Food protein-induced enterocolitis

Food protein-induced enterocolitis (FPIES): non-IgE mediated food allergy

Epidemiology:
- Most commonly presents at 2-7 months of age
- Incidence ~0.34%

Pathophysiology: poorly understood, though likely caused by T-cell mediated inflammation

Common triggers

Specific foods	Rates
Cow's milk	67%
Soy	41%
Grains (rice, oat, wheat)	25%
Egg	11%

DIAGNOSIS

FPIES is a **clinical** diagnosis
- Cannot use allergy tests (skin prick, serum IgE)
- Consider oral food challenge (OFC) by an allergist if trigger food unclear, atypical symptoms or persistent symptoms after elimination of trigger food

PRESENTATION

History
- Profuse vomiting, usually 1-4 hours after ingesting the trigger food
- Diarrhea, usually 5-10 hours later
- Irritability
- Lack of cutaneous or respiratory symptoms
- Continued exposure to trigger food may result in abdominal distention, bloody diarrhea, anemia, and failure to thrive

Signs of severe dehydration:
- Rapid heart rate, decreased blood pressure, decreased urine output, dry mucous membranes, sunken fontanelles, increased capillary refill

DIFFERENTIAL DIAGNOSIS

Non-IgE mediated allergies:
- **Food protein-induced allergic proctocolitis**: bloody stools, in an otherwise healthy and thriving infant. Most commonly due to cow's milk and/or soy.
- **Food protein-induced enteropathy** (ex. Celiac disease): diarrhea, vomiting, poor weight gain, abdominal distention, malabsorption

Other:
- **Anaphylaxis**: rapid-onset, serious, multi-system reaction
- **Infections** (ex. gastroenteritis): presence of fever, sick contacts

MANAGEMENT

Short-term

Treat dehydration:
- IV fluid bolus (10-20mL/kg of NS)
- Anti-emetics

If severe:
- In severe presentations, IV corticosteroids may be considered, though evidence is limited

Long-term

- Eliminate trigger food from diet
- If the trigger was cow's milk, also eliminate soy due to cross-reactivity, and consider replacing with extensively hydrolyzed formula
- In most cases, maternal elimination of food is not required while breastfeeding
- No epinephrine autoinjector required

Prognosis

- High spontaneous rate of resolution by 3-5 years old
- Medically supervised OFCs may be considered as early as 12 to 18 months after the most recent reaction to determine resolution

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