عنوان مقاله:

Antibiotyping and Genotyping of Pseudomonas aeruginosa Strains Isolated from Mottahari Hospital in Tehran, Iran by ERIC-PCR

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خلاصه مقاله:

Background: Pseudomonas aeruginosa has become the most common cause of infections in burn patients. The aim of this study was to investigate the antibiotyping and genotyping of P. aeruginosa strains isolated from burn patients in Mottahari hospital during June-October 2016.Materials and Methods: A total of 78 P. aeruginosa strains were collected from wound infected patients. Identification of the isolates was performed by biochemical tests and confirmed by specific 16srDNA PCR. Antimicrobial susceptibility testing was done by disk diffusion method according to the CLSI guidelines. The isolates were then evaluated for genotyping by ERIC-PCR.Results: From a total of 78 collected isolates, 77 isolates (98.7%) were confirmed as P. aeruginosa by specific PCR. We found 4 antibiotypes. The highest resistance was observed to imipenem and gentamicin (~100%), and the most sensitivity was shown to colistin (100%). Overall, MDR phenotype was observed in most of the isolates (98.7%). The PCR of ERIC box produced 52 different patterns and 3 main clusters. Also, 59 (83%), 2 (3%), and 9 (13%) isolates were included in Cluster A, B, and C, respectively, and Cluster A was the predominant ERIC profile.Conclusion: The high resistance to antibiotics in our study may be due to their abundant use as the prophylactic or treatment regimen in wound infections. So appropriate use of antibiotics seems necessary, and colistin is a proper choice for treatment of burn infection. In genotyping, 3 main clusters and 52 different patterns were shown. The majority of the P. aeruginosa strains isolated from burn patients were related and belonged to Cluster A.

کلمات کلیدی:
P. aeruginosa, Burns, Genotyping technique

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