

Constipation

• A Symptom, Not A Disease

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Objectives

- Discuss common causes of constipation
- Identify medications that may cause constipation and recommend effective alternatives
- Provide information to patients regarding non-pharmacologic treatment of constipation
- Describe pharmacologic agents used in the treatment of constipation, their common side effects, and information that should be provided to patients
- Recommend appropriate laxatives for elderly patients or those with renal disease

Definition

- There is no uniform definition of constipation.
- -Movements that are too infrequent
- -Stools that are too hard
- -Incomplete or difficult evacuation
- For research purposes, constipation has been defined as 2 or fewer bowel movements a week and/or straining on more than 25% of bowel movements

Normal bowel habits

- Vary widely
- Diverse perception of normal function
- Studies indicate normal people have more than three bowel movements per week
- Men likely to have at least five per week

Facts

- Constipation is the most common digestive complaint in the US (4.5 mil)
- 3 times higher in women
- Higher incidence in lower socioeconomic status
- Lower incidence from ages 5-44 yrs
- Increases from age 65 and up

History

- Should include
 - Bowel frequency
 - Straining
 - Fecal soiling
 - Incontinence
 - Abdominal discomfort
 - Hx of hemorrhoids/anorectal dx
 - Laxative use (prior & current)
 - Diet

Constipation Presenting Symptoms

- Abdominal distention
- Lower abdominal distress
- Less frequent passage of stools
- Difficulty passing stool; stools too hard/small
- Feeling of incomplete evacuation
- Lower back pain
- Dull headache
- Anorexia
- Lassitude

Chief Complaint

- “I haven’t had a bowel movement in three days.”

HPI

- Catherine Wilson is a 68 yo woman who presents to an outpatient hemodialysis unit for her routine three hour dialysis session. She complains of mild abdominal discomfort, difficulty passing stools, and no bowel movement in three days. She states that she normally has one bowel movement daily. Last week her nephrologist prescribed Metamucil Sugar Free, 1 teaspoon dissolved in a glass of water QD. She feels that this new medication hasn’t improved her bowel frequency. She states that she spends most of her time in bed since her recent shoulder fracture.

PMH

- End-stage renal disease secondary to DM; on hemodialysis for the past 14 months
- Type II DM X 30 yrs with nephropathy; retinopathy, and neuropathy
- CAD; S/P MI 1 yr ago
- PUD
- HTN
- Hyperlipidemia
- Left shoulder fracture secondary to a fall; discharged from the hospital 1 week ago.

FH

- Father: deceased age 54/MI
- Mother: deceased age 71/MI
- Sister: 68 yo heart failure
- Brother: 70 yo oral cancer
- SH: M homemaker, lives with husband in a rural community, one story house, no running water. Meals on wheels 2x/wk.
- Denies ETOH or smoking

Medications

- Metamucil Sugar Free powder 1 teaspoonful dissolved in water po QD
- Docusate sodium (colace) 100 mg po BID
- Gemfibrozil (Lopid) 600 mg po BID
- Renal multivitamin po QD
- Aluminum Hydroxide (amphogel) 400 mg/5mL liquid 30ml po QID with meals as a phosphate binder
- Hydralazine 50 mg po TID
- Isosorbide mononitrate 20 mg po BID
- Ferrous sulfate 325 mg po QD
- Calcitriol .25 mcg po QD
- Cimetidine 400 mg po QHS
- Sucralfate 1 g po Q 6 H
- Verapamil 120 mg po TID
- Acetaminophen with codeine 30 mg po Q 4 H PRN shoulder pain
- Acetaminophen PRN headaches

• All: PCN (rash)

ROS: Mild abdominal pain, difficulty passing stools, decreased frequency of bowel movements, left shoulder pain

PE:

GEN: Pale woman who appears to be chronically ill

VS: BP 180/84, P 84, RR 20, T 37.0 C; Wt 50 kg, Ht 157 cm

HEENT: NC/AT, PERRLA, EOML, fundus not well visualized

• Lungs: CTA

CV: Normal S1, S2 with III/VI SEM

Abd: Soft, NT/ND, normoactive bowel sounds

Ext: Atrophic extremities; fair to poor pulses diffusely; LUE non-tender, strength decreased secondary pain; AV shunt; shoulder with minimal tenderness and irritable with motion

Neuro: Diminished DTR, L>R

Labs: Sodium 137 mEq/L, potassium 3.7 mEq/L, chloride 98 mEq/L, CO2 content 19 mEq/L, BUN 39 mg/dl, serum creatinine 5.4 mg/dl, glucose 134 mg/dL, phosphorus 6.8 mg/dL

Considering the sign and symptoms of constipation, does this patient fit the criteria for a diagnosis of constipation?

• 1. Less than three stools per week for women and five for men

• 2. A period greater than three days without a stool

• 3. Straining with stool > 25% of the time / 2 or fewer stools/ wk

• 4. Straining at defecation and < one stool daily with minimum effort

Common causes of constipation

- ✦ Gastrointestinal Disorders
- ✦ Metabolic and Endocrine Disorders
- ✦ Pregnancy
- ✦ Neurogenic Constipation
- ✦ Psychogenic Constipation
- ✦ Drug induced Constipation
- ✦ Pregnancy
- ✦ Electrolyte disturbances

Drugs causing constipation

- ✦ Analgesics
 - Inhibitors of prostaglandins synthesis
 - Opiates
- ✦ Anticholinergics
 - Antihistamines
 - Antiparkinsonian agents
 - Phenothiazines
 - Tricyclic Antidepressants
- ✦ Antacids containing calcium carbonate or aluminum hydroxide
- ✦ Barium sulfate
- ✦ Clonidine
- ✦ Diuretics (non-potassium sparing)
- ✦ Ganglionic blockers
- ✦ Iron preparations
- ✦ Muscle blockers (d-tubocurarine, succinylcholine)
- ✦ Polystyrene sodium sulfonate

What are the potential causes of constipation in this patient?
Which of the patient's drugs may cause or contribute to constipation?

- ✦ Aluminum hydroxide
- ✦ Ferrous sulfate
- ✦ Acetaminophen with codeine
- ✦ Gemfibrozil
- ✦ Hydralazine
- ✦ Sucralfate
- ✦ Verapamil
- ✦ No running water/lack of drinking water
- ✦ ? Fluid imbalance
- ✦ Inactive lifestyle
- ✦ Diet (decreased fiber)

What is the goal of therapy for constipation?

- ✦ The basis of therapy should be dietary modification.
 - Increase amt of fiber daily
 - Alter life style
 - Decrease discomfort

What non-pharmacologic interventions should be considered first-line treatments for constipation?

- ✦ Dietary management
- ✦ Exercise
- ✦ Adjust bowel habit
- ✦ Increase fluid intake
- ✦ Chew foods thoroughly & slowly
- ✦ No caffeine
- ✦ No alcohol

What pharmacotherapeutic agents are used for the treatment of constipation?

- ✦ Emollient Laxatives
- ✦ Lubricants
- ✦ Lactulose and Sorbitol
- ✦ Diphenylmethane Derivatives
- ✦ Anthraquinone Derivatives
- ✦ Saline Cathartics
- ✦ Castor Oil
- ✦ Glycerin
- ✦ Other
- ✦ Tap Water
- ✦ Soapsuds *Not recommended
- ✦ Cisapride * More expensive

Prior to recommending new drug therapy, what alterations in the current drug therapy might you recommend?

- ❖ DC Sucralfate & Aluminum hydroxide
- ❖ Start another phosphate binding agent (non constipating).
- ❖ Decrease Acetaminophen with codiene
- ❖ Encourage Acetaminophen

Ms. Wilson conts to c/o of constipation the following week. She refuses to take Metamucil and is not able to comply with the recommended non-pharmacologic therapies due to her multiple medical conditions. Sucralfate was dc the previous week and she is taking acetaminophen with codiene less frequently. What drug therapy would you recommend?

- ❖ Cont. Docusate Na 100mg po BID
- ❖ Start Sorbitol (laxative)30 ml TID PRN for constipation

How should the therapy you recommend be monitored for efficacy and adverse effects?

- ❖ 3 BMs per week (non straining, formed, soft)
- ❖ Adverse effects
 - abdominal cramping, diarrhea, flatulence...

What information about this therapy would you provide to the patient?

- Side effects of laxatives
- encourage compliance and reassure outcomes (constipation resolution/codeine/ activity)
- Discuss bowel program
- Discuss constipation and fluid restrictions (dialysis therapy)
- Continue to encourage non pharmaco-therapeutic measures

Which antacids may be recommended for patients in whom constipation should be avoided?

- Aluminum: causes constipation
- Magnesium: causes diarrhea
- Calcium: cause constipation/fecal impaction
- Magnesium containing products (maalox) or aluminum magnesium products (Riopan or Antiflux)

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