Abstract:

Background: Central venous catheter infection and sepsis are significant causes of morbidity and mortality in neonatal intensive care unit patients. This complication may result in a significant cost burden, prolonged antibiotic treatment, and increased length of stay.

Objectives: The objective of this study was to determine the difference in post-catheter removal clinical sepsis (PCRCS) in neonatal intensive care unit patients who received antibiotics prior to central venous catheter removal when compared to those who did not.

Methods: This was a retrospective cohort study of 200 critically ill neonates comparing those who received one-time doses of vancomycin and cefazolin prior to central venous catheter removal to those who did not.

Results: There was no statistically significant association between antibiotic treatment and PCRCS when the analysis was controlled for gender, time the catheter was in place, birth weight, gestational age, or type of central catheter (OR 1.19; 95% CI: 0.18-8.00; P = .8558). No statistical difference was seen in adverse renal outcomes or total antibiotic treatment received for the treatment of PCRCS.

Conclusions: Administration of one-time doses of vancomycin and cefazolin did not reduce the incidence of PCRCS when administered to critically ill neonates prior to umbilical venous catheter or peripherally inserted central catheter removal.

Reference: