



“Study objective was to assess whether endogenous prothrombotic conditions contribute to the risk of CVL-related DVT in children.” Thom et al (2014).

Reference:

Thom, K., Male, C., Mannhalter, C., Quehenberger, P., Mlczoch, E., Luckner, D., Marx, M. and Hanslik, A. (2014) No impact of endogenous prothrombotic conditions on the risk of central venous line-related thrombotic events in children. Journal of thrombosis and haemostasis. August 16th. .

Do endogenous prothrombotic conditions increase CVC related DVT [@ivteam #ivteam](http://ctt.ec/16C67+)

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Abstract:

**BACKGROUND AND OBJECTIVE:** Central venous lines (CVL) are the major exogenous risk factor for deep venous thrombosis (DVT) in children. Study objective was to assess whether endogenous prothrombotic conditions contribute to the risk of CVL-related DVT in children.

**METHODS:** Cohort study of consecutive children with heart disease requiring CVL for perioperative care. CVL were inserted percutaneously in the upper venous system and patients received prophylaxis with continuous unfractionated heparin (50 u/kg/d). Blood

samples to test for prothrombotic conditions were collected prospectively and assayed in blinded fashion. Outcome assessment was by screening for DVT by venography, venous ultrasound, and echocardiography.

**RESULTS:** The study population consisted of 90 children, median age 2.7 years (0 months – 18 years). Prevalences of antithrombin deficiency, protein C deficiency, protein S deficiency, heterozygous Factor V Leiden, prothrombin G20210A mutation, methylenetetrahydrofolate C677TT genotype, hyperhomocysteinemia, lupus anticoagulant, anticardiolipin antibodies, increased levels of lipoprotein (a) were within the range reported for the general population. At least one prothrombotic condition was present in 38% children and combined abnormalities in 8%. The incidence of DVT was 28% (25/ 90), most of which were asymptomatic. None of the prothrombotic conditions showed a significant association with DVT. The population attributable risk, i.e. the risk of DVT in the overall population attributable to a specific condition, did not exceed 2.2%.

**CONCLUSION:** Prothrombotic conditions did not have an important impact on the risk of DVT in children with short-term CVL. The results of the study suggest that screening for prothrombotic conditions is not justified in this setting.

Other intravenous and vascular access resources that may be of interest (External links – IVTEAM has no responsibility for content).

Guide for intravenous chemotherapy and associated vascular access devices from Macmillan. CancerUK IV chemotherapy information.

