



## COLONIZATION AND INFECTIONS OF CENTRAL VENOUS CATHETERS IN CANCER PATIENTS ADMITTED TO AN INTENSIVE CARE UNIT

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### Abstract

Central venous catheter (CVC) insertion is a common practice in medical care of patients with malignancies. However, CVCs get colonized with microorganisms leading to catheter related blood stream infection (CRBSI), with high morbidity and mortality. This study investigated microorganisms causing CRBSI and catheter colonization, their antibiotic resistance and factors associated with CRBSI at the National Cancer Institute, Maharagama. One hundred and seventy adult patients admitted to the intensive care unit (ICU) and with a CVC in-situ for >48 hours were included. Culture of peripheral blood, line blood and CVC tips were performed, and isolated microorganisms were identified and tested for antibiotic susceptibility. Incidence of CRBSI was 5.24 per 1,000 catheter days and 10 patients were detected to have CRBSI. Predominant pathogens were *Klebsiella* (5/10) and *Pseudomonas* species (3/10). Eighty-nine catheters (52.35%) were colonized, and it was mainly due to Coagulase Negative Staphylococci-CoNS (58.43%). Other colonizers were *Candida* species (7.87%), *Pseudomonas* species (6.74%) and *Acinetobacter* species (6.74%). Eighty percent (4/5) of *Klebsiella* species were resistant to piperacillin/ tazobactam while 66.66 % (2/3) of *Pseudomonas* species were resistant to meropenem. Mean duration of ICU stay in patients with CRBSI was 5.1 days while it was 2.94 days in patients without CRBSI which was statistically significant ( $p = 0.0006$ ). Local complications were found only in one patient with CRBSI. In conclusion, although CoNS is the leading cause of colonization, Gram negative bacteria like *Pseudomonas* and *Klebsiella* species are the commonest organisms causing CRBSI in this patient population. Antibiotic resistance is common in bacteria causing CRBSI and colonization. ICU stay of more than 5 days is significantly associated with CRBSI.

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