There was an 11% absolute decrease and a 6-fold relative decrease in postcatheter removal clinical sepsis events in premature neonates who received antibiotics prior to PICC line removal” Reynolds et al (2015).

Reference:

Abstract:
OBJECTIVES: Evaluate the incidence of postcatheter removal clinical sepsis when antibiotics were infused prior to the removal of percutaneously inserted central venous catheters (PICCs).

METHODS: A retrospective chart review of premature neonates (n = 196) weighing ≤1250 g at birth with 218 PICC line removals in the presence or absence of antibiotics at a tertiary level neonatal intensive care unit (NICU) between January 1, 2010, and May 31, 2012. Charts were reviewed looking for the presence of clinical sepsis defined as a sepsis workup including white blood cell count, differential, C-reactive protein, blood and/or cerebral spinal fluid (CSF), and urine cultures along with at least 48 hours of antibiotic therapy given within 72 hours after removal of a PICC line. Antibiotics were considered present at line removal if given within 12 hours before catheter removal either electively or at completion of a planned course.

RESULTS: When antibiotics were given within 12 hours before PICC line removal, only 2% of the line removal episodes (1/48) resulted in a neonate developing clinical sepsis versus 13% (21/165) when no antibiotics were given prior to removal (p = 0.03, Fisher’s exact test). Despite the increased use of elective antibiotics with line removal, there was no increase in total antibiotic usage due to the overall decrease in episodes of clinical sepsis or changes in antibiogram susceptibility patterns.

CONCLUSIONS: There was an 11% absolute decrease and a 6-fold relative decrease in
postcatheter removal clinical sepsis events in premature neonates who received antibiotics prior to PICC line removal.

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