"We explored the relative impact of multiple CVCs, patient comorbidities, and disease severity on the risk of CLABSI." Concannon et al (2014)

Reference:

Concannon, C., van Wijngaarden, E., Stevens, V. and Dumyati, G. (2014) The Effect of Multiple Concurrent Central Venous Catheters on Central Line-Associated Bloodstream Infections. Infection Control and Hospital Epidemiology. 35(9), p.1140-1146.

Effect of multiple concurrent central venous catheters on CLABSI rates http://ctt.ec/Y7eb3+ @ivteam #ivteam

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Abstract:

Objective: The current central line-associated bloodstream infection (CLABSI) surveillance rate calculation does not account for multiple concurrent central venous catheters (CVCs). The presence of multiple CVCs creates more points of entry into the bloodstream, potentially increasing CLABSI risk. Multiple CVCs may be used in sicker patients, making it difficult to separate the relative contributions of multiple CVCs and comorbidities to CLABSI risk. We explored the relative impact of multiple CVCs, patient comorbidities, and disease severity on the risk of CLABSI.

Design: Case-control study.

Setting: A total of 197 case patients and 201 control subjects with a CVC inserted during hospitalization at a tertiary care academic medical center from January 1, 2008, to December 31, 2010.

Methods: Multiple CVCs was the exposure of interest; the primary outcome was CLABSI. Multivariable logistic regression was conducted to estimate odds ratios (ORs) and 95% confidence intervals (CIs) describing the association between CLABSI and multiple CVCs with and without controlling for Acute Physiology and Chronic Health Evaluation (APACHE) II and Charlson comorbidity index (CCI) scores as measures of disease severity and patient comorbidities, respectively.

Results: Patients with multiple CVCs (n = 78) showed a 4.2 (95% CI, 2.2-8.4) times greater risk of CLABSI compared with patients with 1 CVC after adjusting for CLABSI risk factors. When including APACHE II and CCI scores, multiple CVCs remained an independent risk factor for CLABSI (OR, 3.4 [95% CI, 1.7-6.9]).

Conclusions: Multiple CVCs is an independent risk factor for CLABSI even after adjusting for severity of illness. Adjustment for this risk may be necessary to accurately compare rates between hospitals.

Other intravenous and vascular access resources that may be of interest (External links – IVTEAM has no responsibility for content).

Guide for intravenous chemotherapy and associated vascular access devices from Macmillan.
CancerUK IV chemotherapy information.