Detection of Class I and Class II Integrons in Multi Drug Resistance Isolates of Staphylococcus arueus in Guilan

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Background and aim: Staphylococcus aureus is a widespread commensal bacterium and pathogen. In recent years, it has become more widely determined the role of integrons in the transfer of resistant antibiotic genes. The aim of this study was to determine the multiple antibiotic resistance patterns and to detect class I and II integrin among isolates of Stanafilococcus aureus. Materials and Methods: 66 clinical isolates of Staphylococcus aureus were collected blood samples, urine, articular fluid, phlegm, wound and abscess in patients referred to the medical diagnostic laboratory and transferred to the laboratory. Antibiotic susceptibility of Staphylococcus aureus to 18 different antibiotics was test using the Kirby-Bauer disk according to the CLSI table. PCR test was performed to find the class 1 and 2 integrin genes. Findings: Out of 66 isolates of Staphylococcus aureus, 60 strains isolates (91%) had multiple antibiotic resistance. PCR and sequencing indicated that 51 (85%) of these isolates were positive for intI gene and 18 (30%) for IntII gene. Conclusion: The results of the current study demonstrated that the prevalence of class I and class II integrons and spread of antibiotic-resistant strains is a serious concern for the future of society.Integrons and spread of antibiotic-resistant strains is considered a serious concern for the future of society.

Keywords : Integrone, Multiple Antibiotic Resistance, Staphylococcus aureus.