



# THE BULLETIN OF THE SRI LANKA COLLEGE OF MICROBIOLOGISTS

**INTERNATIONAL CONFERENCE ON  
INFECTIOUS DISEASES AND ANTIMICROBIAL  
RESISTANCE  
"COMMUNICATION AND COLLABORATION  
FOR CLINICAL EXCELLENCE"**

**08 - 11 AUGUST, 2018  
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## Proportion of carbapenemase production and selected associated factors among *Enterobacteriaceae* clinical isolates in two tertiary care hospitals

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### Introduction

*Enterobacteriaceae* is a large family of Gram negative bacilli causing a range of infections. Carbapenemase producing *Enterobacteriaceae* have been emerged as a global threat in healthcare. Many associated factors have been identified contributing to production of carbapenemases.

### Objectives

To detect the carbapenemase production in *Enterobacteriaceae* isolates from clinical specimens and to identify associated factors with carbapenemase production like age and gender of patients and the duration of hospital stay.

### Design, setting and methods

A descriptive cross sectional study was carried out using 120 clinical isolates of *Enterobacteriaceae* at Colombo South Teaching Hospital and Sri Jayewardenepura General Hospital from 22<sup>nd</sup> of November to 30<sup>th</sup> November 2017. All isolates were identified up to species level by API 20E kits. Resistance to carbapenem was detected using meropenem, imipenem and ertapenem. Modified Hodge Test (MHT) was performed to confirm the production of carbapenemases according to Clinical and Laboratory Standards Institute guidelines.

### Results

Out of 120 isolates, 14 (11.7%) were resistant to at least one of the carbapenems tested. Carbapenemase production was confirmed in 10(8.3%) isolates. Majority of the confirmed isolates were *Klebsiella* spp (6, 60.0%) followed by *Escherichia coli* (1, 10.0%), *Serratia marcescens* (1, 10.0%) and *Proteus mirabilis* (1, 10.0%). From carbapenemase producing isolates, 6 were from urine specimens (60.0%), 2 were from catheter tips (20.0%), 1 each from wound swab (10.0%) and bronchial aspirate (10.0%). Eight (80.0%) out of the carbapenemase producing *Enterobacteriaceae* harboring patients were

males and 8(80.0%) were aged above 50 years. Mean duration of hospital stay was 5.03 Days ( $\pm$ SD 12.287 days).

Being a male and age above 50 years were found to be of no significant association (P value=0.253, CI=95%, P value=0.955, CI=95%).

### Conclusion

The proportion of carbapenemase producing *Enterobacteriaceae* was 8.3%, emphasizing the importance of strengthening infection prevention and control strategies. Male gender and age above 50 years did not have significant association with occurrence of carbapenem resistant *Enterobacteriaceae*.

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### BK virus viraemia among the post kidney transplant patients at Nephrology and Transplant Unit, Teaching Hospital, Kandy – A single center experience of pre-emptive measures

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### Introduction

BK virus (BKV) is an ubiquitous human polyoma virus with seroprevalence of 60-90% among adult population worldwide. After primary infection it becomes latent in the genitourinary tract and reactivates with immunosuppression, hence become an important infection among the post kidney transplant patients. It causes a variety of clinical conditions ranging from asymptomatic viraemia with or without viruria to ureteral stenosis and obstruction, interstitial nephritis and subsequent graft damage and graft loss due to BKV allograft nephropathy. As there is no specific treatment, early detection and intervention is important.

To detect the prevalence of BK virus viraemia among post kidney transplant patients at Nephrology and Transplant Unit, Teaching Hospital, Kandy and to highlight the importance of BKV screening for early detection and necessary intervention.

### Method

All renal transplant patients at Nephrology and Transplant unit, Kandy were screened for BK virus at 1, 2,3,6,9, 12 months and then annually following transplant. Screening