With increased awareness of central venous line-related thromboembolism, measures should be taken to reduce the number and duration of central line placements, and further studies addressing the need for thromboprophylaxis should be conducted" Wisecup et al (2015).

Abstract:

OBJECTIVES: With the apparent increase in venous thromboembolism noted in the pediatric population, it is important to define which children are at risk for clots and to determine optimal preventative therapy. The purpose of this study was to determine the risk factors for venous thromboembolism in pediatric patients with central venous line placement.

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METHODS: This was an observational, retrospective, case-control study. Control subjects were patients aged 0 to 18 years who had a central venous line placed. Case subjects had a central line and a radiographically confirmed diagnosis of venous thromboembolism.

RESULTS: A total of 150 patients were included in the study. Presence of multiple comorbidities, particularly the presence of a congenital heart defect (34.7% case vs. 14.7% control; $p < 0.005$), was found to put pediatric patients at increased risk for thrombosis. Additionally, the administration of parenteral nutrition through the central line (34.7% case

vs. 18.7% control; p = 0.03) and location of the line increased the risk for clot formation.

CONCLUSIONS: With increased awareness of central venous line-related thromboembolism, measures should be taken to reduce the number and duration of central line placements, and further studies addressing the need for thromboprophylaxis should be conducted.

Reference:

Wisecup, S., Eades, S. and Turiy, Y. (2015) Characterizing the Risk Factors Associated With Venous Thromboembolism in Pediatric Patients After Central Venous Line Placement. The Journal of Pediatric Pharmacology and Therapeutics. 20(5), p.358-66.

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