CRITICALLY ILL INFANTS BENEFIT FROM EARLY ADMINISTRATION OF PROTEIN AND ENERGY-ENRICHED FORMULA: A RANDOMIZED CONTROLLED TRIAL

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van Waardenburg DA, de Betue CT, van Goudoever JB, Zimmermann LJ, Joosten KF. 2009

PURPOSE

Nutritional support improves outcome in critically ill infants but is impeded by fluid restriction, gastric intolerance and feeding interruptions. Protein- and energy-enriched infant formulas may help to achieve nutritional targets earlier during admission and promote anabolism.

DESIGN

Randomized controlled design. Infants with respiratory failure due to RSV-bronchiolitis received a protein- and energy-enriched formula (ENDF, Fortini™, n=8) or a standard infant formula (SIF, n=10) for 5 days after admission. Primary outcome: nutrient delivery, energy and nitrogen balance and plasma amino acid concentrations. Secondary outcome: tolerance and safety.

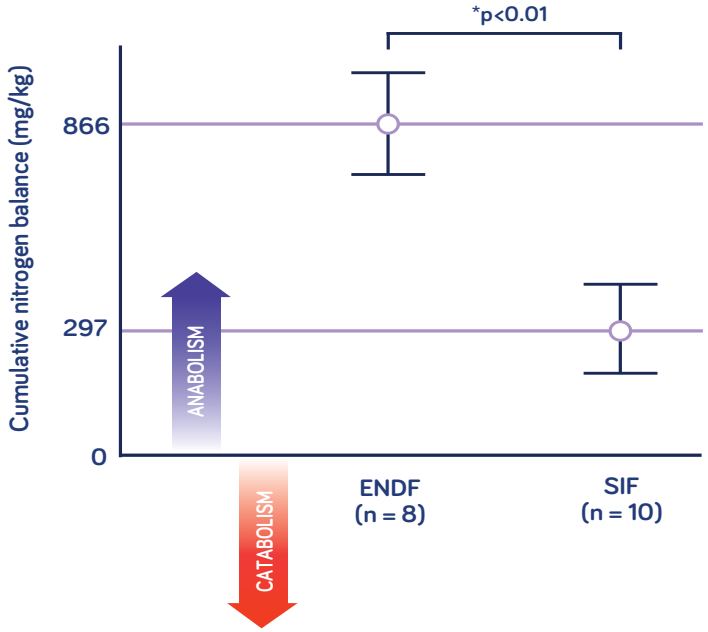
OUTCOMES

Nutrient intakes were higher in ENDF infants and met dietary reference intakes (DRI) on day 3-5. In SIF infants DRI was met on day 5 only. Cumulative nitrogen balance (cNB) and energy balance (cEB) were higher in ENDF infants compared to SIF infants (cNB: 866 ± 113 vs. 296 ± 71 mg/kg; cEB: 151 ± 31 and 26 ± 17 kcal/kg, both p<0.01). Essential amino acid levels were higher in ENDF infants but within reference limits whereas below these limits in SIF infants. Both formulas were well tolerated.

CONCLUSIONS

Early administration of a protein and energy-enriched formula in critically ill infants is well tolerated, promotes a more adequate nutrient intake and improves energy and nitrogen balance without adverse effects.

CUMULATIVE NITROGEN BALANCE, DAYS 2–5



Fortini™ is safe and as well tolerated as SIF in the PICU.

Intakes of nutrients were higher in Fortini™ infants, meeting dietary reference intake levels on days 3-5, which were only met by SIF infants on day 5.

Fortini is for the dietary management of term infants and young children from 0 to 18 months of age or up to 19.8 lbs (9 kg) with or at risk of growth failure, increased energy requirements, and/or fluid restrictions due to conditions such as: congenital heart disease, chronic lung disease, respiratory syncytial virus, neurological syndrome or neuro-disabilities, cystic fibrosis, non-organic failure to thrive. Fortini is known in other countries as Infatrini. For US healthcare professionals

NUTRICIA Fortini™