Original Article

Antibiotic Resistance Patterns in Enteric and Uropathogenic Strains of *Escherichia* Coli in Children

Sedighi, I. (MD)
Associate Professor of Pediatrics, Department of Pediatrics, School of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran

Alikhani, MY. (PhD)
Associate Professor of Microbiology, Department of Microbiology, School of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran

Nakhaee, S. (MD)
Resident of Pediatrics, Department of Pediatrics School of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran

Karami, P. (MSc)
MSc of Microbiology, Hamadan University of Medical Sciences, Hamadan, Iran

Corresponding Author:
Alikhani, MY.

Email: alikhani@umsha.ac.ir

Received: 3 Sep 2013
Revised: 24 Nov 2013
Accepted: 30 Dec 2013

Abstract

Background and Objective: *Escherichia coli* is the most common cause of urinary tract infections in children and the leading cause of intra-abdominal infections (peritonitis and abscess) followed intestinal injuries. Urinary tract infection, including cystitis and pyelonephritis, is a common childhood infection. *E. coli* causes more than 90 percent of the community acquired and 50% of hospital acquired urinary tract infections; therefore, the determination of *E. coli* antibiotic susceptibility is a paramount importance to clinical and epidemiological purposes.

Material and Methods: In this cross-sectional study, 50 *E. coli* strains isolated from urine samples of children less than 7 years of age with urinary tract infections. They were compared for drug susceptibility testing by disc diffusion method with 50 strains of *Escherichia coli* isolated from stool samples of healthy children with the same age and sex pattern.

Results: The actual amount of drug sensitivity of uropathogenic and intestinal *Escherichia coli* strains to amikacin was 94 and 100%, nitrofurantoin 90 and 88%, gentamicin 66 and 94%, cefixime 56 and 60%, nalidixic acid 38 and 44% and to cotrimoxazole 28 and 32%, respectively.

Conclusion: the rate of resistance to gentamicin, Cefixime and nalidixic acid in urinary tract infection isolates were more than intestinal strains. The highest rate of drug resistance in urinary *Escherichia coli* isolates was associated with cotrimoxazole and the lowest one with amikacin.

Keywords: *Escherichia Coli*, Intra-Abdominal Infection, Drug Resistance, Urinary Tract Infection, Children

This paper should be cited as: Sedighi I, Alikhani MY, Nakhaee S, Karami P. [Antibiotic Resistance Patterns in Enteric and Uropathogenic Strains of Escherichia Coli in Children]. mljgoums. 2014; 8(Suppl 4): 42-48[Article in Persian]