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Case study: An RD's perspective on supporting the caregiver & infant with food allergies and growth faltering using an AAF with synbiotics



Raquel Durban, MS, RD, LD/N
Carolina Asthma & Allergy Center
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Disclosures

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- Honorarium provided by Nutricia
- Consultant positions: Reckitt, Abbott, Genentech, Sanofi
- Advisory board affiliations: iFPIES, FAACT

- ***None pose any conflict of interest for this presentation***

The opinions reflected in this presentation are those of the speaker and independent of Nutricia North America

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Objectives

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Identify opportunities for use of an amino acid-based formula (AAF) with pre- and probiotics (synbiotics)

Demonstrate ways to portray empathy and support for the caregivers of children with food allergies

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Patient Journey: Dermatology

✓ Dermatology evaluation at 2 months of age

4-6 weeks of age
• 2-week maternal avoidance
• Cow milk
• Soy

→

No resolution within 2 weeks
• Mother reintroduced cow milk and soy into her diet

→

2 months of age
• Dermatology consult per PCP
• Dx with AD
• Rx topical creams
• No maternal dietary restrictions recommended

PCP = primary care physician; Dx = diagnosed; AD = atopic dermatitis; Rx = prescribed

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Patient Journey: Allergy

✓ Allergy evaluation at 5 months of age

Widespread AD
Face, arms, legs, trunk

Breastfeeding
No maternal restrictions

Patient consuming:
CM-based yogurt, prepackaged infant foods w/o adverse event

AD = atopic dermatitis; CM = cow milk

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Patient Journey: Allergy (cont'd)

✓ Allergy evaluation at 5 months of age

SPT
• • peanut (1/0/15)
• • cow's milk (3/5)

→

Epi
• Prescribed
• Education provided

→


AD plan
• Prescribed
• Education provided

→

RD
Consult ordered

SPT = skin prick test; Epi = epinephrine; AD = atopic dermatitis; RD = registered dietitian

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Patient Journey: Dietitian 

✓ RD evaluation at 5 months, 1 week of age

- AD skin care plan**
 - Reports adherence
- Diet**
 - Unrestricted maternal diet
 - Breastfeeding on demand
 - One solid feeding/day → stages 1 & 2 prepackaged foods
 - Bites from parents' plates
 - Denies peanut ingredients
- Sleep**
 - Not sleeping through the night → up to 10 feedings/day
- Supplementation**
 - No vitamin D
 - No pre-/postnatal vitamin

RD = registered dietitian; AD = atopic dermatitis

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Patient Journey: Dietitian (cont'd) 

✓ RD evaluation at 5 months, 1 week of age

Inquiries:

Growth

AD skin care plan

Stool patterns

QoL


Feeding preferences

Childcare

Siblings/caregivers

RD = registered dietitian; AD = atopic dermatitis; QoL = quality of life

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Patient Journey: Dietitian (cont'd) 

Inquiries:

- Growth
- AD skin care plan
- Stool patterns
- Parental/Maternal QoL
 - Burden of care = cost, time, access, knowledge
- Desire to continue to breastfeed
- Intentions for/current childcare
- Siblings/caregivers

	Age	Length 50 Percentile Range		Weight 50 Percentile Range	
5 month appointment	5 months, 1 week	26.25 inches	50-75	17 pounds	50-75


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Patient Journey: Dietitian (cont'd) 

Inquiries:

- Infant growth
- AD skin care plan
 - Add vitamin D₃ supplementation of 400 IU
- Stool patterns
- Parental/Maternal QoL
 - Burden of care = cost, time, access, knowledge
- Desire to continue to breastfeed
- Intentions for/current childcare
- Siblings/caregivers


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Patient Journey: Dietitian (cont'd) 

Inquiries:

- Infant growth
- AD skin care plan
- Stool patterns
 - Frequent loose stools
- Parental/Maternal QoL
 - Burden of care = cost, time, access, knowledge
- Desire to continue to breastfeed
- Intentions for/current childcare
- Siblings/caregivers

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Patient Journey: Dietitian (cont'd) 

Inquiries:

- Infant growth
- AD skin care plan
- Stool patterns
- Parental/Maternal QoL
 - Burden of care = cost, time, access, knowledge
 - Frequency of nursing, lack of sleep, meal prep, prescription cost, specialist provider copays, knowledge deficit label reading, specialty grocer nearby
- Desire to continue to breastfeed
- Intentions for/current childcare
- Siblings/caregivers

QoL = quality of life


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Patient Journey: Dietitian (cont'd) 

Inquiries:

- Infant growth
- AD skin care plan
- Stool patterns
- Parental/Maternal QoL
 - Burden of care = cost, time, access, knowledge
- **Desire to continue to breastfeed**
 - **Mother interested in supplementation due to lack of sleep, persistent symptoms, and lack of confidence in maternal elimination adherence due to "loving cheese"**
- Intentions for/current childcare
- Siblings/caregivers


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Patient Journey: Dietitian (cont'd) 

Inquiries:

- Infant growth
- AD skin care plan
- Stool patterns
- Parental/Maternal QoL
 - Burden of care = cost, time, access, knowledge
- **Desire to continue to breastfeed**
- **Intentions for/current childcare**
 - **Daycare center to return to work as a school teacher**
- Siblings/caregivers


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Patient Journey: Dietitian (cont'd) 

Inquiries:

- Infant growth
- AD skin care plan
- Stool patterns
- Parental/Maternal QoL
 - Burden of care = cost, time, access, knowledge
- **Desire to continue to breastfeed**
- **Intentions for/current childcare**
- **Siblings/caregivers**
 - **Toddler sibling and paternal grandparents reported to "love through food". Accepts bottles of expressed human milk from various caregivers.**

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What would you do? 

Provide written and verbal education on avoidance of peanut and cow milk

Recommend amino acid-based formula (AAF) with pre- and probiotics (synbiotics) because...


- Mother inquired about formula options
- Severe eczema
- SPT positive to cow milk
- Loose stools

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Transition and anticipatory guidance – goal of 30 fl oz/day to provide 600 kcals of an estimated 710 kcals/day required.


SPT = skin prick test

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ESPGHAN position paper on the diagnosis, management, and prevention of CMA 

AAF with synbiotics


<p>Associated with:</p> <ul style="list-style-type: none">✓ Fewer symptoms✓ Infections✓ Medication prescriptions✓ Healthcare contacts compared to AAF w/o synbiotics	<p>Significantly higher probability of achieving asymptomatic management w/o elimination diet, with shorter clinical course of symptoms</p>
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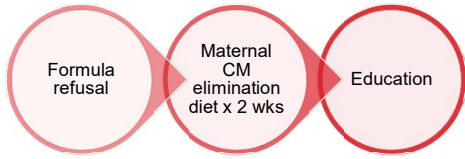


Scan to access position paper

Valentine V, Bakkast L, Doreilly H, et al. An ESPGHAN position paper on the diagnosis, management and prevention of cow's milk allergy. J Pediatr Gastroenterol Nutr. 2021

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3 weeks later... 




Infant weight unchanged in 3 weeks

- Not deemed to improve AD, mother reintroduced CM
- Review food shopping list based on menu building
- Provide transition steps and tips

CM = cow milk, AD = atopic dermatitis

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Patient Journey: Dietitian



8 months of age:

- 28 fl oz/day of AAF w/ synbiotics
- Room temperature
- Breastfeeding for comfort on unrestricted maternal diet
- AD visible on cheeks
- Daycare M-F (Breakfast, lunch, snack)
- 1 meal/day - prepackaged & table foods with a variety of grains, fruits, vegetables
 - Refuses lunch & snack at daycare, will eat these at home.
 - Too tired for dinner.
 - Preference to comfort feed
- Stools now formed and 1-2x/daily


Static growth

Age		Length & Percentile Range		Weight & Percentile Range	
5 month appointment	5 months, 1 week	26.25 inches	50-75	17 pounds	50-75
8 month appointment	Exactly 8 months	26.25 inches	2-5	17 pounds, 1 ounce	10-25

AAAF = amino acid-based formula; AD = atopic dermatitis

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Patient Journey: Dietitian



Fully weaned from breastfeeding

Began to eat more solids at daycare

Consumed appropriate volume of AAF w/ synbiotics


Sleeping through the night


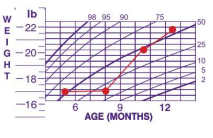
Growth improved

AAAF = amino acid-based formula


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Growth charts



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Conclusion 

Amino acid-based formula containing pre- and probiotics (synbiotics) was helpful in supporting the food allergic infant with:


- ✓ Loose stools
- ✓ Eczema/AD
- ✓ Growth faltering






Scan to access full case study

AD = atopic dermatitis

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References/Additional Resources 

Publication	Scan QR codes to access
Durban R, Groetch M, Meyer R, et al. Dietary Management of Food Allergy. Immunology and Allergy Clinics of North America. 2021;41:233-70.	
Sorensen K, Cawood AL, Gibson GR, et al. Amino Acid Formula Containing Synbiotics in Infants with Cow's Milk Protein Allergy: A Systematic Review and Meta-Analysis. Nutrients. 2021;13	
Vandenplas Y, Broekaert I, Domellöf M, et al. An ESPGHAN position paper on the diagnosis, management and prevention of cow's milk allergy. J Pediatr Gastroenterol Nutr. 2023.	

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