Risk Factors and Incidence of Central Line-Associated Blood Stream Infection outside Intensive Care Unit: A Surveillance Study from University Hospital in Thailand

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**Background:** There is a lack of information about epidemiology and risk factors contributing to central line-associated bloodstream infection (CLABSI) outside of the intensive care unit (ICU). This information is important for the surveillance and prevention of infection in hospital. Many central venous catheters (CVCs) are found outside the ICU. Nowadays, studies have been conducted in the ICU. Rates of CLABSI in non-ICU settings appear to be high as in ICU settings. To effectively prevent CLABSI, we need to understand the epidemiology and risk factors associated with the infection.

**Objective:** We aimed to study risk factors and incidence of central line-associated bloodstream infection in the non-ICU setting.

**Methods:** A prospective surveillance study was conducted from January to December 2017. All patients with CVC in non-ICU were identified. Basic information of patients and data about CVC (e.g. type of CVC, position, duration, pathogens causing CLABSI) was recorded. The epidemiology and risk factors of CLABSI were analyzed.

**Results:** A total of 260 patients with CVC were identified. The most common catheter type was a short-term catheter. The most common insertion site was the internal jugular vein. The main purpose of catheter was hemodialysis. A CLABSI was diagnosed in 7 patients. Most common pathogen was coagulase-negative staphylococcus. The risk factors were associated with pre-existing underlying diseases and duration of admission.

**Conclusion:** The incidence rate of CLABSI is estimated at 3%, with the association with pre-existing underlying diseases and duration of admission.

**Keywords:** CLABSI, CRBSI, CVC, Non-ICU, Infection