BOWEL ISSUES IN LTC: THE POWER OF POOP

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OBJECTIVES

- Discuss physiology of aging and the GI tract
- How to identify constipation and how to prevent and treat it
- Management of C. difficile infections

PHYSIOLOGY OF AGING

- Age related reductions in rectal wall sensitivities or bowel motility may contribute to constipation.1
- Older adults in institutional setting are often taking numerous medications and other substances that may contribute to GI disorders.
MEDICATIONS

• Constipation:
  Anticholinergic meds, calcium channel blockers, diuretics, iron preparations, opioids

Diarrhea:
  Antibiotics, Colchicine, Laxatives, Lithium, Magnesium supplements, Metformin, Misoprostol, Niacin, PPIs, SSRIs, sorbitol and lactulose

Fecal impaction and dehydration may indicate a patient has or is at high risk for a GI disorder
GI disorders may lead to anemia, malabsorption and other potentially serious problems. They can also cause serious discomfort for the patient
Therefore significant abnormalities in GI function should be addressed promptly.

CONSTIPATION

• Usually medically defined as fewer than 3 bowel movements per week
• Specific signs and symptoms of constipation:
  Anorexia, bloating, changes in bowel sounds, changes in pattern of bowel movements, decrease in oral intake, firm, tense abdomen, large amount of hard stool on rectal examination, reduced frequency of bowel movements
CONSTIPATION

Risk Factors for constipation:
Anal fissure, Anorexia, Cancer of the colon or rectum, Dementia, Diabetes, Fluid and electrolyte imbalance, hypercalcemia, hypokalemia, hypothyroidism, Immobility, impairments in ADLS, Irritable bowel syndrome, low-fiber diet, myopathies, neurologic deficits

CONSTIPATION MANAGEMENT

• Focuses on achieving and maintaining appropriate stool consistency and some degree of regularity of bowel movements
• Useful nonpharmacologic approaches to managing constipation and preventing recurrence include adequate fluid intake, regular physical activity and a diet that contains both soluble and insoluble fiber (fresh fruits and vegetables)

CONSTIPATION MANAGEMENT

• Lactulose (15-60ml daily) and sorbitol (15-60ml daily) are effective alternatives to fiber
• Stimulant laxatives (senna, bisacodyl) which act on the myenteric plexus are most effective when given at night. (when gut is least active)
• Excessive long term use of stimulant laxatives may be associated with the development of “cathartic colon” poorly functioning colon caused by chronic abuse of stimulant laxatives.
COMPLICATIONS OF CONSTIPATION

• Fecal impaction heralded by crampy lower abdominal and lower back pain
• Stercoral ulcers are common in the patient who is bed ridden. Caused by pressure necrosis of the rectal or sigmoid mucosa due to a fecal mass. In some cases, the ulcer may be manifested as rectal bleeding
• Anal fissures

COMPLICATIONS CONT’D

• Megacolon in the elderly is almost always idiopathic. Chronic use of cathartics for a period of years may lead to an acquired degeneration of the colonic myenteric plexus and subsequent megacolon. Bacterial overgrowth may occur and further complicate matters
• Volvulus, especially of the sigmoid colon, occurs most commonly in institutionalized, bed-bound elderly patients and carries a high mortality rate.

EFFICACY OF LACTIC ACID BACTERIA

• Using a LAB supplement in the management of constipation among nursing home residents
• Constipation is a significant problem in the elderly specifically nursing home residents are reported to suffer from constipation.
• Lactic acid bacteria (LAB) are beneficial probiotic organisms that contribute to improved nutrition, microbial balance, and immuno-enhancement of the intestinal tract, as well as diarrhea and constipation effect
LAB STUDY

• 19 subjects with chronic constipation were assigned to get LAB 2x a day for 2 weeks. Subjects had a questionnaire on defecation habits (frequency of defecation, amount and state of stool) and fecal samples were collected before and after study to investigate LAB levels and inhibition of harmful enzyme activities.

• Results: increase in the frequency of defecation and amount of stool excreted in defecation and harmful enzyme levels decreased.

PREVALENCE OF CONSTIPATION SYMPTOMS IN FECALLY INCONTINENT NURSING HOME RESIDENTS

• To determine the prevalence of constipation symptoms and the effects of a brief toileting assistance trial on constipation in a sample of fecally incontinent nursing home residents.

• 5 NHs, 111 fecally incontinent NH residents

• Research staff measured BM frequency every 2 hours for 10 days. The following week residents were offered toileting assistance every 2 hours for 2 days to determine resident straining, time required for a BM, and resident perceptions of feeling empty after a BM.

STUDY (CONT.)

• Results: the frequency of BMs during usual NH care was low (mean = 0.32 per person per day), and most episodes were incontinent.

• The frequency of BMs increased significantly, to 0.82 per person per day, and most episodes were continent during the 2 days that research staff provided toileting assistance.
STUDY (CONT.)

• Conclusion: low rates of BMs during the day that are potentially indicative of constipation were immediately improved during a 2-day trial of toileting assistance in approximately 68% of the residents.

C. DIFFICILE DIARRHEA

• Two commonly used- and often misused- classes of drugs have been linked directly to the development of C. difficile infections: antibiotics and proton pump inhibitors (PPIs), heart burn drugs that block the production of stomach acid.

• In a study published in the New England Journal of Medicine (Feb 26 2015) CDC estimated that 453,000 C. difficile infections occurred in the U.S. in 2011 which resulted in 29,300 deaths with 30 days of diagnosis. Approximately 83,000 suffered a recurrence of C. difficile infection.

C. DIFFICILE INFECTION

• Of note people 65 or older were more than eight times more likely to develop these infections than were younger individuals.

• C. difficile cause illness by infection the colon following treatment with oral or intravenous antibiotics for another infection. Exposure to the bacteria most commonly occurs in hospital and nursing home settings, where as many as 20 and 50 percent of patients, respectively, harbor C. difficile in their stool.
C. DIFFICILE INFECTION

• C. difficile spread from these patients to other people who are not colonized with the bacteria via the fecal-oral route. After patients or staff touch contaminated surfaces, they subsequently may ingest small amounts of the bacteria when they eat or drink. The ingested C. difficile then can travel through the stomach and small intestines and into the colon, where they may survive for several weeks to months. Good bacteria in the gut protects it.

C. DIFFICILE INFECTION

• When people are treat with antibiotics, many of the good bacteria in the colon are killed. Left unchecked by the good bacteria the C. difficile can multiply and produce a toxin that damages the inner lining of the colon.

• The main symptoms of a C. difficile infection are watery diarrhea and abdominal cramping.
• Severe cases 10-15 stools a day with blood or pus, along with fever, nausea, loss of appetite and weight loss.

C. DIFFICILE INFECTION

• In rare cases the colon can rupture causing body wide infection, multi-organ failure and sometimes death.
• Clindamycin was the first antibiotic linked to C. difficile. Other antibiotics fluoroquinolones and broad spectrum penicillins and cephalosporins.

• Most often occurs within 1 month of stopping an antibiotic. Patients remain at increased risk for 3 months.
C. DIFFICILE DIARRHEA

- Treatment eliminating causal antibiotic
- Oral metronidazole 500mg 3 times daily for 10-14 days or vancomycin 125mg 4 times daily for 10-14 days
- Both medications can be used up to 30 days if symptoms persist

REFERENCES

- 1. Gastrointestinal Disorders in the Long-Term Care Setting. Clinical Practice Guidelines. AMDA.