

ANTICOAGULANT PRIMARY PROPHYLAXIS

RISK OF VENOUS THROMBOEMBOLISM ASSOCIATED WITH PERIPHERALLY INSERTED CENTRAL CATHETERS IN CANCER PATIENTS RECEIVING CHEMOTHERAPY: A REAL-WORLD SINGLE-CENTRE EXPERIENCE

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Background. Peripherally inserted central catheters (PICCs) are frequently utilized for the administration of chemotherapy in oncology patients. However, venous thromboembolism (VTE) is a recognized complication associated with PICC, which can result in significant morbidity and mortality if not promptly identified and treated. The existing literature demonstrates considerable variability in the reported incidence of VTE in this setting. This study aimed to assess the overall incidence of VTE in ambulatory cancer patients receiving chemotherapy via PICC and determine whether the implementation of prophylactic measures is warranted in this population.

Methods. Adult patients who underwent PICC placement from January to February 2024 were identified through institutional records. A retrospective review of electronic medical records was conducted for demographics, cancer type, chemotherapy, anticoagulant or antiplatelet therapy use, and the incidence of VTE within one year following catheter insertion. Standard statistical methods were applied, including univariate and multivariate analysis.

Results. A total of 100 patients underwent PICC insertion during the study period. Of these, 17% experienced an epi-

sode of VTE, comprising 10% of DVT and 7% PE. 80% of the DVTs were PICC-associated. The mean age was 63.9 years (± 10.95). The most common cancers were colorectal (n8), breast (n4), stomach (n2) and pancreas (n2). No association between cancer type and risk of thrombosis ($p = 0.238$). Twelve patients were on anticoagulation therapy before PICC insertion (half due to thrombosis). Only one of them experienced a subsequent thrombotic event. Patients taking anticoagulation therapy were 54.1% less likely to develop thrombosis. Eleven patients were taking antiplatelet therapy, and none of them developed thrombosis.

Conclusions. This study identified a 17% incidence of VTE among patients with PICC line, with DVT and PE being the most frequently observed events. Although no statistically significant association was found between cancer type and VTE occurrence, patients receiving anticoagulation therapy demonstrated a reduced risk of VTE. However, this association did not reach statistical significance. These findings underscore the need for further investigation into the role of prophylactic strategies, particularly among patients not receiving anticoagulant or antiplatelet therapy—to mitigate the risk of PICC-related VTE in individuals undergoing chemotherapy.