In pediatric oncology, the diagnosis of a hematologic malignancy and presence of a central venous catheter (CVC) have been identified as significant risk factors for the development of a venous thromboembolism (VTE)" Onyeama et al (2018).

Abstract:
In pediatric oncology, the diagnosis of a hematologic malignancy and presence of a central venous catheter (CVC) have been identified as significant risk factors for the development of a venous thromboembolism (VTE). There remain little data regarding CVC factors associated with CVC-related VTE. Using the VTE and oncology database in a quaternary care center, a retrospective cohort study was conducted in children below 18 years old with hematologic cancer from November 5, 2012 to April 4, 2016. Patient, CVC factors, and VTE occurrence were analyzed to identify significant patient and CVC factors associated with the development of clinically identified CVC-related VTE. Utilizing the χ, Mann-Whitney, and the Fisher exact tests, patient factors were compared across VTE yes/no groups. Of the 198 study patients, 22 VTE cases were identified. Eighteen VTE events were CVC-associated, occurring in 9% of study population. Peripherally inserted central catheter lines and older ages were associated with VTE. The use of tissue-plasminogen activator for CVC occlusion was associated with decreased VTE rates, suggesting a protective potential.

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