



In this review, we focus on CVC-related VTE in children with end-stage renal disease (ESRD) undergoing hemodialysis, a population in whom the provision of renal replacement therapy is a lifelong undertaking” Mandel-Shorer et al (2018).

Abstract:

Despite the high rate of central venous catheter (CVC)-related venous thromboembolic (VTE) complications and long-term sequelae, CVCs remain a vital component of patient care in children with complex underlying diseases. In this review, we focus on CVC-related VTE in children with end-stage renal disease (ESRD) undergoing hemodialysis, a population in whom the provision of renal replacement therapy is a lifelong undertaking. Occlusion of the CVC and thrombosis underlie most instances of access malfunction and failure in children on chronic hemodialysis. Frequent CVC replacements are required, resulting in increased risk of central vein thrombosis and stenosis, precluding adequate hemodialysis in years to come. As recurrent CVC malfunction may constitute the sole sign of CVC-related VTE, a high index of suspicion is required for its investigation and the consequent institution of anticoagulation treatment, attempting to salvage the CVC and minimize recurrent line exchanges and venous cannulations and their sequelae. Hemodialysis access planning should take into account potentially modifiable prothrombotic risk factors in order to preserve vascular access. Effective strategies for maintenance of catheter patency and survival are needed for the conservation of future hemodialysis access. Further investigation aiming for identification of

predictors of CVC-related VTE in children undergoing hemodialysis will aid in the design and application of much needed multicenter prospective studies examining the benefit and the safety of thromboprophylaxis.

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Reference:

Mandel-Shorer, N., Tzvi-Behr, S., Harvey, E. and Revel-Vilk, S. (2018) Central venous catheter-related venous thrombosis in children with end-stage renal disease undergoing hemodialysis. *Thrombosis Research*. 172, p.150-157.

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