

**Conclusion:** Sustained surveillance of BSI allows detection of clinically relevant resistance patterns and outbreaks. BSI in Cambodian adults is mainly caused by difficult-to-treat pathogens. Our findings have important implications for treatment guidelines and urge for microbiological capacity building and solid interventions to contain antibiotic resistance.

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#### Antibiotic sensitivity patterns among ESBL UTIs in Sri Lanka



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**Background:** Extended-spectrum  $\beta$ -lactamase (ESBL) producing organisms causing urinary tract infections (UTI) are increasing in incidence and poses a major burden to health care requiring treatment with expensive antimicrobials and prolonged hospital stay. The prevalence of ESBL producing organisms particularly in the Asian region remains unknown. In a study carried out in a tertiary care center in India, 70/218 (32.1%) clinical isolates of Enterobacteriaceae were confirmed as ESBL. Of them *K. pneumoniae* were the most common ESBL producers (46.4%), followed by *E. coli* (31.7%). Previous studies to evaluate antibiotic susceptibility shows high sensitivity to meropenem (95-100%) with aminoglycoside susceptibility ranging from 45-60%. Objective of this study was to evaluate the antibiotic sensitivity patterns of ESBL UTIs in Sri Lanka.

**Methods & Materials:** Patients with ESBL-UTI admitted to Professorial Medical Unit, Colombo North Teaching Hospital, Ragama over a period of 6 months from January-July 2015 were recruited to the study. Their Urine culture and ABST reports were analysed after obtaining informed written consent.

**Results:** There were 52 patients who consented for the study; males 30 (57.7%), mean (SD) age 64.11 (12.59) years. The most common organisms causing the ESBL-UTI were *E. coli* in 44 (84.6%), followed by *Klebsiella* in 8 (15.4%). The ESBL organisms were mostly sensitive to carbapenems; Meropenem 50 (96.2%) and Imipenem in 38 (73.1%). The other sensitivity patterns were Amikacin in 30 (57.7%), Nitrofurantoin in 24 (46.2%) and Ceftriaxone in 2 (3.8%). None were sensitive to Ceftazidime. Meropenem resistance was found in 2 (3.8%) and were *E. coli*. These two patients had received multiple antibiotics including meropenem in the recent past for recurrent UTI.

**Conclusion:** It is evident from the above data that Carbapenems remain as the first line therapy for the majority of UTIs caused by ESBL producing organisms in the local setting. However 3.8% prevalence of meropenem resistance among the study population should draw attention of clinicians and needs implementation of measures

to prevent emergence and spread of carbapenem resistant ESBL organisms.

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#### Direct costs and length of stay in Carbapenem resistant versus Carbapenem sensitive *Klebsiella pneumoniae* infections in a tertiary care hospital



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**Background:** This study was carried out to find out the average direct hospitalization cost and length of hospital stay for patients infected with Carbapenem-resistant *Klebsiella pneumoniae* (CRKp) and compare it with that of patients infected with Carbapenem-sensitive *Klebsiella pneumoniae* (CSKp).

**Methods & Materials:** A cross sectional study was carried out from January–December 2014 and the data for hospitalization cost was collected for the patients with CRKp and CSKp infections from the medicine ICU for 72 patients admitted to the hospital. The data was analyzed for the site of infection, length of stay and average direct hospitalization cost which was then compared between the two groups.

**Results:** During the study period, 101 patients were diagnosed with *Klebsiella pneumoniae* infection. 61.79% of the infections were respiratory, 24.52% urinary tract-related, 13.2% systemic and 0.47% skin and soft tissue-related. The mean age of the study population was  $51.7 \pm 15.7$  years. The median length of stay for CRKp was 12 (11; 23) days as compared to 8 (5.2; 13.2) days in CSKp patients. The median direct hospitalization cost was calculated to be INR 43,274 (24,898; 16,0315) in case of CRKp versus INR 23,452 (12,489; 47,349) in CSKp patients.

**Conclusion:** It was observed that the average cost of overall therapy and the average no. of hospitalization days was higher in CRKp group compared to CSKp group. Antibiotic resistance is a growing phenomenon and the resistance to Carbapenems can lead to increased burden of morbidity and treatment cost for patients.

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