PEDIATRIC EoE CASE STUDY

Escalation of Diet Therapy in Pediatric EoE: Partial Elemental Supplementation as a Practical Step in Pediatric EoE with Growth Faltering

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BACKGROUND



- Eosinophilic esophagitis (EoE) is a chronic, immune-mediated inflammatory disorder characterized by esophageal dysfunction and inflammation

- Dietary therapy is a first-line option:
  - Nutritionally complete amino acid-based formulas (AAF) can be effective
  - Feasibility and quality of life concerns limit exclusive AAF use
  - Limited evidence exists on partial AAF supplementation in EoE

INITIAL MANAGEMENT

- 9-year-old child with 4-month history of progressive odynophagia and dysphagia and eosinophilic infiltration, consistent with EoE
- Family selected dietary elimination therapy without pharmacologic treatment
- Allergy evaluation identified sensitization to milk, soy, and pea protein
- Targeted elimination implemented with Registered Dietitian support

3 months:
partial symptom improvement
+ no weight gain

6 months:
persistent inflammation
+ dysphagia
+ poor weight gain

CLINICAL CHALLENGE

Can partial AAF supplementation support growth while improving histologic control when an elimination diet alone is insufficient in a 9-year-old child?

WHY ESCALATE?

Symptoms, histology, and growth were not ideal

SYMPTOMS
ongoing dysphagia

HISTOLOGY
16 distal
31 proximal

GROWTH
poor weight gain

DECISION: Add nutritionally complete AAF as partial oral supplementation

Pragmatic bridge rather than exclusive elemental feeding

INTERVENTION

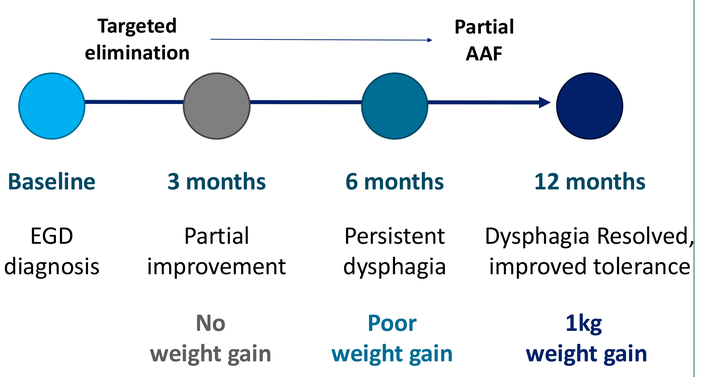
Alfamino® Junior
Nutritionally complete AAF



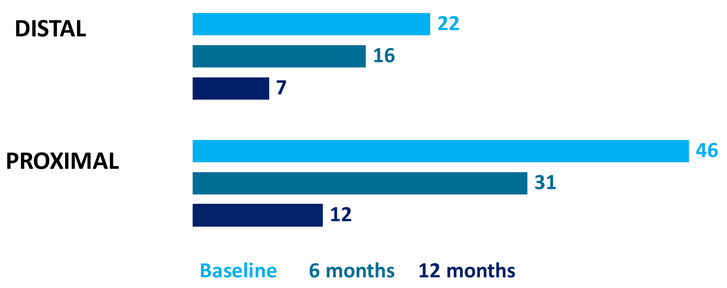
≈500 calories/day

Added to the elimination diet as partial oral supplementation

CLINICAL COURSE



Histologic Response (EoE Response)



Histology shown as distal / proximal eosinophils/high–power field (eos/hpf)

12-MONTH OUTCOMES

After partial AAF at 6 months

completely **diminished dysphagia**
Resolved

distal / proximal **eosinophil count decreased**
7 / 12

appropriate **weight gain sustained**
+1 kg

FINDINGS: Indicated remission

CONCLUSION

In this case, partial AAF supplementation providing ~25% of daily calories was associated with:

Improved growth | **Resolved symptoms** | **Histologic improvements**

Partial supplementation may offer a pragmatic escalation option when elimination diets:
- Compromise nutritional adequacy
- Do not achieve remission
- Family prefers diet over pharmacologic treatment

Prospective studies are needed to define the role of partial AAF therapy in pediatric EoE

PRACTICE TAKEAWAY

1 WHEN
Elimination diet + persistent inflammation or growth concerns

2 CONSIDER
Partial nutritionally complete AAF supplementation with RD support

3 MONITOR
Symptoms + growth + repeat histology

REASSESS: Do not rely on symptoms alone

CLINICAL TAKEAWAY

Partial, non-exclusive AAF supplementation was associated with **improved growth, symptom resolution and histologic response** while preserving a **practical oral diet**

TEACHING POINTS

- **Individualized treatment:** No single dietary strategy is appropriate for every child with EoE
- **Assess beyond symptoms:** Symptom improvement alone may not reflect disease control. Reassess histology objectively
- **Recognize nutritional risk:** Multi-food elimination diets can increase nutritional risk, especially with ongoing inflammation
- **Monitor growth closely:** Lack of weight gain or growth faltering should trigger early re-evaluation of the nutrition plan
- **Consider pragmatic options:** Partial AAF may offer a practical bridge and meaningful benefit without exclusive elemental feeding

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