

Gastrointestinal Issues in ElderCare



Part of the
ElderCare: Healthcare for the Aging Series

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Purpose Statement

The purpose of this home study is to review common changes in the gastrointestinal system related to aging, and the assessment and management of elderly patients with gastrointestinal disease.

Target Audience

This home study was designed for health care professionals with little to no familiarity with caring for elderly patients with gastrointestinal problems.

Content Objectives

1. Describe common changes and pathophysiology related to aging of the gastrointestinal system.
2. Formulate a plan for assessing and managing the elderly patient with gastrointestinal disease.

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Planning Committee/Editors

Linda Checky, BSN, RN, MBA, Assistant Program Manager for TCHP Education Consortium.

Lynn Duane, MSN, RN, Program Manager for TCHP Education Consortium.

Author

Lynn Duane, MSN, RN, Program Manager for TCHP Education Consortium.

Content Expert

Susan Bot, BSN, RN, CRRN, Nursing Instructor in Extended Care and Rehabilitation at the Minneapolis VA Medical Center.

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Introduction

Since 1900, the average life expectancy has increased by 28 years. As we all live longer, we are more likely to encounter aging related changes in our gastrointestinal tract. Gastrointestinal symptoms and complaints are common in elders, and can diminish quality of life.

In Gastrointestinal Issues in ElderCare, you will learn about the normal changes we see in the aging person's gastrointestinal status; the "typical" gastrointestinal symptoms of aging; and the assessment and management of the elder experiencing gastrointestinal disease.

Normal Changes of Aging

Many of the aging related changes in the gastrointestinal tract are not life threatening, but can impact the quality of life in older persons.

Mouth and Pharynx

About half of people over the age of 65 years have lost teeth due to periodontal disease. This, along with ill-fitting dentures, may result in poor nutrition as the older person has pain or difficulty with chewing and eating. Older people may also lose some taste sensation as their taste buds atrophy. This means they may enjoy their food less and nutritional variety may decline, contributing to their poor nutritional status.

Gastrointestinal Tract

In general, digestive system function is slowed in the elderly causing motility and absorption issues.

Esophageal motility declines and may lead to problems with heartburn, dysphagia, and vomiting of undigested foods.

Gastric motility is also decreased because the gastric mucosa starts to degenerate. There is also decreased secretion of digestive enzymes. The elderly person may have difficulty with vitamin absorption due to the decrease in hydrochloric acid and intrinsic factor. Protein digestion may be of concern with a decrease in the secretion of pepsin.

Atrophy of the mucosal lining and the muscle layer of the small intestine contribute to poor absorption of fats and vitamin B₁₂. Constipation is a common complaint among the elderly and is likely due to dulled nerve impulses in the large intestine indicating the need to defecate. Fecal incontinence may occur as a result of a decrease in the tone of the internal anal sphincter.

Gallbladder, Pancreas and Liver

The incidence of gallstones increases with age, affecting women more than men. The increase in gallstones is probably due to a change in the composition of the bile that makes it more likely to form stones. Dehydration in the elderly may also contribute to this.

A decrease in the volume of pancreatic secretions can lead to poor fat absorption and intolerance to fatty foods in older adults.

The liver is also affected by aging. Liver mass decreases over time, but more importantly, research has shown a decrease in drug clearance of 5% to 30%.

Typical Gastrointestinal Symptoms of Aging

Many complaints the elderly have related to the gastrointestinal tract may be a result of the normal aging process, while others could signify a serious problem. Even when the symptoms don't represent a serious medical problem, they can limit the elderly person's sense of well-being. Listed below are several of the more common gastrointestinal symptoms experienced by elderly people.

Nausea and Vomiting

Nausea and vomiting occur in the elderly for all the same reasons they occur in younger people. Since older adults are at greater risk for dehydration and electrolyte imbalance, it is important to carefully monitor the frequency and amount of emesis. Fluids need to be replaced as indicated. Start with small sips of liquid every 15 minutes and increase the volume as tolerated. If the episode of nausea and vomiting persists, or contains blood, the elderly person needs to be evaluated by a health care provider.

Poor Appetite

Decreased food intake may result from a poor appetite or a variety of other reasons including:

- Related illnesses
- Grief, loss or other emotional upsets
- Pain
- Chemotherapy treatment for cancer
- Radiation treatment for cancer

The best approach for this problem is to offer gentle encouragement to eat small, frequent meals. Information

regarding other related symptoms such as weight loss, abdominal pain, constipation, diarrhea, nausea and vomiting are important to assess.

Abdominal Pain

Assessing abdominal pain is difficult, but is even more complex in the elderly person. Older people are not as likely to complain of pain as younger adults. Key aspects of pain assessment include evaluating the following:

- Duration
- Location
- Mode of onset
- Relationship to food
- Alleviating and aggravating factors
- Related symptoms

Comfort measures and pain management are as important for the elderly as they are for other age groups.

Gas

Excess flatus is primarily related to diet.

<i>Cause</i>	<i>Types of Food</i>
Air-containing foods	Whipped cream, carbonated beverages, and certain fruits
Gas-forming foods	Beans and legumes
Sulfur-containing foods	Eggs
Lactose Intolerance	Dairy products

It is normal to pass gas between 7-20 times per day. Intestinal gas may cause abdominal pain, bloating or discomfort. These symptoms are often relieved by avoiding gas producing foods and by walking or changing position. Of course, complete assessment of the older adult is important. Evaluate for changes in bowel function, pain and associated GI symptoms.

Frequent belching usually results from swallowing excess air, however, because these symptoms may portend something more serious in the older adult, assess for symptoms of gastritis and peptic ulcer disease.

Diarrhea

Diarrhea means frequent and liquid bowel movements. One of the first questions to ask the elderly patient is exactly what they mean by diarrhea and if it is different from their normal bowel pattern. Of special importance

with elderly patients who have diarrhea is the risk of dehydration. If symptoms such as thirst, weakness, dizziness, palpitations and fatigue accompany diarrhea, it is important to contact a health care provider. Severe diarrhea can be life-threatening.

Depending on the cause, the physician may prescribe antidiarrheal or antispasmodic medications. Antibiotics may also be indicated. The BRAT (bananas, rice, applesauce, and toast) diet or clear liquids may also be indicated.

Constipation

Constipation is far more common in elderly people than in younger adults. As with diarrhea, it is important to determine exactly what the elderly person means when they say they are constipated. Infrequent bowel movements and dry, hard stools are commonly thought of as constipation. Constipation has many causes including:

- Diet low in fiber
- Decrease in fluid intake
- Medications such as iron or antacids
- Fecal impaction
- Carcinoma
- Depression

Treatment for constipation may include increasing fluids and fiber in the diet, regular activity and maintaining a regular toileting schedule. The physician may also prescribe a laxative or an enema, a stool softener or a medication to increase motility.

Gastrointestinal Diseases

Elders experience many of the same diseases of the GI tract that younger adults experience. The most common gastrointestinal diseases among the elderly (> 65 years of age) are:

- Dysphagia
- Gastroesophageal Reflux (GERD)
- Peptic Ulcer Disease
- Diverticula
- Intestinal Obstruction
- Cancer

Dysphagia

Dysphagia can be defined as difficulty in swallowing. Problems in swallowing may lead to inadequate nutrition and increase the risk of choking and aspiration, which can lead to pneumonia. Dysphagia is generally caused by:

- Oral, laryngeal and esophageal cancer
- Stroke
- Parkinson's Disease
- Alzheimer's Disease
- Esophageal spasm

Any of these problems can cause a disorder called achalasia. The lower esophageal sphincter becomes tightly constricted and the esophagus becomes dilated. Eventually, food starts to collect in the distal end of the esophagus. Symptoms include worsening dysphagia, vomiting and weight loss. The problems with swallowing progress from solid foods to liquids.

Diagnosis

Symptoms of dysphagia can vary from a mild discomfort (such as a "lump" in the throat) and coughing to severe pain and an inability to swallow. Physical exam may not be particularly helpful, but a good history will contribute to a better understanding of the illness. Ask the elderly adult if the dysphagia occurs with liquids, solids or both, and when it tends to occur.

The most common diagnostic exam utilized is the barium swallow. In achalasia, the pharynx and upper esophagus will appear normal, but the lower esophagus will be distended. A swallowing assessment can help determine the extent of the problem and is usually performed by the speech pathologist.

Management

Surgery may be necessary to decrease the amount of obstruction. If the achalasia is severe, anticholinergic medications may alleviate some of the symptoms. In general however, palliative treatments are among the only options.

Preventing aspiration is key in elderly adults with dysphagia, because it may lead to pneumonia. Providing small, frequent meals consisting of soft or pureed foods high in nutritional value will help maintain hydration and nutritional status and prevent weight loss. Reminding the elderly person to sit upright will also reduce the likelihood of aspiration. With dysphagia, the elderly patient may develop a fear of eating, so it is important to provide emotional support and reassurance if this occurs.

Emergency management may be necessary if the elderly person begins to choke. The treatment for choking is to perform the Heimlich maneuver and activate the Emergency Medical System (EMS).

Gastroesophageal Reflux Disease (GERD)

Although GERD is seen more frequently in older adults, it is not a normal change of aging. GERD occurs when the lower esophageal sphincter is incompetent, allowing the gastric contents (including hydrochloric acid) to move back up into the esophagus. Over time, the reflux causes inflammation, resulting in reduced esophageal clearance and damaging the mucosa.

Diagnosis

Symptoms that are typical for geriatric patients are heartburn, retrosternal discomfort, and the regurgitation of acidic material. If regurgitation occurs frequently, the pain may mimic that of a heart attack. Symptoms may be worsened after eating a large amount of fatty or spicy foods or drinking alcohol.

Diagnostics for suspected GERD include an UGI (upper gastrointestinal) radiographic series and endoscopy. Measurement of the pH in the esophagus is the most reliable test.

Management

Treatment of GERD is designed to reduce the source of irritation.

The following changes in diet may be effective.

- High protein, low fat
- Avoid caffeine, alcohol and chocolate
- Eat small, frequent meals that are easily digestible
- Maintain a normal body weight

Elevating the head of the bed at night, avoiding bending over for 2 hours after meals and not wearing tight clothing or girdles will also lessen the symptoms.

There are several options for treatment with medication including: antacids, histamine blockers such as cimetidine, or proton pump inhibitors such as omeprazole. Finally, surgery may be indicated in cases of severe hiatal hernia in which the stomach protrudes through the esophageal hiatus of the diaphragm.

For elderly patients, close monitoring of this disease process is important, as it may lead to peptic ulcers or gastric cancer.

Peptic Ulcer Disease (PUD)

Two primary forces are at work in causing peptic ulcer disease. The first is an excessive amount of gastric acid and/or pepsin secretion. For example, increased production of hydrochloric acid in the stomach is commonly associated with duodenal ulcers.

The second cause is poor integrity of the gastric and/or duodenal mucosa. Decreased resistance of the mucosa can be caused by medications such as NSAID's and indomethacin. Additionally, in 1994, it was determined that the *Helicobacter pylori* bacteria is responsible for more than 70% of all ulcers. *Helicobacter pylori* breaks down the gastric mucosa, allowing an ulcer to form.

Gastric ulcers occur more frequently in the elderly and duodenal ulcers occur more frequently in younger adults. The elderly have an increased risk of developing acute GI bleeding.

Diagnosis

Diagnosis of PUD is based on the history and characteristics of the pain. The most common symptom of gastric ulcer is epigastric pain, with variable relief from food. Other symptoms include nausea, vomiting and weight loss. GI bleeding due to perforation occurs in 25% of persons with gastric ulcers.

Classic symptoms of duodenal ulcers include:

- Pain generally starts 90 minutes to 3 hours after eating and is located in the midepigastrium
- Pain is immediately relieved by food or antacids
- Heartburn and reflux
- Decreased appetite and weight loss are rare

Typical diagnostic procedures for diagnosing peptic ulcer disease include an UGI radiographic series and endoscopy. *Helicobacter pylori* antibody testing is also valuable in diagnosing PUD.

Management

Treatment of PUD focuses on relieving the pain, promoting healing and preventing complications. The elder requires the same types of treatment interventions as the younger adult.

Treatment of PUD requires a 4-pronged approach.

- Acid suppression can be accomplished through medications such as antacids, histamine blockers (cimetidine) or proton pump inhibitors (Prilosec).
- Dietary modifications include eliminating caffeine and alcohol and avoiding foods that cause discomfort.

- Avoid all medications that irritate the gastric mucosa including aspirin and NSAID's.
- Antibiotics such as clarithromycin or tetracycline to eliminate *Helicobacter pylori*.

Upper GI bleeding occurs in 15-20% of patients with of peptic ulcer disease. Other complications of PUD include perforation, which can lead to peritonitis and obstruction caused by scarring, stenosis or inflammation.

GI bleeding is discussed in more detail on page 7 of this home study.

Diverticulosis/Diverticulitis

Simply put, a diverticulum (singular) is an out-pouching of the intestinal wall. They are usually found in the large intestine, although they can occur at any place in the gastrointestinal tract from the esophagus to the colon. The presence of diverticula (plural) is referred to as diverticulosis.

The most likely cause of diverticula is the high pressure generated within the colon caused by lack of dietary fiber in the diet.

When the diverticula become inflamed, it causes a condition known as diverticulitis. Diverticular disease is very common in the United States and affects as many as 50% of people over the age of 60.

Diverticulosis

The presence of multiple diverticula that are not inflamed is called diverticulosis. Generally, people with diverticulosis do not have symptoms and are unaware that they even have them. Diagnosis is usually made during a routine x-ray or sigmoidoscopy.

Prevention of constipation is key in managing diverticulosis. A high fiber diet is commonly recommended and bran or psyllium supplements may be prescribed. This treatment likely prevents complications because it increases the bulk of the stools and reduces pressure in colon. Drinking 6-8 glasses of water a day will also decrease the likelihood of hard, small stools which can contribute to straining.

A regular toileting schedule is valuable in preventing constipation. The recommendation to avoid nuts and seeds remains controversial, as there is no real evidence that they may lodge in the diverticula and cause diverticulitis.

Diverticulitis

Diverticulitis occurs when diverticula becomes inflamed or infected. The cause is thought to be undigested food,

stool and bacteria in the sac which leads to inflammation and infection.

The patient with diverticulitis may experience the following symptoms:

- Lower abdominal pain/discomfort
- Change in bowel habits such as diarrhea or constipation
- Bloating or flatulence
- Pain in the lower left area of the abdomen

Older adults with diverticulitis may not have a fever or abdominal pain, complicating the diagnosis. Diverticulitis may lead to perforation, peritonitis or GI bleeding.

Treatment includes antibiotics to fight the infection and pain management. Surgery may be indicated if an obstruction or perforation occurs.

The elderly are at greater risk for diverticular hemorrhage. This may occur due to the fact that many diverticula follow the paths of the arteries when they penetrate the muscular wall of the large intestine. Symptoms of hemorrhage include faintness and bright red blood by rectum. These symptoms indicate a medical emergency and must be treated immediately.

Intestinal Obstruction

Intestinal obstruction occurs when there is a partial or complete blockage of the intestine and the contents are unable to pass through. The cause of the obstruction may be either mechanical or non-mechanical.

The most common source of intestinal obstruction is mechanical. Mechanical causes that physically block the intestine include the following:

- Tumors blocking the intestines
- Adhesions from scar tissue
- Hernias
- Volvulus, (a twisting of part of the intestine), occurs more frequently in the elderly

Lack of peristalsis or vascular causes are the two primary causes of non-mechanical obstruction. The blockage occurs in this situation without the presence of a mechanical obstruction. The resulting ileus is due to:

- Medications, especially narcotics
- Intraoperative infection
- Injury to the abdominal blood supply

- Post-operative complications
- Metabolic disturbances (such as decreased potassium levels)
- Mesenteric ischemia (although occurring infrequently, it is more common in the elderly)

Elderly people with a history of atherosclerosis or a history of cerebrovascular, peripheral vascular and coronary artery disease are at an increased risk for ischemic related ileus.

Diagnosis

Symptoms of intestinal obstruction include:

- Abdominal fullness
- Abdominal distension
- Abdominal pain and cramping
- Vomiting
- Constipation
- Diarrhea (if the obstruction is not complete)

Physical examination reveals hyperactive bowel sounds. The force of peristalsis may cause loud and high pitched bowel sounds known as “borborygmi”. Eventually, bowel sounds will become absent as the obstruction continues.

Tests that show obstruction include:

- Barium enema
- Abdominal CT scan
- UGI and small bowel series
- Abdominal x-ray

Laboratory tests may indicate an elevated WBC and dehydration.

Management

Treatment includes placing a nasogastric tube and applying suction to decompress the bowel and eliminate vomiting. Elderly persons with intestinal obstruction are at a great risk for developing dehydration so replacing fluid and electrolytes is key.

Surgery may be necessary to relieve the obstruction if the nasogastric tube is ineffective or if the obstruction is complete. Generally, the surgical procedure is a resection of the involved bowel and may include a temporary or permanent ileostomy or colostomy.

Other complications of an intestinal obstruction include:

- Infection
- Perforation of the bowel

- Peritonitis
- Hypovolemic shock
- Septic shock

Careful monitoring of pain is important, as the pain may not be as intense in the elderly, and a crucial symptom may be missed. Narcotics are often avoided in managing the pain associated with intestinal obstruction due to their effect on the bowel and the potential for masking a significant symptom.

Replacement of fluid and electrolytes and close monitoring of intake and output is vitally important. The elderly are more likely to experience problems with dehydration or fluid overload, making this a key aspect of management.

Cancer

More than 25% of cancer deaths in the United States each year are a result of a cancer in the gastrointestinal tract. Most tumors in the GI tract are adenocarcinomas. The incidence of cancer in the gastrointestinal tract increases with age.

Unfortunately, the signs and symptoms associated with GI cancers are often vague and non-specific, resulting in a delay in diagnosis. Two of the more common cancers are discussed below.

Gastric Cancer

Gastric cancer usually occurs between the ages of 50 and 65, and affects more men than women. Gastric cancer is more common in Japan and among African-American men and women.

The symptoms associated with gastric cancer are often vague until the cancer has spread throughout the body. Additionally, since gastric cancer can imitate the symptoms associated with ulcers or gastritis, patients often self-medicate, which further delays diagnosis and treatment.

Symptoms of gastric cancer include:

- Loss of appetite
- Difficulty swallowing
- Vague abdominal fullness
- Nausea and vomiting
- Vomiting blood
- Abdominal pain
- Weight loss

The elderly patient may not complain of any of the above symptoms unless asked.

Upper GI x-rays and endoscopy with biopsy are the usual methods employed to diagnose stomach cancer. Treatment generally involves one or more of the following: surgery, chemotherapy or radiation.

Nursing care for elderly patients with gastric cancer includes maintaining adequate nutrition and hydration. Counseling older patients to seek medical attention even when seemingly trivial GI symptoms occur is helpful in early detection of gastric cancer.

The most common sites for metastasis to occur are the lung, bone, liver, spleen, pancreas, peritoneum and esophagus. Since the symptoms of gastric cancer are so vague, it is usually fairly advanced when it is discovered, leading to a poor prognosis. Gastric cancer tends to be particularly lethal. Only 5 – 15% of patients survive for 5 years following diagnosis.

Colon Cancer

Colon cancer is among the most commonly occurring cancers in the United States probably because the American diet is low in fiber. Carcinomas of the large intestine occur equally among men and women and the incidence increases rapidly above the age of 55, and peaks at age 75. The good news about colon cancer is that if it is treated early, the likelihood of a good outcome is vastly improved.

Most colon cancers begin as polyps in the large intestine, which are easily found on colonoscopy and removed. These polyps tend to be very slow growing and may remain asymptomatic for a long time. The very fact that this cancer is so easily detectable highlights the reason that all adults over the age 50 or older should have colonoscopy.

Although the bowel preparation may be unpleasant, it is worthwhile if colon cancer can be prevented or discovered early. It is best if the cancer is discovered before symptoms occur when it is most curable.

Often, there are no symptoms associated with colon cancer and it is easy for the elder to overlook them. However, the symptoms listed below may occur:

- Diarrhea
- Blood in the stool
- Unexplained anemia
- Abdominal pain and tenderness
- Intestinal obstruction
- Weight loss with no known reason
- Stools narrower than usual

Diagnostic exams include barium enema, sigmoidoscopy and fecal occult blood screening. The definitive diagnosis is with colonoscopy and biopsy.

Treatment for colon cancer depends on what stage the cancer has been placed in. Surgical resection, chemotherapy, and radiation are all possible treatment options, although radiation is uncommonly used. Colon cancer is “staged” from Stage 0 to Stage IV.

- Stage 0: very early cancer on the innermost layer
- Stage I: tumor in the inner layers of the colon
- Stage II: tumor has spread through the muscle wall of the colon
- Stage III: tumor has spread to the lymph nodes
- Stage IV: tumor has spread to the distant organs (i.e. liver)

Overall, the survival rate is about 50%. For tumors discovered early, the survival rate is between 80 – 90%. Patients with Stage IV tumors rarely live beyond 5 years.

Issues that need to be addressed in the elder with colon cancer may include the following (depending on the stage of the cancer):

- Decisions about the end-of-life, including decisions about hospice or home care, life-support, feeding, and hydration
- Nutrition: the elderly are at a greater risk for weight loss and malnutrition
- Pain control
- Social support
- Colostomy care instruction (if the patient has a colostomy)

Gastrointestinal Bleeding

Eighty-five to ninety percent of all GI bleeding occurs in the upper GI tract. Erosive gastritis (25%), gastric or duodenal peptic ulcer (25%), esophageal varices (10%), Mallory Weiss tear (tear in esophagus after vomiting), and aortointestinal fistula are all problems that can result in GI bleeding.

The remaining percentage of GI bleeding occurs in the lower GI tract. Problems resulting in bleeding are:

- Bleeding diverticulum/diverticulosis (most common cause of lower GI bleeding in the elderly)
- Neoplasm: carcinoma, polyp
- Inflammatory bowel disease such as ulcerative colitis or Crohn’s disease

- Ischemic colitis
- Angiodysplasia or AV malformation
- Meckel’s diverticulum
- Hemorrhoids
- Aortointestinal fistula

Important areas to assess in the older person with GI bleeding include:

Estimate blood loss Mild blood loss: 10 – 15% loss of patient’s total blood volume. The patient is usually hemodynamically stable.

Moderate blood loss: 15- 30% loss. The patient may experience bradycardia, tachycardia or orthostasis.

Severe blood loss: more than 30% blood loss. The patient will experience hypotension, tachycardia and will be in shock.

Patient history (when the patient is stabilized) Inquire about onset and quantity of blood loss and any associated symptoms.

Symptoms in the elderly adult may be vague, non-specific or even non-existent. Symptoms may include nausea, epigastric pain, weakness, anorexia, weight loss or dyspnea.

Ask about all medications and alcohol use.

Physical exam Evaluate vital signs, mental status, skin, circulation, and characteristics of the emesis and stool.

Laboratory tests The hemoglobin and hematocrit are important laboratory tests to perform, however, they may not reflect the true blood loss for at least 6 hours

Bleeding manifests itself in different ways related to the physiologic processes the blood undergoes.

Bright red blood	Blood has not undergone any chemical degradation. The site of bleeding is very close to the site of exit (hemorrhoids), or the bleeding is very fast (i.e. arterial blood)
Maroon/dark red blood	Blood has been through at least one chemical process, such as degradation by hydrochloric acid in the stomach or enzymes in the intestine
Maroon/dark red blood with clots	Blood has been through a chemical process and has coagulated
Black/tarry stool	Blood has been through multiple chemical processes. Excreted as <i>melen</i> after passing through the large intestine where water is removed
“Coffee ground” emesis	Blood has been through at least one chemical process, such as degradation by hydrochloric acid in the stomach and usually indicates bleeding in the esophagus, stomach or duodenum

In general, older adults are at an increased risk of developing acute upper and lower GI bleeding. The reasons for this include:

- Medications such as anticoagulants, which are used to treat systemic diseases
- Alcohol, aspirin and NSAID use increases the likelihood of developing peptic ulcer disease
- Increased occurrence of gastric and peptic ulcer disease in the elderly
- Increase incidence of diverticulitis in older adults, which can result in rapid and massive GI bleeding

Elderly persons are more likely to die from GI bleeding. They are also more likely to experience any number of life-threatening complications.

Complications that are more likely to occur in older adults are sepsis, hypoxia, and ischemic damage to the bowel, kidneys, liver, brain, and heart. Older persons are more likely to develop angina or have a myocardial infarction due to a low hemoglobin.

Even when GI bleeding is appropriately managed, the frail elderly person may develop congestive heart failure or pulmonary edema from the fluid resuscitation.

Guaiac-positive stools in the elderly must be assumed to indicate pathology unless proven otherwise. However, medications commonly prescribed for older people can result in a false-positive guaiac test result. Those medications include: laxatives, iron supplements, cimetidine, anticoagulants, aspirin, and NSAID's. Some foods may also cause a false-positive result including red meat, uncooked vegetables and fruits.

Diagnostic exams include:

- CBC
- Abdominal x-ray
- Abdominal CT scan
- Colonoscopy/Sigmoidoscopy
- Bleeding scan (tagged red blood cell scan)
- Angiography
- Abdominal MRI scan

Management

GI Bleeding can be an emergency that necessitates immediate medical intervention. Interventions for an elderly person with acute GI bleeding are:

- Immediate resuscitation and stabilization: insertion of two large bore IV's, and administer normal saline or lactated ringers.
- Oxygenation: protect the airway, elevate the head of the bed to prevent aspiration and initiate oxygen therapy. Intubation may be necessary.
- NG Lavage: If the source of the bleeding is believed to be upper GI, a nasogastric tube may be inserted and a tap water lavage initiated. This treatment is rarely used.
- Continued volume replacement and assessment: maintain normal vital signs and prevent hypovolemia and shock. Blood products will be administered when other IV fluids are ineffective in stabilizing the patient's vital signs and hemoglobin/hematocrit. Blood loss should be replaced by blood products, not IV fluids.

Depending on the source of the bleeding, medications may be of value. If the bleeding is due to esophageal varices, drugs such as vasopressin and somatostatin may be effective. Other medications that may be prescribed are: H₂ blockers and proton pump inhibitors. Stop any medications the patient may have been taking that could contribute to the bleeding. These medications include: NSAID's, aspirin, and corticosteroids.

Finally, if the bleeding continues, endoscopy (with sclerotherapy or laser treatments) colonoscopy, angiography, or surgery may be indicated to treat the cause of the bleeding. Although the elderly person may not be the ideal surgical candidate, they are also at a greater risk for developing severe complications, when the bleeding is managed ineffectively.

Summary

Gastrointestinal problems are common with advancing age. In this home study, you learned about the normal changes of aging in the gastrointestinal system; the commonly encountered diseases that affect the elderly population; and the differences in the assessment and management of the elder experiencing gastrointestinal disease.

Recommended Reading

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To obtain a certificate of completion for this home study program, please complete the post-test and evaluation on the next few pages. The date on your certificate of completion will be the date that your home study is received. **Any materials received with a postmark after the expiration will be discarded.**

HealthEast, HCMC, & MVAMC Employees

If you are an employee of HealthEast, HCMC, or MVAMC, you may send the post-test and evaluation to TCHP for processing. Your post-test will be returned to you through your hospital. It cannot be mailed to your home.

Paid Participants

If you are not an employee of one of the TCHP hospitals, please send the post-test and evaluation to TCHP with a check for \$6.00. Please make check payable to **TCHP Education Consortium** and mail to:

**TCHP Education Consortium
Capitol Office Building
525 Park Street, Suite 120
St. Paul, MN 55103**

Your post-test will be returned to you with the certificate of completion.

Gastrointestinal Issues in ElderCare Post-Test

Please print all information clearly and sign the verification statement:

Name _____
(please print legal name above)

Birth date (required)

Format: 01/03/1999

M	M	D	D	Y	Y	Y	Y

For HealthEast, HCMC, or MVAMC, employees only:

Hospital _____ Unit _____

Personal verification of successful completion of this educational activity (required):

I verify that I have read this home study and have completed the post-test and evaluation.

Signature

- 1) Many of the aging related changes in the gastrointestinal tract are not life threatening, but can impact quality of life in older persons.
 - a) True
 - b) False
- 2) Causes of constipation in elderly patients include:
 - a) Diet low in fiber
 - b) Decrease in fluid intake
 - c) Medications such as antacids or iron
 - d) All of the above
- 3) When dysphagia occurs in the elderly, they are at increased risk for:
 - a) Aspiration
 - b) Constipation
 - c) Diarrhea
 - d) None of the above
- 4) Management of gastroesophageal reflux (GERD) includes dietary modifications, elevating the head of the bed at night, and medications such as antacids, histamine blockers or proton pump inhibitors.
 - a) True
 - b) False

- 5) Typical symptoms of peptic ulcer disease include:
 - a) Vomiting bright red blood
 - b) Epigastric pain, heartburn and reflux
 - c) Diarrhea
 - d) Weight gain
- 6) Diverticulitis is caused by:
 - a) Intestinal perforation
 - b) Excess fiber in the diet
 - c) An infected or inflamed diverticula
 - d) Eating too many nuts and seeds
- 7) Complications of intestinal obstruction include all of the following except:
 - a) Infection
 - b) Septic Shock
 - c) Perforation of the bowel and peritonitis
 - d) Anaphylactic shock
- 8) Gastric cancer has a survival rate of what at five years?
 - a) 75 - 85%
 - b) 50 - 60%
 - c) 25 - 35%
 - d) 5 - 15%
- 9) Bright red blood with GI bleeding usually means:
 - a) The bleeding is slow
 - b) The site of the bleeding is close to the exit site
 - c) The blood has undergone numerous chemical changes
 - d) Hydrochloric acid has degraded the blood
- 10) Elderly adults are at an increased risk of developing GI bleeding
 - a) True
 - b) False

Expiration date: The last day that post tests will be accepted for this edition is **December 31, 2017**—your envelope must be postmarked on or before that day.

Evaluation: Gastrointestinal Issues in ElderCare

Please complete the evaluation form below by placing an “X” in the box that best fits your evaluation of this educational activity. Completion of this form is required to successfully complete the activity and be awarded contact hours.

At the end of this home study program, I am able to:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Describe common changes and pathophysiology related to aging of the gastrointestinal system.					
2. Formulate a plan for assessing and managing the elderly patient with gastrointestinal disease.					
3. The teaching / learning resources were effective. <i>If not, please comment:</i>					

The following were disclosed in writing prior to, or at the start of, this educational activity (please refer to the first 2 pages of the booklet).		
	Yes	No
4. Notice of requirements for successful completion, including purpose and objectives		
5. Conflict of interest		
6. Disclosure of relevant financial relationships and mechanism to identify and resolve conflicts of interest		
7. Sponsorship or commercial support		
8. Non-endorsement of products		
9. Off-label use		
10. Expiration Date for Awarding Contact Hours		
11. Did you, as a participant, notice any bias in this educational activity that was not previously disclosed? <i>If yes, please describe the nature of the bias:</i>		

12. How long did it take you to read this home study and complete the post test and evaluation:

_____ hours and _____ minutes.

13. Did you feel that the number of contact hours offered for this educational activity was appropriate for the amount of time you spent on it?

___ Yes

___ No, more contact hours should have been offered

___ No, fewer contact hours should have been offered.

Expiration date: December 31, 2017
