

Abstract:

PURPOSE: Central venous access devices (CVADs) are commonly employed in the management of cancer patients. While having several benefits they are associated with significant risks. We reviewed the incidence and risk factors for catheter-related thrombosis (CRT) in cancer patients with CVADs.

METHODS: We performed a prospective observational cohort study of adult patients with cancer requiring a CVAD between January 12 004 and June 292 016. The rate of, and risk factors for the development of, symptomatic catheter-related thrombosis were evaluated.

RESULTS: 4920 central lines were inserted into 3130 patients. The incidence of CRT was 3.6%. CRT developed a median of 12 days following line insertion. PICCs were associated with the highest rates of CRT (HR 22.2, 95% CI 2.9-170.6). Older age groups developed CRT at lower rates (HR 0.57; 95%CI 0.39-0.84 for age 50-61 years, and HR 0.63; 95% CI 0.45-0.89 for age > 61 years) compared to age < 50 years. Increased CRT was seen in patients with prior CRT (HR 1.81; 95%CI 1.19-2.77). There was a trend to more for cancer subtype with a Khorana tumor score of 1 compared to those with a score of 0 (HR 1.37, 95% CI 1.00-1.88). Hodgkin lymphoma, germ cell and oesophagus cancers had the highest CRT rates. Side of insertion was not associated with thrombosis risk (HR 0.77; 95% CI 0.57-1.05 P = 0.10).

CONCLUSIONS: Age < 50, PICC lines and prior CRT were associated with highest CRT rate. Cancer subtype and insertion side were not predictive of thrombosis.

Reference:

Ellis, M.L., Okano, S., McCann, A., McDowall, A., Van Kuilenburg, R., McCarthy, A.L., Joubert, W., Harper, J., Jones, M. and Mollee, P. (2020) Catheter-related thrombosis incidence and risk factors in adult cancer patients with central venous access devices. Internal Medicine Journal. February 11th. doi: 10.1111/imj.14780. (Epub ahead of print).