This study found that using alcohol with chlorhexidine gluconate prior to accessing central line hubs and vascular grafts allows for reduction in CLABSI events and sustains statistically significant lower CLABSI rates in the inpatient dialysis population” Marty Cooney et al (2020).

Abstract:

Purpose: Preventing CLABSI events in the dialysis inpatient population represents significant challenges. Bacteremia associated with lines or grafts are common health-associated infections that lead to adverse patient outcomes. Dialysis patients represent a much higher infection risk due to health frequency needs, more frequent hospitalizations, multiple comorbidity issues, fistula functionality, and multiple attempts for line access leading to additional complications, costs, morbidity, and mortality.

Methods: An observational study was conducted including central line device days, CLABSI events, and possible confounding variables in admitted dialysis patients. All CLABSI data were identified according to the Centers for Disease Control and Prevention’s National Healthcare Safety Network’s definitions for CLABSIs. The intervention involved the removal of 70% alcohol swabs and alcohol hub disinfecting caps, then replacing with swabs containing 3.15% chlorhexidine gluconate/70% alcohol for central line hub disinfection and vascular graft access skin disinfection.

Results: The 5-year preintervention period (2008–2012) involved 7568 central line days, 11 CLABSI events, and a 1.45 per 1000 device day rate. The 6-month trial period involved 1559 central line days and no CLABSI events. The 5-year postimplementation period (2013–2017) involved 9787 central line days, 5 CLABSI events, and a 0.51 per 1000 device day rate. The postimplementation period represented a statistically significant (P value=0.0493) reduction with 65% fewer CLABSI events compared with the preimplementation period.

Limitations: A limitation was variations in scrub time and dry time during central venous catheter hub access. While we were comparing 2 products, behavioral practices using these 2 products were possible influencers and represent a possible confounding variable.
Conclusions: This study found that using alcohol with chlorhexidine gluconate prior to accessing central line hubs and vascular grafts allows for reduction in CLABSI events and sustains statistically significant lower CLABSI rates in the inpatient dialysis population.

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