NUTRICIA Neocate®

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When to throw a nutrition lifeline: an infant with feeding difficulties, gastroesophageal reflux, and wasting, and suspected food allergies achieves improved growth and symptom resolution when switched from an extensively hydrolyzed formula to an amino acid-based formula

PATIENT HISTORY:

A 5-month-old, baby boy presented to a clinic with gastroesophageal reflux, feeding difficulties, and eczema flare-ups requiring topical steroid therapy. Gastroesophageal reflux had not improved since birth and the baby was currently experiencing frequent spit-ups throughout the day associated with cough. Before coming to the clinic, the family trialed various antacids without improvement in symptoms. As for his feeding difficulties, baby boy was less interested in feeding, pulling off the breast more frequently in discomfort, and gagging on purees. Baby boy was exclusively breastfed, as two extensively hydrolyzed formulas were rejected, and he had been trialing Stage 1 and 2 purees for the last month. Mom had been dairy, soy, and wheat free for the last three months. The family was provided four options: wait for an upper endoscopy with pediatric gastroenterology, wait for a modified barium swallow and esophagram, expand maternal elimination to eight foods, or trial an amino acid-based formula with limited human milk. Through shared decision-making, the family and provider chose to pursue nutrition therapy.

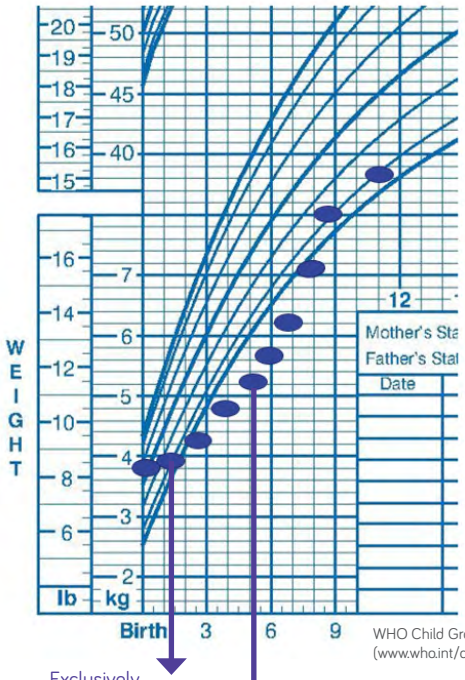
NUTRITIONAL MANAGEMENT:

The primary goals of nutrition therapy were to maximize patient comfort, preserve the baby boy's interest in oral feeding, and preserve maternal nutrition and mental health through a more extensive elimination diet. To accomplish this, purees were temporarily held, and most of the human milk was replaced with on-demand feeding of Neocate® Syneo® Infant, an amino acid-based formula, at the standard dilution, 20kcal/fl oz. While baby boy transitioned most of his feeds to Neocate Syneo Infant, the mother maintained a 3-food elimination and nursed twice daily. At one week, Neocate Syneo Infant was concentrated to 24kcal/oz to optimize caloric intake with a goal of 100kcal/kg/day from formula. Within three weeks, baby boy's symptoms improved. The family reported gastroesophageal reflux was infrequent and not disruptive. Additionally, his eczema was milder and less extensive. As his symptoms improved, so did his feeding behaviors. The caloric concentration of Neocate Syneo Infant was reduced to 22kcal/fl oz because baby boy's hunger cues and oral intake were more robust. Not only did he resume previously well-tolerated Stage 1 purees, which included apples, pears, and squash, but his solid food intake advanced to Stage 3 purees within a 1-month timeframe.

Neocate®
Syneo® Infant

GROWTH TRENDS:

Upon presenting to clinic, baby boy was wasting with a weight-for-age z-score of -3.7 and weight-for-length z-score of -4.2. While he was still gaining weight, it was significantly less than expected for his age at 2.7g/d. Fortunately, his linear growth remained stable. Baby boy's growth accelerated post-nutrition intervention. His weight trajectory improved to 27g/d on average from 6 to 9 months of age, and his weight-for-length increased to the 25th percentile for age.



WHO Child Growth Standards (www.who.int/childgrowth/en)

CONCLUSION:

Baby boy was ultimately diagnosed with multiple non-IgE food allergies. He had a negative skin prick test to the top 8 food allergens. However, a food challenge yielded reactions to tree nuts, dairy, and eggs. During the elimination diet, Neocate Syneo Infant provided this baby boy a nutritional lifeline. His symptoms improved and he was able to maintain a positive sensory experience around feeding. This was essential to preserving oral intake, which also positively impacted his growth trajectory.

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