

## عنوان مقاله:

Association between ESBLs Genes and Quinolone Resistance in Uropathogenic Escherichia coli Isolated from Patients with Urinary Tract Infection

## محل انتشار:

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## خلاصه مقاله:

**Aims:** Urinary tract infection (UTI) is one of the most common infections worldwide. The aim of this study was to investigate the association between the ESBLs genes and quinolone resistance in uropathogenic Escherichia coli strains isolated from patients with urinary tract infection. **Materials & Methods:** A total of 150 E. coli isolates were collected from patients with urinary tract infection, referring to Firouzgar hospital in Tehran, Iran. Antimicrobial susceptibility of isolates was determined by disk diffusion method. Double-disk diffusion test was performed for phenotypic identification of extended-spectrum  $\beta$ -lactamase (ESBL)-producing isolates. PCR was used for the detection of ESBL-encoding and quinolone (qnr) resistance genes. **Findings:** There was a high resistance rate to most of the studied antimicrobial agents. Phenotypically, 75% of the isolates produced an ESBL enzyme and were resistant to different antimicrobial classes. Overall, 83% of the isolates carried ESBL genes, especially blaTEM and blaCTX-M. Also, 75% of the isolates were positive for the presence of quinolone resistance genes, including qnrA, qnrB, qnrS, and qepA. The present study results indicated the association between the presence of various ESBLs genes and quinolone resistance in uropathogenic E. coli strains. **Conclusion:** Resistance patterns showed an increase in the incidence of antibacterial resistance in E. coli strains. The current study results indicated the high prevalence rate of ESBL-producing isolates and quinolone resistance genes. Simultaneous presence of genes responsible for antibacterial resistance has made the treatment of UTI more challenging than before.

## کلمات کلیدی:

Antimicrobial resistance; ESBL; Uropathogenic Escherichia coli; Quinolones

## لینک ثابت مقاله در پایگاه سیویلیکا:

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