Scoop on the poop: Constipation in the Elderly

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Constipation management

More than just prunes!

Learning objectives

1. Select appropriate treatment to manage chronic constipation in elderly
2. Differentiate causes of constipation

Constipation

- Chronic constipation affects 30% elderly
  - 26 % men, 34% women c/o constipation
- Cause: med s/e, metabolic/ neuro disease
- Exclude colonic obstruction
- Defined: <3 stools/ week; decrease transit time
  - Often patient's impression: disturbance bowel function
  - Varied meanings (stool hard, small; defecation is too difficult/ straining, infrequent, or incomplete)

[10, 11]

Rome III Criteria Constipation

≥ 3 months (symptom onset 6 mos prior to Dx)

1. Must include ≥2 for ≥ 25% of the time
   - straining with defecation
   - lumpy or hard stools
   - sensation of incomplete evacuation
   - sensation of anorectal obstruction/blockage
   - Manual maneuvers for defecations (eg, digital evacuation, support of the pelvic floor)
   - <3 defecations/week
2. Rarely loose stools without laxatives
3. Insufficient criteria for IBS

Causes of constipation

Peripheral Neurogenic d/o	**Non-neurogenic disorders**	**Medications**
Diabetes mellitus	Hypothyroidism	***Analgesics***
Autonomic neuropathy	Hypokalemia	***Anticholinergics***
Hirschsprung disease	Anorexia nervosa	αhistamines, αspasmodics, αdepressants, αpsychotics
Chagas disease	Pregnancy	
Intestinal pseudoobstruction	Panhypopituitarism	***Cation-containing agents***
Central Neurogenic d/o	Systemic sclerosis	Fe supplements
Multiple sclerosis	Myotonic dystrophy	Al (antacids, sucralfate)
Spinal cord injury	**Idiopathic constipation**	***Neurally active agents***
Parkinson disease	Normal or slow colonic transit	Opiates, αHTN, αGanglionic, Vinca alkaloids, CCB, α5HT3
Irritable bowel syndrome	Dyssynergic defecation	

Constipation

- IBS: alternating with normal BM. Normal transit time
- Lumbosacral spine dz: colonic hypomobility, dilatation
- Parkinson's: worsened by physical inactivity or meds
- Pelvic floor muscle laxity: may contribute to fecal incontinence

Treatment constipation
Slow transit

- Daily osmotic laxatives
  - Sorbitol, lactulose, polyethylene glycol
  - Tegaserod (5-HT^4 agonist)
- Inertia → megacolon
  - May require resection
- Pelvic floor dysfunction
  - Bio-feed back, relaxation exercises, suppositories

- Most patients have normal transit time, so that's what we'll focus on in this workshop

Treatment constipation
Normal transit

- To increase frequency & soften stool
  - Fluids
  - Dietary fiber
  - Bulk laxatives (psyllsium seed, Ca polycarbophil)
  - Stimulant laxative (biscodyl, senna)
    - Chronically, can → low K, protein-loosing enteropathy, impaired bowel motility
  - Stool softeners (docusate)
    - Few s/e, but less effective

Remain proactive

- In any patient that isn't in control of their own environment, keep in mind bowel function
  - Dementia
  - Delirium
  - Hospitalized
  - Limited mobility for any reason
    - ex. fracture, trauma
- **Preventing Constipation can prevent delirium**

Ms. W

- 72 yo PMH HTN, OA, COPD comes to you with complaint of constipation.
- For past few weeks, she stools qod and it's hard to pass
- ROS: tired, mild abd cramping, otw negative
- SH: remote tobacco, lives with husband, volunteers weekly
- FH: CAD, HTN, DM

Any alarming features?

Evaluating a patient with constipation

- Careful history and physical
- Alarm features
  - Hematochezia
  - weight loss of ≥10 pounds
  - FH colon cancer or IBD
  - Anemia
  - + fecal occult blood
  - acute onset elderly
    - ➢ labs (Ca, Thyroid), radiology, or endoscopy

Important elements in H&P

- History
  - nature and duration of constipation; consider diary
  - secondary causes
  - Med history, esp with timing
  - Neuro d/o or local processes (eg, tumors) → often other symptoms
  - Acute & persistent with no definable cause, should prompt an evaluation to exclude structural changes or organic diseases.
- Physical (Rectal exam)
  - Fissures or hemorrhoids caused by or leading to constipation
  - Ask the patient to strain during exam
    - Gaping or asymmetric anal opening (impaired sphincter) →neurologic d/o
    - Contraction of the puborectalis and external anal sphincter muscles for dyssynergic defecation
    - Rectal prolapse: strain in a squat, if not apparent supine.
    - Rectocele: strain with the examining finger oriented anteriorly in a woman.

Initial Management

- Patient education
  - Increase fluid and fiber intake
  - Reduce dependency on laxatives
  - If dependent → advise taper
- Dietary changes
  - Dietary fiber
  - Adequate fluids
- Non-bulk forming laxatives
  - Ex. psyllium or methylcellulose
  - Most physiologic and effective approach

Supplemental fiber

- Can improve symptoms (normal transit)
- Variety of supplements and natural foods
- Cheap & safe, so try first
- Recommended: 20-35 g/day
  - Sugars (sorbitol and fructose) can decrease constipation
  - Take with **adequate water**
  - Warn pts to **start low and go slow**
    - Dose response
    - Base on tolerance and effect
    - To avoid bloating , distention, flatulence

Floch, Gastro, 1994.

Dietary Fiber

DIETARY FIBER (food, fiber grams/serving)	
FRUITS	
Apple (with skin)	3.5/1 medium-sized apple
Apricot (fresh)	1.8/3 apricots
Banana	2.5/1 banana
Cantaloupe	2.7/half edible portion
Dates	13.5/1 cup (chopped)
Grapefruit	1.6/half edible portion
Grapes	2.6/10 grapes
Oranges	2.6/1 orange
Peach (with skin)	2.1/1 peach
Pear (with skin)	4.6/1 pear
Pineapple	2.2/1 cup (diced)
Prunes	11.9/11 dried prunes
Raisins	2.2/packet
Strawberries	3.0/1 cup
JUICES	
Apple	0.74/1 cup
Grapefruit	1.0/1 cup
Grape	1.3/1 cup
Orange	1.0/1 cup
COOKED VEGETABLES	
Asparagus	1.5/7 spears
Beans, string, green	3.4/1 cup
Broccoli	5.0/1 stalk
Brussels sprouts	4.6/7-8 sprouts
Cabbage	2.9/1 cup (cooked)
Carrots	4.6/1 cup
Cauliflower	2.1/1 cup
Peas	7.2/1 cup (cooked)
Potato (with skin)	2.3/1 boiled
Spinach	4.1/1 cup (raw)
Squash, summer	3.4/1 cup (cooked, diced)
Sweet potatoes	2.7/1 baked
Zucchini	4.2/1 cup (cooked, diced)
RAW VEGETABLES	
Cucumber	0.2/6-8 slices with skin
Lettuce	2.0/1 wedge iceberg
Mushrooms	0.8/half cup (sliced)
Onions	1.3/1 cup
Peppers, green	1.0/1 pod
Tomato	1.8/1 tomato
Spinach	8.0/1 cup (chopped)
LEGUMES	
Baked beans	18.6/1 cup
Dried peas	4.7/half cup (cooked)
Kidney beans	7.4/half cup (cooked)
Lima beans	2.6/half cup (cooked)
Lentils	1.9/half cup (cooked)
BREADS, PASTA, FLOURS	
Bagels	1.1/half bagel
Bran muffins	6.3/muffin

American Gastroenterological Association. Kim, YI, Gastroenterology 2000; 118:1235.

Laxative	Usual adult dose	Onset	Side effects
Bulk-forming laxatives			**≤ 50% dose--> slowly up (gas, bloating); with 6-12 oz water/juice. Avoid w/in 1hr of other meds**
Psyllium	Up-1 tbs (~3.5 g fiber) TID	12-72 h	Impaction above strictures, fluid overload, gas and bloating
Methylcellulose	Up-1 tbs (~2 g fiber) or 4 cap (500 mg fiber/cap) TID	12-72 h	
Polycarbophil	2-4 tabs (500 mg fiber per tab) QD	24-48 h	
Wheat dextrin (Benefiber™)	1-3 cap (1 g fiber/cap) or 2 tsp (1.5 g fiber/teaspoon) up-TID	24-48 h	
Surfactants (softeners)			
Docusate sodium	100 mg 2 times QD	24-72 h	Lower dose if w/ another. Contact dermatitis reported.
Docusate calcium	240 mg 1 time QD	24-72 h	
Osmotic agents			**Avoid excessive use**
Polyethylene glycol	8.5-34 g in 240 mL (8 ounces) liquids	1-4 days	Nausea, bloating, cramping
Lactulose	10-20 g (15-30 mL) QOD -> up to BID	24-48 h	Abdominal bloating, flatulence
Sorbitol	30 g (120 mL of 25% solution) QD	24-48 h	Abdominal bloating, flatulence
Glycerin (Glycerol)	1 supp (2-3 g) pr 15mins QD	15-60 mins	Rectal irritation
Magnesium sulfate	1-2 tsp (~5-10 g) in 8oz water QD	0.5-3 h	Watery stools and urgency. **Caution:** Renal (Mg toxicity)
Magnesium citrate	200 mL (11.6 g) QD	0.5-3 h	
Stimulant laxatives			**Caution:** Chronic use can → low K, protein loss, salt overload.
Bisacodyl po	10-30 mg Enteric coated tab QD	6-10 h	Gastric irritation
Bisacodyl pr	10 mg supp pr QD	15-60 mins	Rectal irritation
Senna	2-4 tabs (8.6 mg sennosides/tab) 1-2 tabs (15 mg sennosides/tab) QD/ BID	6-12 h	Melanosis coli
Other			
Lubiprostone	24 µg BID	24-48 h	Nausea, diarrhea

CASE

Ms. B

- 77 yo PMH HTN, DM2, OA presents for PCP visit after recent discharge for left hip repair
- States generally feeling well, no pain in hip. Patient has no complaints
- Daughter, however, stops you in the hall to note that “mom has been more confused and sleepy over past few days.”
- What else do you want to know?

Ms. B

- Ms. B had routine scheduled L THA done 10 days ago, recovered well post-op, and was discharged home to continue with PT recovery.
- Daughter has been staying with her and notes that the first few days she was great, but over the past week, more irritable, dosing off during the day, intermittently confused.

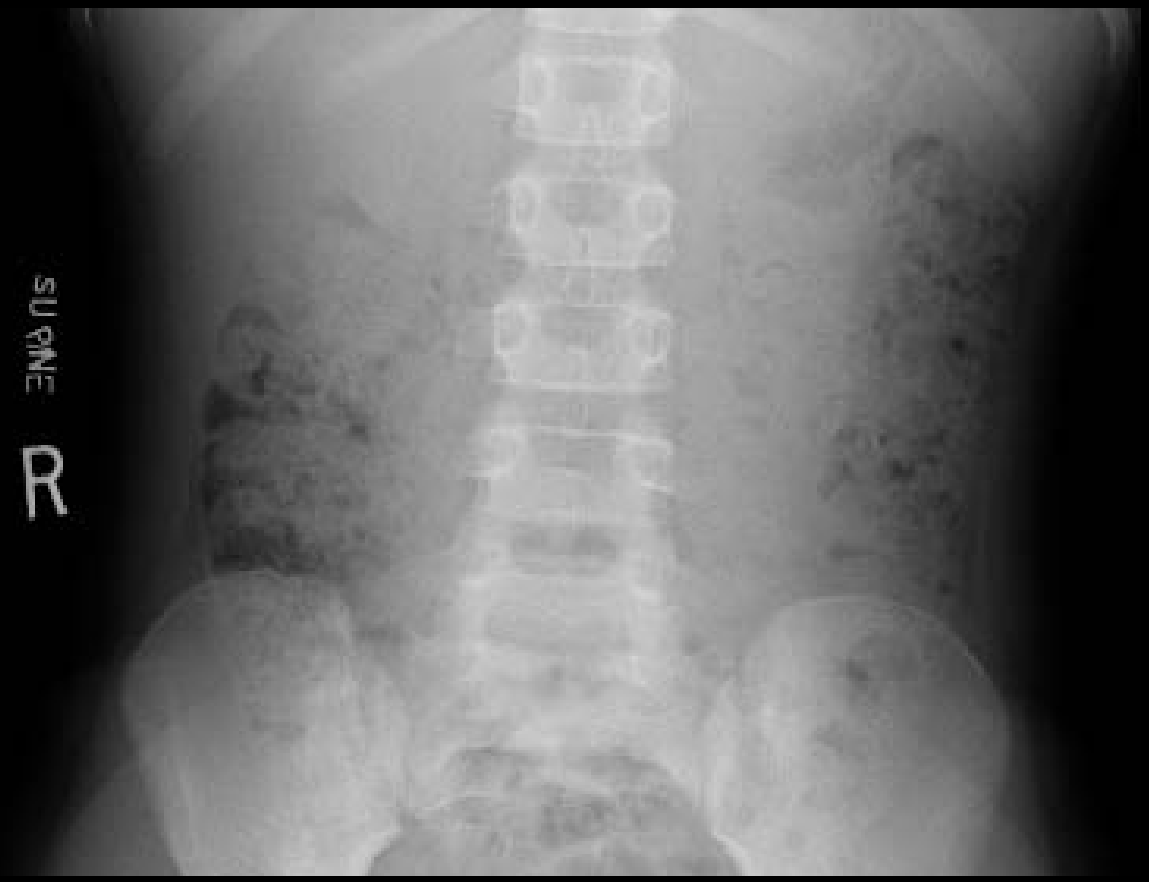
- Meds: HCTZ 25 mg qd, Vicodin 5/325 2 tabs q6 prn pain, Colace

Ms. B

- PE: 118/62, 85, 12, 98%
- Gen: Alert, fully conversant
- HEENT: dry mucous mb
- CV: RRR, no M/R/G
- Lungs: CTA B
- Abd: Distended, nl BS, no T/G/R
- Ext: no edema, 2+ pulses
- Neuro: A&O to person, place only. MMSE: 26/30, but difficult to get her to focus on it

What's wrong with Ms. B?

- Delirious
  - Decrease attention, acute change in cognition with wax/ wane pattern
- DDX: broad; so more H&P
- PCP noted distended abdomen, asked re: BM. Neither patient nor daughter recalled her last normal BM, did note some loose stool, small volume over past few days, as well as some UI.
- Rectal exam: stool impaction
- AXR: next slide



Ms. B AXR

Fecal Impaction

Ms. B

- Decreased colonic motility from post-op narcotics, perhaps contributed to by diuretic
  - Colace: softens stool, but does not contribute to decreased motility

- Resolution: dis-impacted in clinic, started on Senna, increased dietary fiber and held HCTZ. Returned to normal BM in 2 days and delirium cleared over the next 2 weeks.