We describe incidence rates, risk factors, and outcomes related to PVC-associated Staphylococcus aureus bacteremia (SAB), a common cause of hospital-onset (HO) SAB” Blauw et al (2019).

Abstract:

BACKGROUND: Peripheral venous catheters (PVCs) are common in hospitals, but the literature surrounding PVC-associated bacteremia is lacking. We describe incidence rates, risk factors, and outcomes related to PVC-associated Staphylococcus aureus bacteremia (SAB), a common cause of hospital-onset (HO) SAB.

METHODS: This is a retrospective case-control study conducted at a 537-bed teaching community hospital during 2015-2016. Cases were adult inpatients with HO SAB with infectious diseases documentation of the PVC as the only source of bacteremia. Cases were matched 1:2 with controls on approximate PVC insertion date, age, mortality prediction score, and insurance type. Odds ratios (ORs) were estimated using conditional logistic regression. PVC utilization was estimated by a point-prevalence survey from July 2017.

RESULTS: Of 205 SAB episodes, 160 were community-onset and 45 were HO; 16 (36%) HO cases were PVC-associated. Cases (n = 16) were more likely than controls (n = 32) to have a PVC placed in the antecubital area (odds ratio [OR], 11.9; 95% confidence interval [CI], 1.5-95.7; P = .02) and PVC duration ≥4 days (OR, 4.0; 95% CI, 1.1-15.2; P = .04). The point prevalence of at least 1 PVC in adult inpatients was 86%, and the incidence density of HO
PVC-associated SAB was 0.15 per 1000 PVC-days. The mean length of stay for cases was 13.2 days. All cases successfully completed parenteral antibiotics with a mean treatment length of 23.6 days.

CONCLUSIONS: PVC-associated SAB is a common cause of HO SAB that results in significant morbidity. PVC placement in the antecubital area and line duration should be minimized to reduce HO SAB.

You may also be interested in...

Peripheral intravenous catheter-related bacteremia
Bacterial colonization of peripheral intravenous cannulae
Nursing competence in ultrasound-guided peripheral intravenous catheter placement

Reference: