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ORIGINAL ARTICLE

Variability in enteral feeding practices of preterm infants among hospitals in the SEN1500 Spanish neonatal network☆

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Very low birth weight infant;
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Trophic feeding

Abstract
Introduction: Proper nutrition is one of the primary objectives in the management of preterm infants. However, lack of evidence on the best strategy to achieve this objective has led to a great variability in feeding practices. This variability may be related to the differences in the incidence of complications, such as necrotising enterocolitis (NEC).
Objective: The aim of this study is to assess the variability in clinical practice regarding enteral feeding in SEN-1500 Spanish network.
Method: An observational study was conducted using a questionnaire sent out in 2013 requesting information about feeding very low birth weight (VLBW) neonates (bank milk, start time, trophic feeding, increases, fortifiers and probiotics).
Results: Responses were received from 60 of the 98 hospitals. The response rate was higher in centres with more than 50 VLBW/year (30/31). Just over two-thirds (67%) have feeding protocols, and 52% refer to variability within their unit. A milk bank is available in 25% of the units. First feeding occurs fairly evenly throughout first 48 h, although it is delayed in lower gestational ages, even when there is no haemodynamic failure. In addition to haemodynamic instability there are other situations when the start is delayed (absence of breast milk, CIR, altered umbilical flow, asphyxia), while it is rarely delayed by absence of meconium or maintain an umbilical catheter. Half of those under 25 weeks begin directly with progressive increases instead of trophic feeding. Increases rarely reach 30 mL/kg/day. Almost all use fortification and vitamins. There was a significant use of probiotics at the time of the survey.

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Conclusions: There is great variability in enteral nutrition policies in VLBW in Spain. Although some differences are justified by the lack of evidence, there are other interventions that have proven to be effective, such as evidence-based protocols or access to donor milk. Implementation in all the units could reduce the incidence of NEC and improve the nutritional status.

PALABRAS CLAVE
Variaciones en la práctica clínica;
Nutrición enteral;
Enterocolitis necrosante;
Recién nacido de muy bajo peso;
Prematuro;
Prevención;
Nutrición enteral trófica

Variabilidad en las prácticas sobre alimentación enteral del prematuro entre hospitales españoles de la red SEN-1500

Resumen
Introducción: La nutrición adecuada es uno de los objetivos primordiales en el manejo de los recién nacidos prematuros. Sin embargo, la falta de evidencia en cuanto a cuál es la mejor estrategia para alcanzar este objetivo da lugar a que exista una gran variabilidad en las prácticas de alimentación. Esta variabilidad podría estar relacionada con las diferencias que existen en la incidencia de complicaciones como la enterocolitis necrosante (ECN).
Objetivo: Valorar la variabilidad en las prácticas sobre alimentación entre las unidades neonatales de la red SEN-1500.
Método: Estudio transversal, mediante cuestionario, solicitando información sobre alimentación del recién nacido de muy bajo peso (RNMBP) (leche donada, momento de inicio, trófica, incrementos, fortificantes, probióticos) en el año 2013.
Resultados: Contestaron 60/98 hospitales; la tasa de respuesta fue mayor en centros con más de 50 RNMBP/año (30/31). El 67% tienen protocolo de alimentación, el 52% refieren variabilidad en su unidad y el 25% disponen de leche donada. Se inicia la alimentación en las primeras 48 h, aunque se retrasa en las edades más bajas aun en ausencia de fallo hemodinámico. Además de la inestabilidad hemodinámica hay otras situaciones por las que se demora su inicio (ausencia de leche materna, CIR, flujo umbilical alterado, asfixia), mientras que raramente se retrasa por ausencia de meconio o por mantener un catéter umbilical. Por debajo de 25 semanas la mitad comienzan directamente con incrementos progresivos en lugar de nutrición trófica. Los incrementos raramente alcanzan 30 ml/kg/día. Casi todos usan fortificantes y vitaminas. El uso de probióticos es excepcional.
Conclusiones: Existe gran variabilidad en la política de alimentación del RNMBP entre las unidades neonatales españolas. Aunque algunas diferencias en las prácticas de alimentación están justificadas por la falta de evidencia, hay intervenciones que sí han demostrado su eficacia, como disponer de un protocolo de alimentación (basado en pruebas) o tener acceso a leche donada; su implementación en todos los centros podría disminuir la incidencia de ECN y mejorar el estado nutricional de los RNMBP.

Introduction

Preterm newborns (NBs) are born during a critical period in growth and neurodevelopment. The goal of nutrition in very low birth weight (VLBW) newborns is to promote a growth that is similar to the one that would occur in utero without stressing their immature metabolism and excretory system. This is difficult to achieve in everyday practice due to the challenges posed by immature metabolic and digestive systems and the comorbidities present in these patients. As a result, many of them experience delays in extrauterine growth that compound the effects of previous intrauterine growth restriction. Suboptimal nutrition in this critical period may have irreparable consequences in both growth and neurodevelopmental outcomes.[1,2]

For this reason, the prevailing approach at present is the prevention of extrauterine growth retardation, to the extent possible, through the early and aggressive use of parenteral nutrition (with administration of nutrients that approximate those that would be received through the placenta) and initiation of enteral feeding at the earliest possible time.[3]

But the best way to implement this has yet to be determined. The evidence available on many of the procedures related to newborn nutrition is poor, which explains the broad variability observed in the approach to initiating and maintaining enteral feeding in different countries, different hospitals in a country and even different professionals in a hospital.[4] This variability could be associated with differences in the incidence of postnatal malnutrition or necrotising enterocolitis (NEC). Several studies have