

Pediatric oncology patients with tunneled central venous catheters (CVCs) are at increased risk to develop venous thromboembolic events (VTEs), but the true prevalence of (a)symptomatic VTE is unknown” Schoot et al (2016).

Abstract:

BACKGROUND: Pediatric oncology patients with tunneled central venous catheters (CVCs) are at increased risk to develop venous thromboembolic events (VTEs), but the true prevalence of (a)symptomatic VTE is unknown. Aim of this study was to evaluate the prevalence of (a)symptomatic VTE in pediatric oncology patients with tunneled CVCs.

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PROCEDURE: All patients were included in the Aristocaths study: a randomized controlled multicenter trial investigating the prophylactic effect of 70% ethanol locks on CVC-associated bloodstream infections (CABSIs) were eligible for this study. We assessed the following outcomes: (i) symptomatic VTE and (ii) asymptomatic CVC-related VTE (using ultrasound). Follow-up was 6 months, unless patients developed one of the following events: VTE, CABSI, CVC removal, or death.

RESULTS: We included 305 patients (hematologic malignancy, n = 148; solid tumor, n = 157), median age 9 years (range, 1-18 years). Symptomatic VTE was detected in 8 of 305 patients (2.6%; 95% confidence interval : 1.1-5.1%), which was related to the CVC in three patients. Patients (185/305) were evaluated with US: 11 of 185 (5.9%; 95% CI: 3.0-10.4%) patients had asymptomatic CVC-related VTE.

CONCLUSIONS: Prevalence of both symptomatic VTE and asymptomatic CVC-related VTE was low compared to other studies, which may be explained by the inclusion of patients with solid tumors, reduction of CABSI by ethanol, use of tunneled CVCs, and use of US.

Reference:

Schoot, R.A., van de Wetering, M.D., Stijnen, T., Tissing, W.J., Michiels, E., Abbink, F.C., Raphael, M.F., Heij, H.A., Zwaan, M., Lieverst, J.A., Caron, H.N. and van Ommen, H. (2016) Prevalence of Symptomatic and Asymptomatic Thrombosis in Pediatric Oncology Patients With Tunneled Central Venous Catheters. *Pediatric Blood & Cancer*. April 29th. .

doi: 10.1002/pbc.26036.

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