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Abstract:

Patients with acute leukemia frequently develop catheter-related thrombosis (CRT) despite concurrent thrombocytopenia. The incidence, treatment and outcomes of this complication are poorly documented. We undertook this study to determine the incidence of CRT in patients with acute leukemia and assess the safety and effectiveness of a treatment strategy using a platelet-adjusted low molecular weight heparin (LMWH) dosing protocol. Patients (18 years and older) with newly diagnosed acute leukemia from January 2014 to December 2015 who received central venous catheters were included. The clinical data were reviewed up to 12 months from acute leukemia diagnosis to capture objectively documented CRT events. The outcome events including recurrent venous thromboembolism (VTE), bleeding events, infectious or mechanical complications, and death were reported up to 3 months from the time of CRT diagnosis. The incidence of CRT among 214 patients was 10.7% (23 patients) in the first 12 months after acute leukemia diagnosis. Among 18 patients who were treated with anticoagulation, 14 (78%) received reduced LMWH dosing due to concurrent thrombocytopenia. There were no recurrent VTE episodes, but 3 patients experienced bleeding events while on anticoagulation. Fifteen patients (83%) completed a minimum of 3 months anticoagulation. Twelve patients (52%) experienced an infectious complication, which was the main reason for catheter removal. Deaths occurred in 2 patients, related to underlying acute leukemia during 3 months period following CRT. Symptomatic CRT is frequent in patients with acute leukemia. Platelet-adjusted LMWH dosing may be effective and well tolerated despite thrombocytopenia.

Reference:

Htun, K.T., Ma, M.J.Y. and Lee, A.Y.Y. (2018) Incidence and outcomes of catheter related thrombosis (CRT) in patients with acute leukemia using a platelet-adjusted low molecular weight heparin regimen. *Journal of Thrombosis and Thrombolysis*. July 16th. .

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