The use of central venous catheters (CVCs) in children is escalating, which is likely linked to the increased incidence of pediatric venous thromboembolism (VTE)” Jaffray et al (2017).

Abstract:

The use of central venous catheters (CVCs) in children is escalating, which is likely linked to the increased incidence of pediatric venous thromboembolism (VTE). In order to better understand the specific risk factors associated with CVC-VTE in children, as well as available prevention methods, a literature review was performed.

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The overall incidence of CVC-VTE was found to range from 0 to 74%, depending on the patient population, CVC type, imaging modality, and study design. Throughout the available literature, there was not a consistent determination regarding whether a particular type of central line (tunneled vs. non-tunneled vs. peripherally inserted vs. implanted), catheter material, insertion technique, or insertion location lead to an increased VTE risk. The patient populations who were found to be most at risk for CVC-VTE were those with cancer, congenital heart disease, gastrointestinal failure, systemic infection, intensive care unit admission, or involved in a trauma. Both mechanical and pharmacological prophylactic techniques have been shown to be successful in preventing VTE in adult patients, but studies in children have yet to be performed or are underpowered. In order to better determine true CVC-VTE risk factors and best preventative techniques, an increase in large, prospective pediatric trials needs to be performed.

Full Text

Reference:

Jaffray, J., Bauman, M. and Massicotte, P. (2017) The Impact of Central Venous Catheters on Pediatric Venous Thromboembolism. Frontiers in Pediatrics. January 23ed. 5:5. eCollection
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