In VLBW infants, early PICC removal at an enteral feed volume of 100 mL/kg/day compared with later removal at 140 mL/kg/day resulted in a significant delay in time to regain birth weight" Perrem et al (2019).

Abstract:

BACKGROUND: Peripherally inserted central catheters (PICCs) are used to administer parenteral nutrition (PN) in very low birth weight infants (VLBW; <1500 g). Clinicians try to optimize early nutrition but also minimize the risks associated with intravascular devices. The objective of this study was to examine the early nutrition impact of discontinuing PN at different enteral feed volumes in VLBW infants.

METHODS: In this unmasked, multicenter, randomized controlled trial, patients were randomly assigned to PICC removal and PN discontinuation at an enteral feed volume of 100 mL/kg/day (intervention) or 140 mL/kg/day (control). Clinically stable VLBW infants with a PICC in situ who were receiving PN were eligible for inclusion. Infants with major congenital anomalies were excluded. A total of 139 patients were enrolled; 69 and 70 patients were randomized to the intervention and control groups, respectively. The primary outcome measure was the mean difference in time (days) to regain birth weight.

RESULTS: The groups were well matched at study entry. Patients in the intervention group regained birth weight more slowly (mean difference 1.5 days CI: 0.3-2.7 days, P = 0.01). The mean difference in time to regain birth weight for infants <1000 g was 2.8 days (95% CI: 0.8-4.8 days, P = 0.008).

CONCLUSIONS: In VLBW infants, early PICC removal at an enteral feed volume of 100 mL/kg/day compared with later removal at 140 mL/kg/day resulted in a significant delay in time to regain birth weight, and this delay was more pronounced in infants <1000 g.

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