

عنوان مقاله:

Determination of genetic diversity of type IV pili among *Pseudomonas aeruginosa* isolated from burn patients of Guilan province

محل انتشار:

نخستین همایش ملی یافته های نوین میکروبیولوژی (سال: 1394)

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خلاصه مقاله:

Introduction: Type IV pili (TFP) are important colonization factors of the opportunistic pathogen *Pseudomonas aeruginosa* (*P. aeruginosa*), involved in biofilm formation and attachment to host cells. *P. aeruginosa* TFP are divided into five distinct phylogenetic groups. Each pilin allele is stringently associated with distinct accessory genes that allow identification of the allele by specific PCR. The invariant association of the pilin and accessory genes implies horizontal transfer of the entire locus. This study undertook an analysis of TFP alleles in burn isolates of *P. aeruginosa*. **Material and Methods:** In this study 50 isolates were collected from burn patients in Velayat hospital, Rasht, Guilan province. 35 isolates were identified as *P. aeruginosa* using morphological and biochemical methods. The prevalence of *pilA*, *tfpO*, *tfpY*, *tfpW* and *tfpZ* genes in *P. aeruginosa* strains were amplified by PCR using specific primers. **Results:** The results showed that 26 out of 35 isolates had *tfpY* gene, 4 isolates *tfpZ*, 1 isolate *tfpO* gene, 4 isolates did not have any accessory genes that it means they have group II pilins of TFP and none of the isolates had *tfpW* gene. **Conclusion:** In conclusion, the prevalence of isolates with group III pilin genes that contained *tfpY* as accessory gene were more than other strains in burn patients. This information could be useful for comprehensive pilin-based vaccine design.

کلمات کلیدی:

Pseudomonas aeruginosa, pilin accessory genes, burn patients, Type IV pili

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