. The objective of this study is to determine the prevalence of erm genes and the frequency of constitutive MLSB (cMLSB), inducible MLSB (iMLSB), and MS phenotypes using D-test and polymerase chain reaction (PCR) methods. Methods:D-test was performed on ۱۱۰ clinical specimens of S. aureus collected from Kashani and Hajar Hospitals in Shahrkord from October ۲۰۱۴ to May ۲۰۱۵. After sampling, DNA extraction was performed by simple boiling method and, in order to detect erm genes, multiplex PCR was carried out on erythromycin resistant isolates using specific primers. Results:The result of this study revealed that among ۱۱۰ S. aureus isolates examined, ۳۵ (۳۱.۸%) were MRSA and frequency of cMLSB, iMLSB, and MS resistant phenotypes were ۲۲ (۲۰%), ۹ (۸.۲%), and ۲ (۱.۸%), respectively. The genes ermA, ermB, and ermC were detected in ۲۷ (۲۴.۵%), ۲۸ (۲۵.۴%), and ۲۶ (۲۳.۶%) isolates. Conclusion:This study demonstrated that cMLSB was the most common phenotype among isolated S. aureus. Moreover, another interesting point to notice in our study was the high frequency of the ermB gene in iMLSB .resistant phenotypes

کلمات کلیدی:

Staphylococcus aureus, D-test, Erm gene, Macrolide-lincosamid-streptogramin