

عنوان مقاله:

Evaluation of Type IV Pilin Sub Groups in *Pseudomonas aeruginosa* Isolated from Environmental Samples, Cystic Fibrosis and Burn Patients

محل انتشار:

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خلاصه مقاله:

Background and Aim: Type IV pilin molecule in *Pseudomonas aeruginosa* with wide functions, has important role in the diversity of the bacterial genome. According to the latest classification, Type IV pilin is divided to two main subtypes; IVa, IVb. The major subunit encoding Type IV pilin subtypes; IVa, IVb is pilA and pilS2 genes respectively which serve as a marker for the detection of the Type IV pilin subtypes. The purpose of the current study was to evaluate the frequency of pilA and pilS2 gene in cystic fibrosis, burns, and environmental isolates. **Materials and Methods:** The samples for *P.aeruginosa* were collected from cystic fibrosis, burns, and environment wastewater during the April 2013 to December 2013. Samples were cultured and identified using microbial and biochemical methods. DNA of isolates was extracted by commercial kit. PCR was performed using specific primers. Statistical analysis was done using SPSS 17.0 software. **Results:** A total of 100 *P.aeruginosa* isolates were collected; 30 cystic fibrosis, 30 burn, 40 environmental. The prevalence of the pilA gene were 63.3% , 56.7% and 45/2% for cystic fibrosis, for burns and environmental strains . The PilS2 gene frequency was 57.5% of the environmental isolates, 67.5% of cystic fibrosis strains and 73.3 % of the isolates were burned. **Conclusions:** Our study showed that the frequency of *P.aeruginosa* T4P major pilin subunits in our *P. aeruginosa* population was high. The incidence of pilS2 gene was greater than pilA and was more frequent in *Pseudomonas aeruginosa* isolated from hospitalized burn patients.

کلمات کلیدی:

Pseudomonas aeruginosa, type IV pilin, Cystic Fibrosis

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