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RESEARCH ARTICLE

On demand infant formula vs. gastric capacity during the neonatal transition period

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Abstract

Background: Newborn formula feeding can be given ad libitum (AL) or as calculated gastric capacity (CGC). The objective of the study was to determine if the technique used to offer the newborn formula (AL vs. CGC) modifies volume intake, tolerance and risk for hypoglycemia.

Methods: The study design was an open, nonrandomized clinical trial. Patients were healthy term newborns. All newborns were followed for 24 h. We determined the total volume ingested (ml/kg), oral tolerance (vomiting, regurgitation, abdominal circumference), impact on weight and hypoglycemic events.

Results: One hundred fifty four infants were included (CGC = 90 and AL = 64). The AL group consumed slightly more formula (8 ml/kg, 95% CI 5-11) with greater variation between intakes. There was no difference in the percentage of weight loss (2.1% vs. 2%, $P = 0.78$). AL group also showed more vomiting (17.2% vs. 6.7%, $P = 0.02$) and increased abdominal distension (43.8% vs. 22.2%, $P = 0.007$). Only one newborn in the CGC group had hypoglycemia ($P = 1.00$).

Conclusions: CGC feedings allows constant intake with less risk for intolerance without increasing the possibility of hypoglycemia or weight loss.

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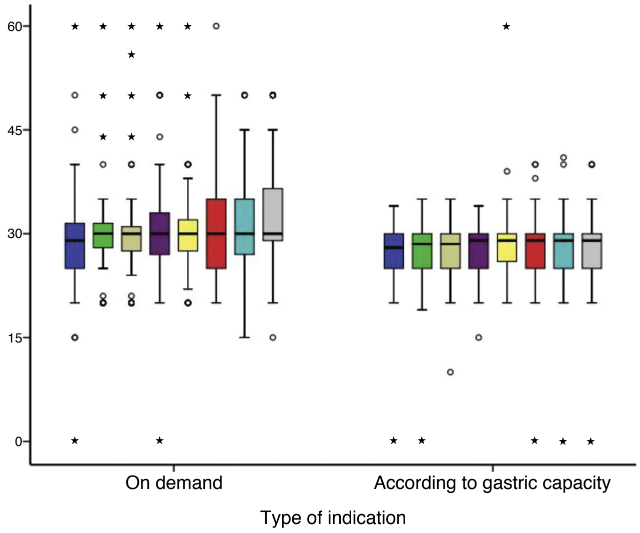
60
45
30
15
0
On demand
According to gastric capacity
Type of indication