Nutritional Management of Newborn Infants: Practical Guidelines

PICOT Question: What is optimal nutrition for newborn infants?

CMH is within guidelines for nutritional management of newborns.

Search strategy implemented: CMH&C OVID

Search outcome: This is a meta-analysis. Multiple studies were researched for this article.

Synthesis of relevant studies:

<table>
<thead>
<tr>
<th>Author, date, country, and industry of funding</th>
<th>Patient Group</th>
<th>Level of Evidence (Oxford) / Strength of Evidence (GRADE)</th>
<th>Research design</th>
<th>Significant results</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutritional Management of Newborn Infants: Practical Guidelines Ben, Xiao-Ming World Journal of Gastroenterology, October, 2008;114 (40):6133-6139</td>
<td>Premature to term newborn infants</td>
<td>3</td>
<td>Summary of current research progress in the nutritional management of newborn infants. Searches of MEDLINE, Cochrane Central Register of Controlled Trials (The Cochrane Library, Issue 3, 2007), abstracts and conference</td>
<td>-Minimum protein content of 1.7 gm/100 kcal and maximum protein content of 3.4 gm/100 kcal in infant formulas is recommended. -There is inadequate information that adding fatty acids AA and DHA will result in improved infant vision or cognitive abilities. FDA expert panel will revisit this field in the year ~2013 when more data from larger studies are available.</td>
<td>“Non-healthy” preterm and term infant nutrition needs are not fully addressed.</td>
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proceedings, and references from relevant publications in the English language.

maximum level of oligosaccharides in formula. Formulas are on the market now with oligosaccharides.
-HMF is indicated in babies <31 weeks GA and/or <1500 gm.
-In the preterm infant, trophic feeds of 10-20 ml/kg/d given at the same rate for at least 5 days during TPN is a strategy to enhance feeding tolerance and decrease the side effects of TPN, and the time to achieve full feeds. Then daily increments of 10-30 ml/kg/d feeding advance is safe.
-Bolus feeding is associated with better growth than continuous feeding for premature infants with relatively healthy GI tracts.
-In TPN, 3.5 g AA/kg/d is optimal for growth.
-In TPN, vitamins must be added to the fat emulsion to minimize loss of vitamins due to adherence to tubes and photodegradation.

Commentary:
-Should we give premature babies on TPN, 5 days of trophic feeds before advancing feeds? Would need to stratify by wt categories.
-Would like to spend more time in d/w pharmacists regarding adding vitamins to lipids instead of the TPN CHO/AA solution.

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References: