

Abstract:

Despite increasing use, the exact prevalence and predictors of peripherally inserted central catheter-associated bloodstream infection (PICC-CLABSI) in hospitalized patients with cancer are not elucidated. This retrospective cohort study included consecutive patients who underwent peripherally inserted central catheter (PICC) placement in 4 institutions (during 12 months in 3 hospitals and 10 months in 1 hospital). The prevalence of PICC-CLABSI was evaluated. The association between predictors and PICC-CLABSI were analyzed using Cox proportional hazards regression models and Kaplan-Meier survival analysis with log-rank tests. During the study period, 539 PICCs were inserted in 484 patients for a total of 10,841 catheter days. PICC-CLABSI occurred in 25 (5.2%) patients, with an infection rate of 2.31 per 1000 catheter days. PICC for chemotherapy (hazards ratio 11.421; 95% confidence interval (CI), 2.434-53.594; $P = .019$), double lumen catheter, and PICC for antibiotic therapy were associated with PICC-CLABSI. PICC for chemotherapy or antibiotics, and number of catheter lumens are associated with increased risk of PICC-CLABSI in cancer patients. Careful assessment of these factors might help prevent PICC-CLABSI and improve cancer patients care.

Reference:

Lee, J.H., Kim, M.U., Kim, E.T., Shim, D.J., Kim, I.J., Byeon, J.H. and Kim, H.B. (2020) Prevalence and predictors of peripherally inserted central venous catheter associated bloodstream infections in cancer patients: A multicentre cohort study. *Medicine*. 99(6), p.e19056. doi: 10.1097/MD.0000000000019056.