MANAGEMENT OF CONSTIPATION – FECAL IMPACTION IN THE ER SETTING

Diana Montoya Melo
PGY 2 Pediatrics

PROBLEM

- Functional Constipation is a very common complain in the pediatric population
- Is a chronic condition that affect lifestyle and quality of life of children and families
- 2nd most common referral to Pedi GI
- Associated with increasing direct and indirect costs nationwide

CONSTIPATION

- Heterogeneous disorder characterized by lumpy or hard stools, straining during defecation, a sensation of incomplete rectal evacuation, and ano-rectal obstruction
- Delay or difficulty in defecation, present for 2 or more weeks, and sufficient to cause significant distress to the patient
- Functional constipation most commonly is caused by painful bowel movements with resultant voluntary withholding of feces by a child who wants to avoid unpleasant defecation

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Rome III criteria for the diagnosis of functional constipation in children

Infants and toddlers
At least two of the following present for at least one month
Two or fewer defecations per week
At least one episode of incontinence after the acquisition of toileting skills
History of excessive stool retention
History of painful or hard bowel movements
Presence of a large fecal mass in the rectum
History of large-diameter stools that may obstruct the toilet

Children with developmental age 4 to 18 years
At least two of the following present for at least two months
Two or fewer defecations per week
At least one episode of fecal incontinence per week
History of retentive posturing or excessive volitional stool retention
History of painful or hard bowel movements
Presence of a large fecal mass in the rectum
History of large-diameter stools that may obstruct the toilet

Data from:

1. *Hyman PE, Milla PJ, Benninga MA, et al. Childhood functional gastrointestinal disorders: Neonate/toddler. Gastroenterology 2006; 130:1519*
2. *Rasquin A, Di Lorenzo C, Forbes D, et al. Childhood functional gastrointestinal disorders: child/adolescent. Gastroenterology 2006; 130:1527*

THE BRISTOL STOOL FORM SCALE (for children)

choose your POO!

type 1		looks like: **rabbit droppings** Separate hard lumps, like nuts (hard to pass)
type 2		looks like: **bunch of grapes** Sausage-shaped but lumpy
type 3		looks like: **corn on cob** Like a sausage but with cracks on its surface
type 4		looks like: **sausage** Like a sausage or snake, smooth and soft
type 5		looks like: **chicken nuggets** Soft blobs with clear-cut edges (passed easily)
type 6		looks like: **porridge** Fluffy pieces with ragged edges, a mushy stool
type 7		looks like: **gravy** Watery, no solid pieces ENTIRELY LIQUID

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ORIGINAL CONTRIBUTIONS

Functional GI Disorders

Ambulatory Care for Constipation in the United States, 1993–2004

- Increase in constipation-related visits for pediatricians and Pedi GI specialists
- The primary treatment for constipation among medical providers shifted from using bulking agents to osmotic laxatives for unknown reasons

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Clinical Practice Guideline

Evaluation and Treatment of Constipation in Infants and Children: Recommendations of the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition

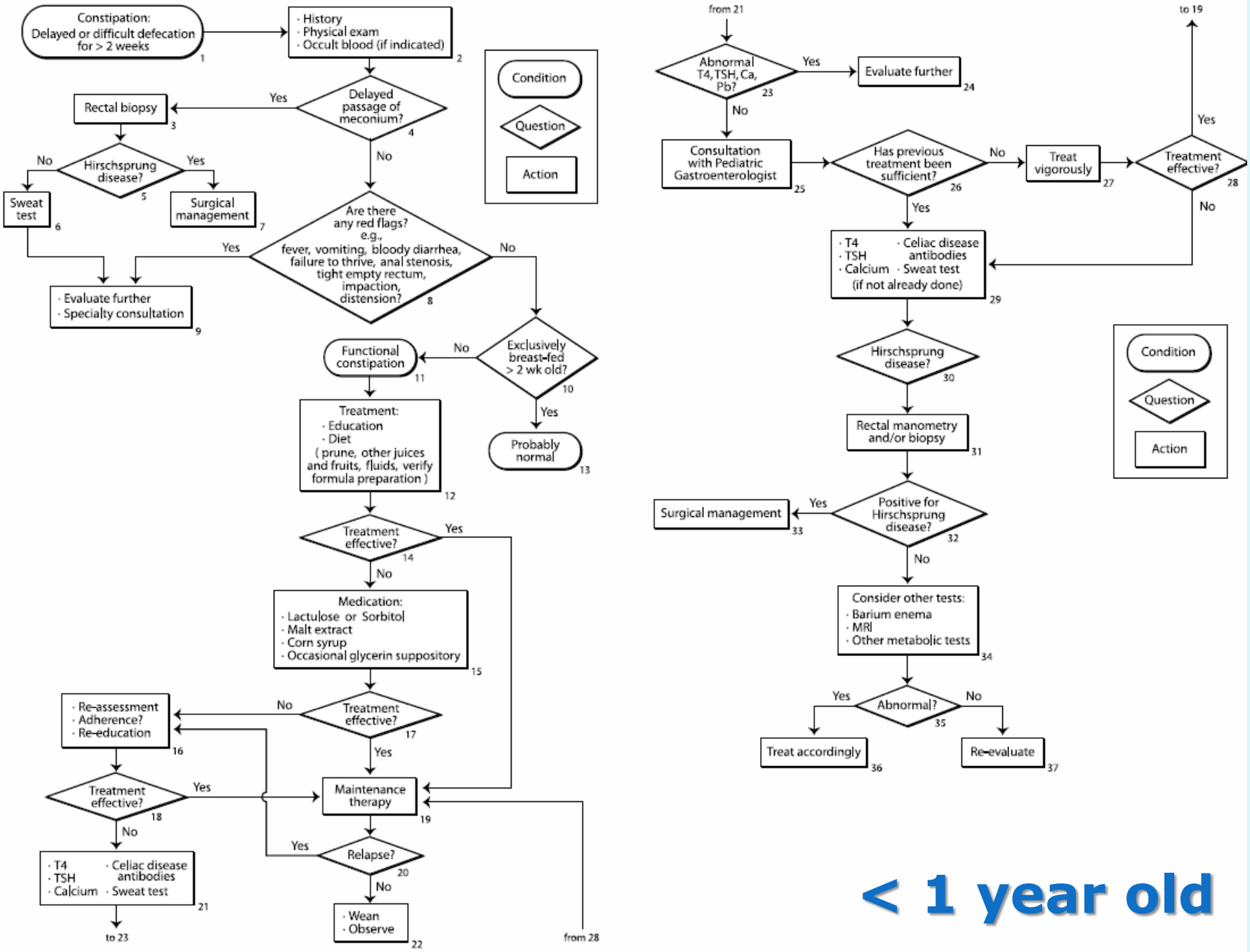
TREATMENT

- The desirable outcome: "normal stooling pattern, with interventions that have few or no adverse effects, and with resultant resumption of functional health"
- Most pediatricians are unaware of the NASPGHAN guideline
- According to the NASPGHAN clinical guideline,

referral to a pediatric gastroenterology specialist is warranted for the following reasons:

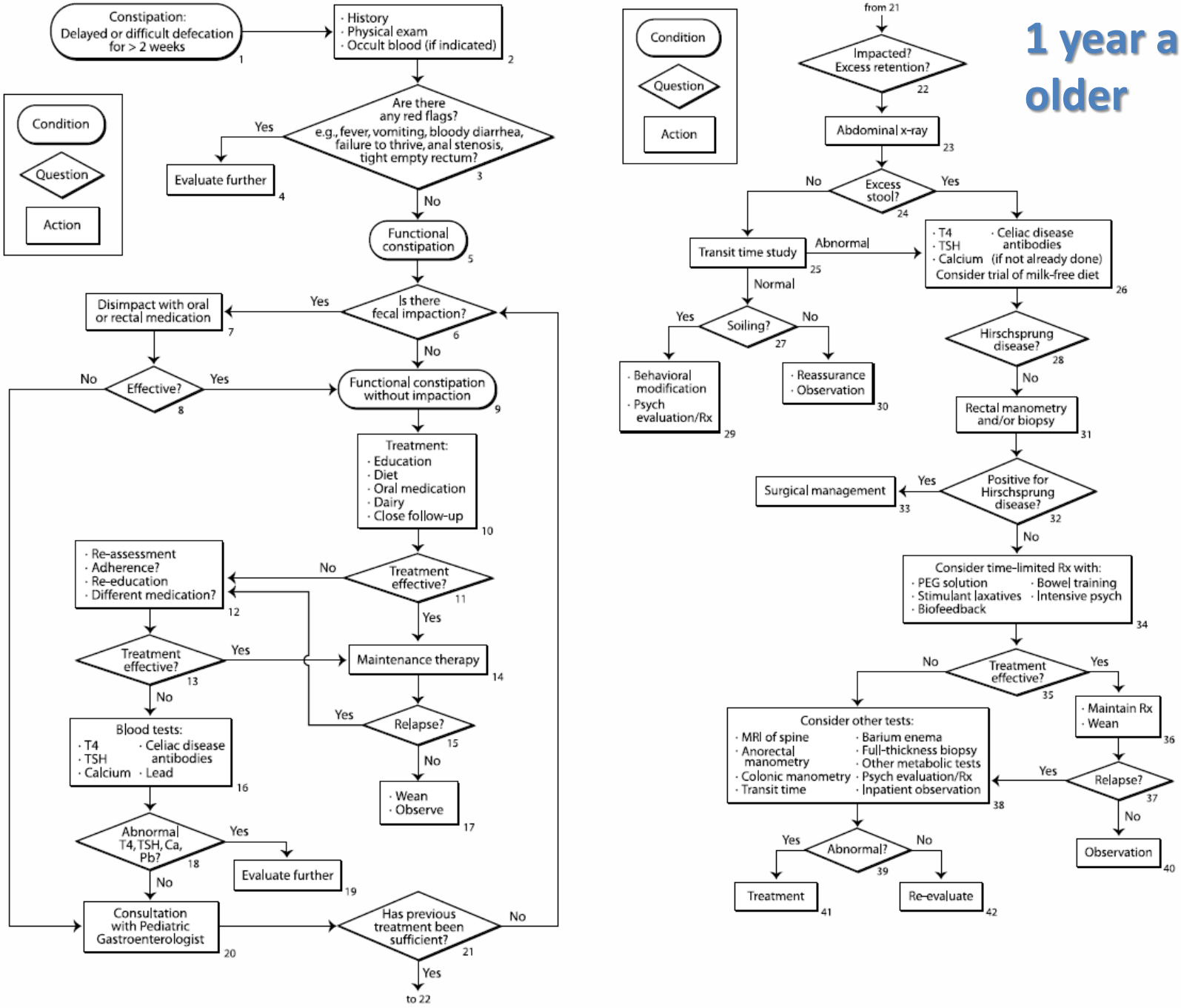
  - therapy is unsuccessful
  - there is concern of organic disease, or
  - management is complicated

1. Focht, Baker, Heubim, and Moyer (2006)


Constipation: Delayed or difficult defecation for > 2 weeks
1
· History
· Physical exam
· Occult blood (if indicated)
2
Delayed passage of meconium?
4
Yes
Rectal biopsy
3
No
Hirschsprung disease?
5
No
Yes
Sweat test
6
Surgical management
7
Are there any red flags? e.g., fever, vomiting, bloody diarrhea, failure to thrive, anal stenosis, tight empty rectum, impaction, distension?
8
Yes
No
· Evaluate further
· Specialty consultation
9
Exclusively breast-fed > 2 wk old?
10
No
Yes
Functional constipation
11
Probably normal
13
Treatment:
· Education
· Diet
(prune, other juices and fruits, fluids, verify formula preparation)
12
Treatment effective?
14
Yes
No
Medication:
· Lactulose or Sorbitol
· Malt extract
· Corn syrup
· Occasional glycerin suppository
15
Treatment effective?
17
No
Yes
· Re-assessment
· Adherence?
· Re-education
16
Treatment effective?
18
Yes
No
Maintenance therapy
19
Relapse?
20
Yes
No
· T4
· TSH
· Calcium
· Celiac disease antibodies
· Sweat test
21
to 23
· Wean
· Observe
22
from 28
Condition
Question
Action
from 21
Abnormal T4, TSH, Ca, Pb?
23
Yes
Evaluate further
24
No
Consultation with Pediatric Gastroenterologist
25
Has previous treatment been sufficient?
26
No
Treat vigorously
27
Treatment effective?
28
Yes
No
to 19
· T4
· TSH
· Calcium
· Celiac disease antibodies
· Sweat test
(if not already done)
29
Hirschsprung disease?
30
Rectal manometry and/or biopsy
31
Positive for Hirschsprung disease?
32
Yes
Surgical management
33
No
Consider other tests:
· Barium enema
· MRI
· Other metabolic tests
34
Abnormal?
35
Yes
No
Treat accordingly
36
Re-evaluate
37
Condition
Question
Action

< 1 year old

1 year and older



FUNCTIONAL CONSTIPATION

- General approach:
  - Determine whether fecal impaction is present (box 6)
  - Treat the impaction if present (box 7)
  - Initiate treatment with oral medication
  - Provide parental education and close follow-up
  - Adjust medications as necessary (box 10)

FUNCTIONAL CONSTIPATION

- Disimpaction
  - Before initiation of maintenance therapy
  - Oral vs. Rectal
- Maintenance Therapy
  - Dietary interventions
  - Behavioral modification
  - Stool Softeners
  - Laxatives
- Consultation with a Specialist
  - Failure of therapy
  - Concern of an organic disease
  - If management is complex

ACUTE CONSTIPATION

- **Infants**
  - For infants who have not yet begun solid foods → addition of undigestible, osmotically active carbohydrates to the formula → sorbitol-containing juices (eg, apple, prune, or pear)
  - >4 mo → 2-4 oz of 100% fruit juice per day
  - For infants who have begun solid foods, sorbitol-containing fruit purees can be used
  - Increase the fiber content of the infant's solid foods
- Glycerin suppositories can be used occasionally if there is very hard stool in the rectum. These interventions should not be used frequently because tolerance may develop

ACUTE CONSTIPATION

- **Toddlers and children**
  - If not bleeding, anal fissure → dietary changes
  - Initial treatment with an osmotic or lubricant laxative → Miralax or mineral oil for at least a few days until the stool is consistently soft
  - Alternatively, several ounces of sorbitol-containing juices
  - Anal fissures can be treated topically with petroleum jelly

ACUTE CONSTIPATION

Clean out

●Laxatives – Children with recurrent constipation also may need one or two doses of a laxative at the onset of an episode

Disimpaction

●sodium phosphate enema (using the appropriate sized enema for the child's age), followed by one or two doses of a laxative

THANKS!