Diarrhea

OVERVIEW

Acute diarrhea is one of the most commonly reported illnesses in the United States, second only to respiratory infections. Worldwide, it is a leading cause of mortality in children younger than four years old, especially in the developing world. Diarrhea that lasts less than 2 weeks is termed acute diarrhea. Persistent diarrhea lasts between 2 and 4 weeks. Chronic diarrhea lasts longer than 4 weeks.

SYMPTOMS

Diarrheal stools are those that take shape of the container, so they are often described as loose or watery. Some people consider diarrhea as an increase in the number of stools, but stool consistency is really the hallmark. Associated symptoms can include abdominal cramps fever, nausea, vomiting, fatigue and urgency. Chronic diarrhea can be accompanied by weight loss, malnutrition, abdominal pain or other symptoms of the underling illness. Clues for organic disease are weight loss, diarrhea that wakes you up at night, or blood in the stools. These are signs that your doctor will want to do a thorough evaluation to determine the cause of your symptoms. Also tell your doctor if you have a family history of celiac disease, inflammatory bowel disease (IBD), have unintentional weight loss, fever, abdominal cramping or decreased appetite. Tell your doctor if you experience bulky, greasy or very bad smelling stools.

CAUSES – ACUTE DIARRHEA

Most cases of acute, watery diarrhea are caused by viruses (viral gastroenteritis). The most common ones in children are rotavirus and in adults are norovirus (this is sometimes called "cruise ship diarrhea" due to well publicized epidemics). Bacteria are a common cause of traveler's diarrhea.

CAUSES – CHRONIC DIARRHEA

Chronic diarrhea is classified as fatty or malabsorption, inflammatory or most commonly watery. Chronic bloody diarrhea may be due to inflammatory bowel disease (IBD), which is ulcerative colitis or Crohn's disease. Other less common causes include ischemia of the gut, infections, radiation therapy and colon cancer or polyps. Infections leading to chronic diarrhea are uncommon, with the exception of parasites. The two major causes of fatty or malabsorptive diarrhea are impaired digestion of fats due to low pancreatic enzyme levels and impaired absorption of fats due to small bowel disease. These conditions interfere with the normal processing of fats in the diet. The former is usually due to chronic pancreatitis which is a result of chronic injury to the pancreas. Alcohol damage to the pancreas is the most common cause of chronic pancreatitis in the United States. Other causes of chronic pancreatitis include cystic fibrosis, hereditary pancreatitis, trauma to the pancreas and pancreatic cancer. The most common small bowel disease in the U.S. is celiac disease, also called celiac sprue. Crohn's disease can also involve the small bowel. Whipple's disease, tropical sprue, and eosinophilic gastroenteritis are some of the rare conditions that can lead to malabsorption diarrhea.

There are many causes of watery diarrhea, including carbohydrate malabsorption such as lactose, sorbitol, and fructose intolerance. Symptoms of abdominal bloating and excessive gas after consuming dairy products suggests lactose intolerance. This condition is more common in African-Americans and Asian-Americans. Certain soft drinks, juices, dried fruits and gums contain sorbitol and fructose, which can lead to watery diarrhea in people with sorbitol and fructose intolerance. Diarrhea is a frequent side effect of antibiotics. Certain other medications such as NSAIDs, antacids, antihypertensives, antibiotics and antiarrhythmics can have side effects leading to diarrhea.

Parasitic intestinal infections such as giardiasis can cause chronic diarrhea. Diabetes mellitus may be associated with diarrhea due to nerve damage and bacterial overgrowth; this occurs mainly in patients with long-standing, poorly-controlled diabetes.

Irritable bowel syndrome (IBS) is a condition often associated with diarrhea, constipation or more frequently alternating diarrhea and constipation. Other common symptoms are bloating, abdominal pain relieved with defecation and a sense of incomplete evacuation.

RISK FACTORS

Exposure to infectious agents is the major risk factor for acute diarrhea. Bacteria and viruses are often transmitted by the fecal-oral route, so hand washing and hygiene are important to prevent infection. Soap and water are better because alcohol-based hand sanitizers may not kill viruses. Medications such as antibiotics and drugs that contain magnesium products are also common offenders. Recent dietary changes can also lead to acute diarrhea. These including intake of coffee, tea, colas, dietetic foods, gums or mints that contain poorly absorbable sugars. Acute bloody diarrhea suggests a bacterial cause like Campylobacter, Salmonella or Shigella or Shiga-toxin E. coli. Traveler's diarrhea is common in those who travel to developing countries and results from exposure to bacterial pathogens most commonly enterotoxigenic E. coli. The best method of prevention is to avoid eating and drinking contaminated or raw foods and beverages.

SCREENING/DIAGNOSIS

Most episodes of acute diarrhea resolve quickly without antibiotic therapy and with simple dietary modifications. See a doctor if you feel ill, have bloody diarrhea, severe abdominal pain or diarrhea lasting more than 48 hours. In patients with mild acute diarrhea, no laboratory evaluation is needed because the illness generally resolves quickly. Your doctor may perform stool tests for bacteria and parasites if your diarrhea is severe or bloody or if you traveled to an area where infections are common. If you have severe diarrhea, blood tests will be helpful to guide replacement of fluid and electrolytes and minerals such as magnesium, potassium and zinc that can become depleted.

If you have chronic diarrhea, your doctor will want to further assess etiologic factors or complications of diarrhea by obtaining several tests. These can include a blood count to look for anemia and infections, an electrolyte and kidney function panel to assess for electrolyte abnormalities and renal insufficiency, and albumin to assess your nutritional status.

A stool sample may help define the type of diarrhea. The presence of fat, microscopic amounts of blood, and white blood cells will help determine if a fatty, inflammatory, or watery diarrhea is present. A bacterial culture and ova/parasite studies of a stool specimen will also help determine if an infectious etiology is present.

Endoscopic examination of the colon with flexible sigmoidoscopy or colonoscopy and upper endoscopy are helpful in detecting the etiology of chronic diarrhea, as this allows direct examination of the bowel mucosa and the ability to obtain biopsies for microscopic evaluation. Double-balloon enteroscopy and capsule endoscopy are sometimes used to examine the mucosa of the small intestine that lies beyond the reach of conventional endoscopes.

Radiographic studies such as an upper GI series or barium enema are not routinely performed in the evaluation of chronic diarrhea, and have largely been replaced by cross-sectional imaging. Ultrasound and CT scan of the abdomen can be helpful to evaluate the bowel, pancreas and other intra-abdominal organs.

TREATING ACUTE DIARRHEA

It is important to take plenty of fluid with sugar and salt to avoid dehydration. Salt and sugar together in a beverage help your intestine absorb fluids. Milk and dairy products should be avoided for 24 to 48 hours as they can make diarrhea worse. Initial dietary choices when refeeding should begin with soups and broth.

Anti-diarrheal drug therapy can be helpful to control severe symptoms, and includes bismuth subsalicylate and antimotility agents such as loperamide. These, however, should be avoided in people with high fever or bloody diarrhea as they can worsen severe colon infections and in children because the use of anti-diarrheals can lead to complications of hemolytic uremic syndrome in cases of Shiga-toxin E. coli (E. coli 0157:H7).

Your doctor may prescribe antibiotics if you have high fever, dysentery, or moderate to severe traveler's diarrhea. Some infections such as Shigella always require antibiotic therapy.

Treatment of chronic diarrhea depends on the etiology of the chronic diarrhea. Often, empiric treatment can be provided for symptomatic relief, when a specific diagnosis is not reached, or when a diagnosis that is not specifically treatable is reached. Antimotility agents such as loperamide are the most effective agents for the treatment of chronic diarrhea. They reduce symptoms as well as stool weight. Attention should be paid to replacing any mineral and vitamin deficiencies, especially calcium, potassium, magnesium and zinc.

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