OMICS Group Conferences
Accelerating Scientific Discovery

International Conference & Exhibition on
Vaccines & Vaccination

22-24 Nov 2011 Philadelphia Airport Marriott, USA

Risk factor analysis among Trimethoprim-Sulfamethoxazole resistant *Escherichia coli* isolates

Rashid Ramazanzadeh[1] and Majid Mansouri[2]

[1]Microbiology Department, Faculty of Medicine, Kurdistan University of Medical Science, Sanandaj
[2]Pediatric Department, Faculty of Medicine, Kurdistan University of Medical Science, Sanandaj

Background : Ttrimethoprim-sulfamethoxazole (TMP-SMX) can be used for treatments of several infection including respiratory tract infections, renal and urinary tract infections, gastrointestinal tract infections, skin and wound infections, septicemias and other infections caused by sensitive organisms.

Objectives: The aim of this study was to evaluate risk factors for acquisition of TMP-SMX resistance in *E. coli* strains among hospitalized patients, in a university hospital of Sanandaj-Iran.

Methods: The study type was case-control. A case patient was defined as a patient who had one isolate of TMP-SMX resistance *E. coli* strain. A control patient was defined as a patient who had one isolate of TMP-SMX sensitive *E. coli* strain. TMP-SMX resistance was determined by using of disk diffusion methods.

Results: Out of 343 total isolates, 197 (57.43%) were TMP-SMX resistance. The use of ventilator was a risk for acquisition of TMP-SMX resistance isolate (odds ratio [OR] = 3.037, [95% CI] =1.60 to 5.75, $P<0.000$). The use of catheter was a risk for acquisition of TMP-SMX resistance isolate (odds ratio [OR] =2.93, [95% CI] =1.15 to 7.43, $P<0.013$). There was significant correlation between days of stay in ward and TMP-SMX resistance ($p<0.003$).

Conclusions: The main risk factors associated for TMP-SMX resistance were use of ventilator, use of catheter and days of stay in ward. There is need more study to evaluate the role of this factor in order to control the spread of drug resistance.