

7th European Pediatrics and Pediatric Surgery

September 14-16, 2016 Amsterdam, Netherlands

Epidemiology and antimicrobial susceptibility of strains isolated from urinary tract infection outpatient

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Aim: Urinary tract infection (UTI) is the most common bacterial disease in children. The aim of this study was to compare the species distribution and antimicrobial susceptibility pattern of strains isolated from outpatient pediatric with urinary tract infection.

Materials & Methods: The study group consisted of children aged up to 12 years and lasted for two years (2014-2015). Organisms were isolated using standard culture techniques. A total of 201 isolates were tested. The antibiotic susceptibility profiles were analyzed for all strains using the Kirby Bauer disk diffusion susceptibility procedure and the VITEK 2 system for betalactam antibiotics, fluoroquinolones, carbapenems, aminoglycosides, nitrofurans, sulfonamides, fosfomycin (CLSI 2014, CLSI 2015).

Results: A total of 201 gram negative bacteria isolated from urine specimens, female infants were predominance. *Escherichia coli* 154 isolates (76,6%) was the most common strain, followed by *Klebsiella* spp. 19 strains (9,45%), *Proteus* spp. 18 strains (8,95%). The isolated bacteria were *Escherichia coli* (76,6%); 18 cases (11,6%) were found to be ESBL-producing organisms. *E. coli* isolates ESBL-producing were susceptible to carbapenems, nitrofurans, amikacin, fosfomycin. The large majority of *E. coli* strains were resistant to ampicillin. All isolates *Klebsiella* spp. and *Proteus* spp. were susceptible to carbapenems, fosfomycin and amikacin.

Conclusions: *Escherichia Coli* was the most common causative organism for pediatric UTI. Recurrent episodes of UTI was presented a risk of ESBL-producing and antimicrobial resistance. The majority of ESBL isolates were susceptible to carbapenems, fosfomycin and amikacin, these antibiotics were important therapeutic options for infections due to multidrug-resistant.

Biography

Elena Adela involved under treatments of pediatric diseases she is belongs to Pediatrics, Dr V Babes Foundation. Elena Adela educational institution is the University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj Napoca, Faculty of Medicine. She finished her postgraduate training courses. Cardiopulmonary resuscitation and pediatric cerebral", organized by the Romanian National Council for Resuscitation, University of Medicine and Pharmacy.

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