THERAPEUTIC EFFECT OF A MAGNESIUM-ENRICHED FORMULA ON INFANTS WITH CONSTIPATION
Yvan Vandenplas and Hsun-Chin Chao
Pediatrics 2008;121;S113
DOI: 10.1542/peds.2007-2022DDD

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://www.pediatrics.org
THERAPEUTIC EFFECT OF A MAGNESIUM-ENRICHED FORMULA ON INFANTS WITH CONSTIPATION

Submitted by Yvan Vandenplas
Yvan Vandenplas, Hsun-Chin Chao
\textsuperscript{a}Department of Pediatrics, UZ Brussels, Brussels, Belgium; \textsuperscript{b}Division of Gastroenterology, Department of Pediatrics, Chang Gung Children’s Hospital, Chang Gung Memorial Hospital, Chang Gung University Medical College, Taoyuan, Taiwan

INTRODUCTION: Infant constipation is a frequent condition in formula-fed infants.

OBJECTIVE: Our goal was to study the effectiveness of magnesium-enriched formula in relieving constipation in infants.

METHODS: A prospective, randomized, clinical trial was performed with infants with constipation fed with a magnesium-enriched formula, Novalac-IT (IT group) in comparison with 20% strengthened formula (S group). Enrolled subjects had difficulties with defecating, hard stools, or low frequency of defecation (\approx 4 times per week).

RESULTS: Ninety-three infants (47 boys; mean age: 3.8 \pm 1.7 months) were included because of hard constipation of (50.5%), low frequency of (44.1%), and painful (33.3%) defecation. Statistically significant improvement was observed after 4 and 8 weeks of intervention in the IT group (P = .014 and P < .001, respectively). In the IT group, significantly more infants were symptom free at 4 weeks (82.9% vs 50%; P = .029) and 8 weeks (89.1% vs 54.1%; P < .001). Increase of stool weight was significant in the infants in the IT group after 4 and 8 weeks (P = .048 and .029, respectively).

CONCLUSIONS: A magnesium-enriched formula improves constipation in formula-fed infants.

DOUBLE-BLIND TRIAL OF FORMULA IN DISTRESSED AND REGURGITATING INFANTS

Submitted by Yvan Vandenplas
Yvan Vandenplas, T. Devreker, B. Hauser
UZ Brussels, Brussels, Belgium

INTRODUCTION: Many parents seek medical help because of frequent regurgitation and inconsiderable crying of their formula-fed infant.

OBJECTIVE: We aimed to assess the effectiveness of special formulas in distressed and regurgitating infants.

METHODS: We included 12 consecutive infants in a prospective, randomized, single-blinded (parents), cross-over trial (6 infants were started on G1 [80/20 casein/whey, tapioca starch, and locust bean] for 2 weeks and then switched for 2 weeks to G3 [partial whey hydrolysate, tapioca starch, and locust bean]; for the other 6 infants, the order of the formulas was opposite). Infants were exclusively formula fed, were crying for > 3 hours/day for at least 3 weeks, and regurgitated several times after each feeding. Before inclusion, all of them had been given \geq 3 different commercialized AR formulae, formulae for digestive comfort, and at least 1 extensive hydrolysate without success. All infants had been treated without success with a prokinetic agent (domperidone/cisapride) and an acid-blocking drug (H2-receptor agonist/proton-pump inhibitor).

RESULTS: Gastric emptying time, as evaluated with a \textsuperscript{13}C acetate breath test, was 117.1 \pm 18.3 minutes with Novalac-AR (80/20 casein/whey and corn starch), 104.5 \pm 15.5 minutes with G1, and 79.2 \pm 14.0 minutes with G3 (P < .001 [Friedman test]). The mean number of regurgitations per day was 5.1 \pm 1.2 with G1 and 1.8 \pm 1.2 with G3 (P = .002). Quality of life, as assessed by the parents in a diary, was 4.20 \pm 1.79 with G1 and 2.10 \pm 0.74 with G3 (P = .005). The mean duration of crying per day was 84.5 \pm 50.1 minutes with G1 and 26.7 \pm 18.1 minutes with G3 (P = .003).

CONCLUSIONS: The cross-over design protected for bias. G3 scored better than G1 for all parameters evaluated and decreased regurgitation and infant distress significantly.

General Pediatrics

PEidiatriCians’ AWARENESS OF AND ATTITUDES ABOUT OTITIS MEDIA: RESULTS OF A MULTINATIONAL SURVEY

Submitted by Adriano Arguedas
Adriano Arguedas, Cedric Lefebvre, Severine Vercruysse, Carol Dean, Julie Maurich
\textsuperscript{a}Instituto de Atencion Pediatrica, San José, Costa Rica; \textsuperscript{b}GlaxoSmithKline Biologicals, Rixensart, Belgium; \textsuperscript{c}GfK Health Care, East Hanover, NJ
# THERAPEUTIC EFFECT OF A MAGNESIUM-ENRICHED FORMULA ON INFANTS WITH CONSTIPATION

Yvan Vandenplas and Hsun-Chin Chao

*Pediatrics* 2008;121;S113

DOI: 10.1542/peds.2007-2022DDD

<table>
<thead>
<tr>
<th>Updated Information &amp; Services</th>
<th>including high-resolution figures, can be found at: <a href="http://www.pediatrics.org">http://www.pediatrics.org</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Permissions &amp; Licensing</td>
<td>Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: <a href="http://www.pediatrics.org/misc/Permissions.shtml">http://www.pediatrics.org/misc/Permissions.shtml</a></td>
</tr>
<tr>
<td>Reprints</td>
<td>Information about ordering reprints can be found online: <a href="http://www.pediatrics.org/misc/reprints.shtml">http://www.pediatrics.org/misc/reprints.shtml</a></td>
</tr>
</tbody>
</table>