



Intravenous literature: Reyes, J.A., Habash, M.L. and Taylor, R.P. (2012) Femoral central venous catheters are not associated with higher rates of infection in the pediatric critical care population. *AJIC: American Journal of Infection Control*. 40(1), p.43-47.

Abstract:

Background: Adult data show a difference in central venous catheter (CVC) infection rates between 3 major sites: subclavian (SC), internal jugular (IJ), and femoral veins. We hypothesized that in patients in pediatric intensive care units (PICUs), there is no difference in rates of CVC infection among these three sites, but specifically the femoral compared to all other sites.

Methods: In this retrospective cohort study, data from January 1999 to January 2008 were collected prospectively for internal review and quality assurance. All PICU patients with a CVC were enrolled. The rate of CVC infection was determined using Cox regression survival analysis to account for various durations of CVC placement at the various sites, then adjusted for severity of illness, number of lumens, and patient age. Mortality was compared in patients with a CVC infection versus those without.

Results: A total of 4,512 patients with a CVC were enrolled. No site was associated with an increased risk of infection compared with the other sites, with hazard ratios of 0.951 (95% confidence interval [CI], 0.612-1.478) for the SC site, 0.956 (95% CI, 0.593-1.541) for the IJ site, and 1.120 (95% CI, 0.753-1.665) for the femoral site. No significant association between



Femoral central venous catheters are not associated with higher rates of infection | 2

mortality and presence of CVC infection was found when adjusted for age, severity of illness, and duration of CVC placement. An association was found between the presence of a CVC infection and prolonged PICU length of stay (3.98 days longer; $P < .001$).

Conclusion: Femoral CVCs are not associated with higher rates of infection in the PICU. In addition, the presence of CVC infection does not affect mortality, but is associated with longer PICU admission.



Femoral central venous catheters are not associated with higher rates of infection | 3



Femoral central venous catheters are not associated with higher rates of infection | 4

