



To identify the interventions used to treat thrombotic events in long-term central venous catheters in pediatric patients with cancer” da Costa et al (2019).

Abstract:

CONTEXT: Thrombotic occlusion is 1 of the most frequent complications in catheters implanted in children.

OBJECTIVE: To identify the interventions used to treat thrombotic events in long-term central venous catheters in pediatric patients with cancer.

DATA SOURCES: Electronic searches were performed in the Cumulative Index to Nursing and Allied Health Literature, Cochrane Central Register of Controlled Trials, Latin American and Caribbean Health Sciences Literature, LIVIVO, PubMed, Scopus, Web of Science, Google Scholar, OpenGrey, and ProQuest databases. There were no restrictions on language or publication period.

STUDY SELECTION: This systematic review was performed in 2 phases and included clinical trials and observational studies on drugs used to treat thrombotic catheter events in pediatric patients with cancer. The review was reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis checklist, and the protocol was registered at PROSPERO (identifier CRD42018083555).

DATA EXTRACTION: The authors evaluated the quality of included studies using the Methodological Index for Nonrandomized Studies and Grading of Recommendations Assessment, Development and Evaluation methods. The meta-analysis was performed by using Stata software.

RESULTS: Ten studies were included. The drugs used to restore catheter function were alteplase, urokinase, and streptokinase. A meta-analysis of 6 studies revealed an overall restoration rate of 88% for alteplase.

LIMITATIONS: Reference studies were excluded when it was not possible to reliably extract data that met the inclusion criteria of this review. Sampling issues (absence of randomization, blinding, or a control group) were the main methodologic concerns for the included articles.

CONCLUSIONS: On the basis of the evidence obtained, thrombolysis is effective and potentially safe in this population.

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Reference:

da Costa, A.C.C., Vieira, N.N.P., Vasques, C.I., Ferreira, E.B., Guerra, E.N.S. and Dos Reis, P.E.D. (2019) Interventions for Occluded Central Venous Catheters: A Meta-analysis. *Pediatrics*. 144(6), p.e20183789; DOI: <https://doi.org/10.1542/peds.2018-3789>.

