

The Frequency of Fim Gene in Urinary Tract Isolated E.Coli

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Background & Objectives: Urinary tract infections (UTIs) are predominantly caused by strains of uropathogenic *Escherichia coli*. Most UPEC isolates encode filamentous adhesive organelles called type 1 pili that promote bacterial colonization and invasion of the host urothelium. The aim of this study is to detect fim adhesion-encoding gene using polymerase chain reaction (PCR) in *E.coli* isolated from urinary tract infection in Gorgan, north of Iran.

Methods: DNA extraction for 204 *E. coli* isolated from patients with UTI were carried out by boiling methods. The presence of fim adhesion-encoding operon was detected by specific primer using polymerase chain reaction (PCR) Methods.

Results: in our study 189 (92.6%) out of 204 *E.coli* isolates had fim gene. Antimicrobial resistancy in fim positive isolates for cotrimoxazole, nalidixic acid, and cefotaxime were respectively 62.4 %, 49.2 %, and 25.4 %. There was no relation between pap gene existence with sex, occupation, residency on town or village and ethnicity and symptoms of disease.

Conclusion: Frequency of pap gene in our region was in predicted range between 80 and 97 %. There was no relation between fim gene existence with our variables. Since attachment is the first step for infection and type 1 fimbriae is the most common virulence factor in UPEC , it can be suggested for vaccine against this disease.

Keywords: Urinary Tract Infection; *Escherichia coli*; Fimbriae

