



Asymptomatic central venous catheter (CVC)-related thrombosis in children varies in incidence from 5-69%” Jones et al (2018).

Abstract:

Asymptomatic central venous catheter (CVC)-related thrombosis in children varies in incidence from 5-69%. The rate of acute and long-term complications, such as Post Thrombotic Syndrome (PTS), from asymptomatic CVC-related thrombosis is unknown. This paper reports the outcomes of a prospective study of 189 children in paediatric intensive care unit that aimed to determine the frequency of asymptomatic CVC-related thrombosis during hospital admission, and the incidence of residual CVC-related thrombosis and clinically significant PTS two years later. Risk factors associated with CVC-related thrombosis were also identified. This study is distinct from previous work as children identified to have asymptomatic CVC-related thrombosis were not treated (clinical team kept blinded) and the entire cohort was followed for two years to determine the natural history of asymptomatic thrombosis. Ultrasounds of 146 children determined a 21.9% incidence of acute CVC-related thrombosis. Two children were symptomatic. No radiological thrombosis extension or clinical embolization occurred in the 126 children assessed at follow-up. Using two recognised PTS scales, clinically significant PTS was reported in two children (one symptomatic, one asymptomatic CVC-related thrombosis), however neither had functional impairment. Cardiac arrest was a risk factor for CVC-related thrombosis during admission and femoral CVC placement was predictive of residual thrombosis two years later. This study challenges the notion that critically ill children with asymptomatic CVC-related thrombosis require

anticoagulant treatment, as the results demonstrate that the incidence of acute or long-term complications is low. A larger confirmatory study of non-treatment of CVC related thrombosis in critically ill children is justified.

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Reference:

Jones, S., Butt, W., Monagle, P., Cain, T. and Newall, F. (2018) The natural history of asymptomatic central venous catheter-related thrombosis in critically ill children. *Blood*. October 30th. .

doi: 10.1182/blood-2018-05-849737.

