

The Survey on the Rate of Resistance to Quinolones among ESBLs Producing Uropathogenic *Escherichia coli* Strains

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Background & Objectives: Urinary tract infections (UTIs) is one of the most common bacterial infections of childhood, and *Escherichia coli* is the predominant pathogen of UTIs. Extensive use of quinolones in treatment of UTIs has been associated with raising level of resistance. Quinolone resistance mostly originates from chromosomal mutations. In recent years, however, plasmid-mediated quinolone resistance has been reported in several parts of the world. The aim of this study was to determinate the prevalence of resistance to quinolones among ESBLs producing *E. coli* strains isolated from infants urinary tract infections.

Methods: in a cross sectional study, totally 120 isolates of *E. coli* isolated from children with UTI in Besat Hospital in Hamdan city from October 2009 to September 2010. Isolation of *E. coli* was based on standard biochemical methods. The isolate's quinolone sensitivity was determined using disc diffusion agar methods and ESBL production was confirmed phenotypically by the combined-disk synergy test based on CLSI criteria.

Results: Thirty three (27.3%) out of 120 isolates of *E. coli* were ESBLs producing and 87 (71.9%) isolates were non ESBLs producing *E. coli*. Fourteen (42.4%) isolates of ESBLs producing *E. coli* and 11 (12.6%) isolates of non ESBLs producing *E. coli* were resistant or semi sensitive to quinolones.

Conclusion: the present study has shown the high frequency of ESBLs producing uropathogenic *E. coli* and also higher prevalence of quinolone resistance among these isolates.

Keywords: *Escherichia coli*; ESBL; UTI; Quinolone; Resistance