



Cystic fibrosis (CF) is a risk for recurrent pediatric VTE and has potential thrombophilic tendency. However, much remains unknown, including incidence and intrapopulation risk factors” Knight-Perry et al (2017).

Abstract:

INTRODUCTION: Pediatric venous thromboembolism (VTE) is a rare but serious medical condition. Cystic fibrosis (CF) is a risk for recurrent pediatric VTE and has potential thrombophilic tendency. However, much remains unknown, including incidence and intrapopulation risk factors.

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METHODS: A retrospective cohort of pediatric CF patients followed at Children’s Hospital Colorado from January 1st 2003 through May 20th 2016 was examined. Cases were identified by informatics and validated manually. Data on CF severity, co-morbidities and treatment, central venous catheter (CVC) use, and thrombophilia were obtained from an institutional CF database and chart review.

RESULTS: Nineteen VTE occurred in 458 participants followed for 3595 person-years, yielding

an incidence rate of 53 VTE per 10,000 children with CF. VTE cases had additional co-morbidities including CF-related diabetes ($p=0.002$) and sinus disease ($p=0.04$), more total admissions ($p<0.001$), admit days ($p<0.001$), positive respiratory cultures ($p<0.001$), pseudomonas infections ($p<0.001$), steroid courses ($p=0.001$), and total CVC days (PICC $p=0.03$, port $p=0.007$). On univariate analysis, older age (RR 1.162, $p=0.007$), sinus disease (RR 2.62, $p=0.05$), longer hospital stay (RR 1.03, $p<0.001$), higher ESR (RR 1.02, $p=0.03$) and CRP (RR 1.07, $p=0.007$), and an absence of systemic steroids (RR 0.19, $p=0.004$) increased the risk of VTE.

CONCLUSIONS: In this cohort, children with CF had a higher incidence of VTE when compared to the previously reported incidence in the overall pediatric population at Children's Hospital Colorado. Overall, those with VTE had a greater disease burden and older age, sinus disease, longer hospitalization and increased inflammation were VTE risk factors.

Reference:

Knight-Perry, J., Branchford, B.R., Thornhill, D., Martiniano, S.L., Sagel, S.D. and Wang, M. (2017) Venous thromboembolism in children with cystic fibrosis: Retrospective incidence and intrapopulation risk factors. *Thrombosis Research*. September 5th. .

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