

*In the name of  
God*

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# ***INTRODUCTION***

- **The most common food allergy in young children**
- **More prevalent in infants**
- **Approximately 2 % of children < 4 year**

# ***PATHOGENESIS***

- Immunologic response (IgE , non-IgE)
- Casein and whey proteins(80 and 20 percent )

# ***IgE-mediated reactions***

- **Immediately, within minutes to two hours**
- **Skin, oropharyngeal, upper and lower respiratory, GI, cardiovascular**
- **From mild to life-threatening anaphylaxis**

# ***Non-IgE-mediated reactions***

- **Food protein-induced proctitis/proctocolitis**
- **Food protein-induced enterocolitis syndrome**
- **Food protein-induced enteropathy**
- **Heiner syndrome**
- ***Gastroesophageal reflux***
- ***Infantile colic***
- ***Constipation***

# ***FPIPC***

- **The first weeks of life**
- **The first week of life(occasionally)**
- **Inflammation of the distal colon**
- **Rectal bleeding**
- **Loose stool or diarrhea (sometimes)**
- **Breastfed(at least one-half)**
- **Healthy-appearing and happy**
- **Resolve by late infancy**

# ***Stool pattern***

- **Multiple daily stools with visible blood**
- **Mucus-streaked stools ,OB +**
- **Infrequent stools with occasional bleeding**
- **Constipation(rarely)**
- **Associated eczema(rarely)**
- **Family history of atopic disease**

# ***DIETARY TRIGGERS***

- **Cow's milk – 76 percent**
- **Egg – 16 percent**
- **Soy – 6 percent**
- **Multiple**
- **No response to maternal dietary restriction**



# ***Warning symptoms ,signs***

- **Unwell appearance**
- **Fever**
- **Poor weight gain**
- **Failure to thrive**
- **Frank diarrhea**
- **Forceful vomiting**
- **Abdominal distension**

## ***Further evaluation***

- **Allergy testing**
  - Skin prick testing : ***not recommended***
  - may be considered in suggestive of IgE-mediated allergy
- **Flexible sigmoidoscopy or colonoscopy**
- **Antibiotic**

# ***DIFFERENTIAL DIAGNOSIS***

- **Anal fissure**
- **Enteric infection**
- **Early-onset inflammatory bowel disease**
- **Other types of food allergies**
- **Intussusception**
- **Others**

# MANAGEMENT

- **Exclusively breastfed infants**
- **Formula-supplemented or formula-fed infants**

# ***Exclusively breastfed infants***

- **Continued breastfeeding**
- **No further management**
- **Elimination of dairy products from the mother's diet ??**
- **Q.O.L of mother**

## ***Exclusively breastfed infants***

- **cow's milk elimination for at least two weeks**
- **soy, followed by egg**
- **Clinical clearing within one to two weeks**
- **Microscopic clearing may persist for several weeks.**

# ***MANAGEMENT***

- **Switch from breastfeeding to a hydrolyzed or amino acid-based formula**
- **Continue breastfeeding despite ongoing symptoms**

# ***Formula-fed infants***

- **Cow's milk formulas**
- **Soy-based formulas**
- **Extensively hydrolyzed formula**
- **Amino acid-based ("elemental") formula (5 percent)**
- **Probiotic supplement??**



# ***Reintroduction***

- **Timing** : at six months to one year of age
  - early reintroduction with mild symptoms
- **Setting** :can be done at home
  - amino acid-based formula to extensively hydrolyzed protein for one to two months
- **Advancement** :1 ounce (30 mL), increases 1 ounce every 1-3 day
- **Recurrence**: restriction for an additional six months

# *Younger siblings*

- *Continue breast feeding*

- asymptomatic infant

- =no need for dietary restriction

- symptomatic infant

- *Formula fed infant*

# ***FPIES***

- **Far less common than proctocolitis**
- **The severe end of the spectrum**
- **Most commonly by cow's milk or soy protein**
- **usually early infancy**
- **In extreme cases, within the first days of life**
- **later age at onset of solid-food FPIES**

# ***Acute FPIES***

**tend to be sicker**

**profuse, repetitive vomiting**

**sometimes diarrhea**

**dehydration**

**lethargy**

**pallor**

**hypotonia**

**hypotension/shock**

**hypothermia**

# ***Chronic FPIES***

- **watery diarrhea**
- **intermittent vomiting**
- **weight loss , FTT**
- **Anemia**
- **hypoproteinemia, and hypoalbuminemia**

# ***Food Triggers***

- **Cow's milk and soy**: the most common
- Rare in exclusively breastfed infants(a protective role)
- **Solid foods**: rice is the most common

# ***DIFFERENTIAL DIAGNOSIS***

- **Gastrointestinal food allergy disorders**
- **Infections**
- **Necrotizing enterocolitis**
- **Intestinal obstruction**
- **Metabolic disorders**

# ***MANAGEMENT***

- **Emergency treatment plan**
- **Dietary elimination**



