# Clinical manifestations and diagnosis of acute colonic diverticulitis in adults

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#### INTRODUCTION

Approximately 1 to 4 percent of patients with colonic diverticulosis develop acute diverticulitis over seven years of follow-up [1]. Colonic diverticulitis is defined as inflammation in and adjacent to a diverticulum.

This topic will review the clinical manifestations and diagnosis of acute diverticulitis. The epidemiology of diverticulosis, diverticular disease, and diverticular bleeding and the management of acute diverticulitis and diverticular bleeding are discussed in detail, separately. (See "Colonic diverticulosis and diverticular disease: Epidemiology, risk factors, and pathogenesis" and "Acute colonic diverticulitis: Triage and inpatient management" and "Diverticular fistulas" and "Colonic diverticular bleeding".)

#### **DEFINITIONS**

- A diverticulum is a sac-like protrusion of the colonic wall.
- Diverticulosis merely describes the presence of diverticula.
- Acute diverticulitis is defined as inflammation, generally considered to be due to microperforation of a diverticulum.

- Complicated diverticulitis is defined as diverticulitis with one of the following associated complications: bowel obstruction, stricture, abscess, fistula, or perforation.
- Simple or uncomplicated diverticulitis is defined as acute diverticulitis without an associated complication. (See 'Acute complications' below.)
- Smoldering or chronic diverticulitis is diverticular inflammation that persists for weeks to months.

#### **CLINICAL FEATURES**

**Clinical manifestations** — The clinical presentation of acute diverticulitis depends on the severity of the underlying inflammatory process and the presence of associated complications. Diverticulitis is most commonly managed in the ambulatory setting but is also a common indication for hospital admission [2]. The incidence of diverticulitis increases with age but is not uncommon in young adults [3].

Abdominal pain is the most common complaint in patients with acute diverticulitis. The pain is usually in the left lower quadrant due to involvement of the sigmoid colon. However, patients may have right lower quadrant or suprapubic pain due to the presence of a redundant inflamed sigmoid colon or, much less commonly, right-sided (cecal) diverticulitis [4-6]. The pain is usually constant [7]. (See "Acute colonic diverticulitis: Triage and inpatient management".)

Patients may also have a fever. Hemodynamic instability with hypotension and shock are rare and are associated with perforation and peritonitis. A tender mass is palpable in approximately 20 percent of patients due to pericolonic inflammation or a peridiverticular abscess [8]. Patients may have localized peritoneal signs with localized guarding, rigidity, and rebound tenderness. Rectal examination may reveal a mass or tenderness to palpation in the presence of a distal sigmoid abscess. Stool may be positive for occult blood. (See "Etiologies, clinical manifestations, and diagnosis of mechanical small bowel obstruction in adults" and 'Acute complications' below and "Evaluation of the adult with abdominal pain" and "Evaluation of occult gastrointestinal bleeding", section on 'Testing for occult blood'.)

Acute diverticulitis may be associated with a change in bowel habits, with constipation reported in approximately 50 percent of patients and diarrhea in 25 to 35 percent of patients [9,10]. Hematochezia is rare.

Approximately 10 to 15 percent of patients with acute diverticulitis have urinary urgency, frequency, or dysuria due to irritation of the bladder from an inflamed sigmoid colon [9].

**Acute complications** — Approximately 12 percent of patients with acute diverticulitis have associated acute or chronic complications [3]. Patients may have an acute complication of diverticulitis at initial presentation or may develop an acute complication subsequently. Obstruction is the most complication followed by perforation and abscess [11] (See 'Disease course' below.)

**Obstruction** — During an attack of acute diverticulitis, partial colonic obstruction can occur because of relative luminal narrowing due to pericolonic inflammation or compression from a diverticular abscess. However, high-grade colonic obstruction is rare in the acute setting and is usually associated with the subsequent development of a stricture due to chronic diverticular inflammation. (See 'Disease course' below.)

Acute diverticulitis can also cause a small bowel obstruction if a loop of small intestine becomes incorporated in a pericolonic inflammatory mass, or due to localized irritation and the development of an ileus.

Depending on the degree and site of obstruction, patients may have abdominal pain, nausea, vomiting, abdominal distension, constipation, or obstipation. Patients with an ileus or obstruction may have abdominal distention and tympany on percussion due to the presence of dilated loops of bowel. Bowel sounds may be either high-pitched with obstruction or hypoactive in the case of ileus. (See "Etiologies, clinical manifestations, and diagnosis of mechanical small bowel obstruction in adults", section on 'Intra-abdominal inflammation or infection' and "Etiologies, clinical manifestations, and diagnosis of mechanical small bowel obstruction in adults", section on 'Clinical presentations'.)

**Abscess** — Diverticular abscesses occur in approximately 17 percent of patients hospitalized with acute diverticulitis [12,13]. The symptoms of a diverticular abscess are similar to acute diverticulitis. A diverticular abscess may be noted on abdominal CT scan at initial presentation or may develop subsequently. A diverticular abscess should therefore be suspected in patients with uncomplicated diverticulitis who have no improvement in abdominal pain or a persistent fever despite three days of antibiotic treatment. (See "Acute colonic diverticulitis: Triage and inpatient management", section on 'Abscess'.)

In rare cases, patients may develop a pyogenic liver abscess due to the spread of infection through the portal circulation. (See "Pyogenic liver abscess", section on 'Clinical manifestations'.)

**Perforation** — Perforation with generalized peritonitis may result from rupture of a diverticular abscess into the peritoneal cavity or free rupture of an inflamed diverticulum with fecal contamination of the peritoneum. Although only 1 to 2 percent of patients with acute

diverticulitis have a perforation with purulent or fecal peritonitis, mortality rates approach 20 percent [14-17]. In patients with a free perforation, the abdomen is distended and diffusely tender to light palpation. There is diffuse guarding, rigidity, and rebound tenderness, and bowel sounds are absent. (See "Evaluation of the adult with abdominal pain".)

**Fistula** — Inflammation from acute diverticulitis may result in the formation of a fistula between the colon and adjacent viscera. Fistulas most commonly involve the bladder [18]. (See "Diverticular fistulas", section on 'Introduction'.)

Patients with a colovesical fistula may have pneumaturia, fecaluria, or dysuria. Patients with a colovaginal fistula may report vaginal passage of feces or flatus. The clinical manifestations, diagnosis, and treatment of fistulas in patients with acute diverticulitis are discussed in detail separately. (See "Diverticular fistulas", section on 'Clinical manifestations'.)

**Laboratory findings** — Patients with acute diverticulitis may have an elevated C-reactive protein and a mild leukocytosis [19,20]. However, the white count may be normal in up to 45 percent of patients [21]. C-reactive protein is not reliable for ruling out complicated disease [22]. Serum amylase and lipase may be normal or mildly elevated, especially in patients with a free perforation and peritonitis. (See "Approach to the patient with elevated serum amylase or lipase", section on 'Causes'.)

Urinalysis may reveal sterile pyuria due to adjacent inflammation. The presence of colonic flora on urine culture suggests the presence of a colovesical fistula. (See "Sampling and evaluation of voided urine in the diagnosis of urinary tract infection in adults", section on 'Sterile pyuria' and "Diverticular fistulas", section on 'Clinical manifestations'.)

**Imaging** — Several features may be seen on imaging in patients with acute diverticulitis.

**Computed tomography scan** — Computed tomography (CT) findings suggestive of acute diverticulitis include the presence of localized bowel wall thickening (>4 mm), an increase in soft tissue density within the pericolonic fat secondary to inflammation or fat stranding, and the presence of colonic diverticula ( image 1A-B) [23-25]. The sensitivity and specificity of abdominal CT for the diagnosis of acute diverticulitis are 94 and 99 percent, respectively [26].

Complications of diverticulitis can also be visualized on abdominal CT scan. Abscesses are identified as fluid collections surrounded by an area with inflammatory changes. The center of the collection may contain air, air-fluid levels, or tissue with low attenuation representing necrotic debris [27]. Abdominal CT scan findings in patients with a bowel obstruction due to acute diverticulitis include the presence of dilated loops of bowel with air-fluid levels in proximity of an area with pericolonic inflammation (fat stranding). Extracolonic air collections

within organs other than the bowel and the abdominal wall are suggestive of a fistula. In patients with peritonitis, free air can be seen on abdominal CT scan. (See "Diverticular fistulas", section on 'Diagnosis'.)

**Abdominal ultrasound** — Ultrasound features suggestive of acute diverticulitis include:

- A hypoechoic peridiverticular inflammatory reaction
- Mural and peridiverticular abscess formation with or without gas bubbles
- Bowel wall thickening (segmental mural thickening greater than 4 mm) at the point of maximal tenderness
- Presence of diverticula in the surrounding segments

Complications of diverticulitis may also be visualized by ultrasonography. An abscess appears as an anechoic masses containing echogenic debris ( image 2). Features suggestive of a fistula include the presence of a hypoechoic area next to inflamed diverticula with extraluminal air bubbles extending in the bladder, vagina, or abdominal wall. In patients with peritonitis, ascites, diffuse peritoneal thickening, and scattered loculated fluid collections may be seen. (See "Transabdominal ultrasonography of the small and large intestine", section on 'Diverticulitis'.)

High-resolution, graded, compression ultrasound has comparable sensitivity and specificity for acute diverticulitis as compared with abdominal CT scan [28]. Ultrasound also has the advantage that it is widely available, inexpensive, and avoids radiation exposure. However, abdominal ultrasound is operator dependent and cannot exclude other causes of abdominal pain. (See 'Differential diagnosis' below.)

**Magnetic resonance imaging** — Abdominal magnetic resonance imaging (MRI) findings suggestive of acute diverticulitis include colonic wall thickening, presence of diverticula, and pericolonic exudates and edema [29,30]. Nonspecific findings that can be seen on MRI include segmental narrowing of the colon, ascites, and an abscess.

MRI has the advantage of avoiding radiation exposure. However, before MRI can routinely be used to diagnose acute diverticulitis and rule out other causes of abdominal pain, more studies are needed to compare the sensitivity, specificity, and cost-effectiveness of abdominal MRI with CT scan. In most institutions where both abdominal CT and MRI are available, CT is usually obtainable more expeditiously.

**Abdominal and chest radiographs** — Nonspecific abnormalities can be seen on abdominal radiographs in 30 to 50 percent of patients with acute diverticulitis [31]. These findings include air-fluid levels with small or large intestinal dilation due to an ileus or obstruction and soft tissue densities due to the presence of an abscess. An upright chest radiograph may

demonstrate the presence of pneumoperitoneum with air under the diaphragm in 3 to 12 percent of patients with acute diverticulitis [31].

#### **DIAGNOSTIC APPROACH**

**Diagnosis** — The diagnosis of acute diverticulitis should be suspected in a patient with lower abdominal pain and abdominal tenderness on physical examination. The pain is usually in the left lower quadrant in Western populations but may be suprapubic or in the right lower quadrant, particularly in patients with right-sided diverticulitis. Laboratory findings of an elevated CRP (>50 mg/dL) leukocytosis, while not sensitive or specific for acute diverticulitis, can support the diagnosis. We perform abdominal imaging (preferably computed tomography [CT] scan) to establish the diagnosis of acute diverticulitis. (See 'Imaging' above.)

The authors' practice is to perform an abdominal CT scan with oral and intravenous (IV) contrast to establish the diagnosis of acute diverticulitis because it has a high sensitivity and specificity for acute diverticulitis and can exclude other causes of abdominal pain. However, some guidelines suggest that imaging can be performed more selectively, and that a diagnosis can be made without abdominal imaging in patients with localized left lower quadrant pain in the absence of vomiting, a CRP>50 mg/dL, and/or a prior history of acute diverticulitis [32]. (See 'Computed tomography scan' above and 'Differential diagnosis' below.)

**Evaluation** — The goal of the evaluation is to establish the diagnosis of acute diverticulitis and to rule out other causes of abdominal pain. Evaluation should begin with a history and physical examination, which includes a pelvic examination in women to rule out pelvic pathology. (See 'Clinical manifestations' above and 'Differential diagnosis' below and "Evaluation of the adult with abdominal pain", section on 'Lower abdominal pain' and "The gynecologic history and pelvic examination", section on 'Components of the examination'.)

Laboratory evaluation should include a complete blood count, electrolytes, and urine analysis. A pregnancy test should be performed in all women of childbearing age. The presence of leukocytosis is supportive of the diagnosis of acute diverticulitis. (See 'Laboratory findings' above.)

In patients with a suspected perforation and diffuse peritonitis, serum aminotransferases, alkaline phosphatase, bilirubin, amylase, and lipase levels should be obtained to rule out other causes of acute abdominal pain. (See "Evaluation of the adult with abdominal pain", section on 'Initial workup'.)

Stool studies should be performed only in patients with diarrhea to rule out infectious etiologies. Stool studies should include stool *Clostridioides difficile* toxin, routine stool cultures (*Salmonella*, *Shigella*, *Campylobacter*, *Yersinia*), specific testing for *E. coli* O157:H7, microscopy for ova and parasites (three samples), and a *Giardia* stool antigen test. In patients with a clear diagnosis of diverticulitis on imaging studies, stool studies are rarely indicated.

We perform an abdominal CT scan with oral and intravenous (IV) contrast to establish the diagnosis of acute diverticulitis. High-resolution, graded, compression ultrasound should be performed if abdominal CT scan is unavailable [33,34]. Abdominal CT scan and ultrasound features suggestive of acute diverticulitis are reviewed above ( image 1A and image 1B) [23-25]. (See 'Computed tomography scan' above and 'Abdominal ultrasound' above.)

#### **DIFFERENTIAL DIAGNOSIS**

The differential diagnosis of acute diverticulitis includes other etiologies of lower abdominal pain. Acute diverticulitis can be distinguished from most other causes of lower abdominal pain based on the clinical features, physical examination, laboratory studies, and abdominal computed tomography (CT) scan.

- Irritable bowel syndrome (IBS) The abdominal discomfort seen in patients with IBS can
  be similar to patients with diverticulitis. However, the symptoms of abdominal pain and
  altered bowel habits are chronic in patients with IBS. Patients with IBS usually also have
  symptoms of bloating, distension, and diarrhea and/or constipation. CT scan is diagnostic
  in patients with diverticulitis and normal in patients with IBS. (See "Clinical manifestations
  and diagnosis of irritable bowel syndrome in adults".)
- Colorectal cancer Patients with colorectal cancer (CRC) and acute diverticulitis may present with similar clinical features and have bowel wall thickening on abdominal CT. However, the presence of pericolonic and mesenteric inflammation, involvement of greater than 10 cm of the colon, and absence of enlarged pericolonic lymph nodes on abdominal CT are suggestive of acute diverticulitis [35,36]. In 10 to 20 percent of patients, it remains difficult to distinguish between acute diverticulitis and a CRC on abdominal CT scan, and a CRC can only be excluded with a colonoscopy after resolution of acute inflammation [37,38]. (See "Clinical presentation, diagnosis, and staging of colorectal cancer", section on 'Clinical presentation' and 'Exclusion of an underlying malignancy' below.)

- Acute appendicitis Classic symptoms of appendicitis include right lower quadrant abdominal pain, anorexia, fever, nausea, and vomiting. The abdominal pain is initially periumbilical and subsequently in the right lower quadrant. Abdominal CT scan can differentiate between acute appendicitis and acute diverticulitis. The abdominal CT scan findings in patients with acute appendicitis are discussed in detail, separately. (See "Acute appendicitis in adults: Diagnostic evaluation", section on 'Computed tomography' and "Acute appendicitis in adults: Clinical manifestations and differential diagnosis", section on 'Computed tomography findings'.)
- Inflammatory bowel disease In patients with inflammatory bowel disease (IBD), diarrhea rather than abdominal pain is the predominant symptom. In addition, patients have symptoms for several months prior to presentation. Although abdominal CT scan may demonstrate wall thickening in both acute diverticulitis and IBD, the presence of diverticulosis and peridiverticular inflammation are suggestive of acute diverticulitis. (See "Clinical manifestations, diagnosis, and prognosis of ulcerative colitis in adults", section on 'Imaging'.)
- Infectious colitis In patients with infectious colitis, diarrhea is the predominant symptom. Patients may have a history of prior antibiotic use or recent travel. Stool cultures may identify the causative pathogen. While an abdominal CT may demonstrate wall thickening in infectious colitis, peridiverticular inflammation, as seen in patients with acute diverticulitis, is absent. (See 'Evaluation' above.)
- Ischemic colitis Patients with ischemic colitis usually present with rapid onset of abdominal pain, hematochezia, or bloody diarrhea. Patients may have risk factors for ischemic colitis (eg, age >60 years, hemodialysis, hypertension, diabetes mellitus, dehydration, or stimulant laxative use). On abdominal CT scan, segmental bowel wall thickening can be seen, similar to patients with acute diverticulitis, but pericolonic inflammation is absent. (See "Colonic ischemia", section on 'Clinical features' and "Colonic ischemia", section on 'Diagnosis'.)
- Other Alternative diagnoses should also be considered in the differential diagnosis of
  acute diverticulitis. These include tubo-ovarian abscess, ovarian cyst, ovarian torsion,
  ectopic pregnancy, cystitis, and nephrolithiasis. These can be differentiated from acute
  diverticulitis by history, physical examination, laboratory studies, and imaging and are
  discussed in detail, separately. (See "Evaluation of the adult with abdominal pain", section
  on 'Lower abdominal pain'.)

#### **EXCLUSION OF AN UNDERLYING MALIGNANCY**

Colonoscopy has no role in establishing the diagnosis of acute diverticulitis as the inflammation is peridiverticular. Endoscopic evaluation of the colon should be avoided in the acute setting due to the risk of perforation or exacerbation of the existing inflammation. After the complete resolution of symptoms associated with acute diverticulitis (typically in six to eight weeks), a colonoscopy is performed to rule out missed malignancy, except for those who have had a colonoscopy within the previous year [6,39,40]. The risk of a missed malignancy is higher in patients with a history of complicated diverticulitis as compared to uncomplicated diverticulitis [41]. Patients with recurrent acute diverticulitis should follow routine screening and surveillance intervals after the baseline colonoscopy unless alarm symptoms develop. (See "Acute colonic diverticulitis: Outpatient management and follow-up", section on 'Colonoscopy for all patients following diverticulitis'.)

#### **NATURAL HISTORY**

Patients with acute diverticulitis present with lower abdominal pain, usually in the left lower quadrant and a low-grade fever.

**Disease course** — Disease course depends on multiple factors including patient characteristics, prior history of diverticular disease, and severity of the episode [3].

The most common presentation of diverticulitis is acute uncomplicated disease. Most patients with this presentation recover from the acute episode. Median time to recovery is 14 days [42]. Among patients with acute uncomplicated diverticulitis at initial presentation, 5 percent will develop a complication, usually within 10 days of presentation. Obstruction is the most common complication followed by perforation and abscess [11].

Ongoing abdominal discomfort is common after resolution of acute inflammation. In a cohort study of patients with imaging-confirmed acute uncomplicated diverticulitis, 45 percent of patients reported abdominal pain and 33 percent reported altered bowel habits at one-year follow-up. The differential diagnosis for ongoing symptoms is broad. Imaging and colonoscopy may need to be considered to rule out an alternative diagnosis or ongoing inflammation. In approximately 5 percent of patients, chronic abdominal pain is due to chronic or smoldering diverticulitis with persistent chronic diverticular inflammation [43].

After recovery from an acute episode managed conservatively, patients are at risk for recurrent episodes. The risk of recurrence depends on the number of prior episodes and disease severity.

After a first episode of diverticulitis, the risk of a second episode is 22 percent within 10 years. After a second episode, the risk of a third episode is 55 percent. The risk of recurrence increases with every episode. Diverticulitis complicated by abscess or perforation is usually the first or sometimes the second presentation. Recurrent diverticulitis is not associated with an increased risk of perforation or abscess [3].

A fibrotic diverticular stricture can develop after an episode of acute diverticulitis. Recurrent episodes are not a risk factor for the development of a diverticular stricture [44]. Patients with a colonic stricture usually present with obstructive symptoms without diverticulitis or sometimes with more insidious symptoms of abdominal pain and constipation. Fistulizing disease from diverticulitis is rare, but the risk increases with recurrence [44]. (See "Acute colonic diverticulitis: Triage and inpatient management", section on 'Obstruction'.)

**Mortality** — In patients with acute diverticulitis, mortality rates vary depending on the presence of complications and patient comorbidities. In patients with acute uncomplicated diverticulitis, conservative treatment is successful in 70 to 100 percent of patients and mortality is negligible [45]. (See "Acute colonic diverticulitis: Triage and inpatient management".)

In patients with complicated diverticulitis undergoing an operation, the mortality rate is approximately 0.6 to 5 percent [46-48]. Although mortality rates are up to 20 percent in patients with perforated diverticulitis with purulent or fecal peritonitis, these complications are rare in the absence of diffuse peritonitis [14-17]. (See "Acute colonic diverticulitis: Triage and inpatient management" and "Acute colonic diverticulitis: Surgical management".)

#### **SOCIETY GUIDELINE LINKS**

Links to society and government-sponsored guidelines from selected countries and regions around the world are provided separately. (See "Society guideline links: Colonic diverticular disease".)

#### **INFORMATION FOR PATIENTS**

UpToDate offers two types of patient education materials, "The Basics" and "Beyond the Basics." The Basics patient education pieces are written in plain language, at the 5<sup>th</sup> to 6<sup>th</sup> grade reading level, and they answer the four or five key questions a patient might have about a given condition. These articles are best for patients who want a general overview and who prefer short, easy-to-read materials. Beyond the Basics patient education pieces are longer, more sophisticated, and more detailed. These articles are written at the 10<sup>th</sup> to 12<sup>th</sup> grade reading

level and are best for patients who want in-depth information and are comfortable with some medical jargon.

Here are the patient education articles that are relevant to this topic. We encourage you to print or e-mail these topics to your patients. (You can also locate patient education articles on a variety of subjects by searching on "patient info" and the keyword(s) of interest.)

- Basics topics (see "Patient education: Diverticulitis (The Basics)")
- Beyond the Basics topics (see "Patient education: Diverticular disease (Beyond the Basics)")

#### SUMMARY AND RECOMMENDATIONS

- Definition Acute diverticulitis is defined as inflammation and/or infection of a diverticulum. (See 'Definitions' above.)
  - Diverticulitis is most commonly managed in the ambulatory setting. The incidence of diverticulitis increases with age but is not uncommon in young adults.
- Clinical manifestations Abdominal pain is the most common complaint in patients with acute diverticulitis. The pain is left sided in approximately 85 percent of patients. However, patients may present with right lower quadrant or suprapubic pain due to the presence of a redundant inflamed sigmoid colon or right-sided (cecal) diverticulitis. Patients may also have a low-grade fever. Other associated symptoms include nausea, vomiting, constipation, and diarrhea. (See 'Clinical features' above.)
- Acute complications Approximately 12 percent of patients with acute diverticulitis have associated complications. Acute complications include bowel obstruction, development of an abscess, fistula, stricture, or a colonic perforation into the peritoneum and peritonitis. Diverticulitis complicated by an abscess or perforation is usually the first or second presentation of the disease. Recurrent episodes are not a risk factor for developing perforation or abscess. (See 'Acute complications' above and 'Disease course' above.)
- **Diagnosis** The diagnosis of acute diverticulitis should be suspected in a patient with lower abdominal pain with tenderness to palpation on physical examination. Laboratory findings of leukocytosis, while not sensitive or specific for acute diverticulitis, can support the diagnosis. Abdominal imaging is required to establish the diagnosis of acute diverticulitis. We perform an abdominal computed tomography (CT) scan with oral and intravenous contrast to establish the diagnosis of acute diverticulitis because it has a high

sensitivity and specificity for acute diverticulitis and can exclude other causes of abdominal pain.

CT scan findings suggestive of acute diverticulitis include the presence of localized bowel wall thickening (>4 mm), an increase in soft tissue density within the pericolonic fat secondary to inflammation, and the presence of colonic diverticula. (See 'Diagnosis' above and 'Computed tomography scan' above.)

- Role of delayed colonoscopy Colonoscopy has no role in establishing the diagnosis of acute diverticulitis and should not be performed in the acute setting due to the risk of perforation. However, a colonoscopy should generally be performed at least six weeks after recovery to definitively rule out the presence of an underlying colorectal cancer, unless the patient has had a colonoscopy within the previous year. Patients with recurrent uncomplicated diverticulitis should follow routine screening and surveillance intervals after the baseline colonoscopy unless alarm symptoms develop. (See 'Exclusion of an underlying malignancy' above.)
- **Natural history** Ongoing abdominal discomfort is common after resolution of acute inflammation. The differential for ongoing symptoms is broad. Imaging and colonoscopy may need to be considered to rule out an alternative diagnosis or ongoing inflammation.

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#### **GRAPHICS**

## Mild diverticulitis of the sigmoid colon on CT



A CT scan of the pelvis in a patient with mild acute diverticulitis. There is mild induration of the perisigmoid fat (arrow) and thickening of the sigmoid mesocolon (dashed arrow). Multiple diverticula are noted (arrowheads).

CT: computed tomography.

Graphic 80808 Version 11.0

## Diverticular abscess of the sigmoid colon



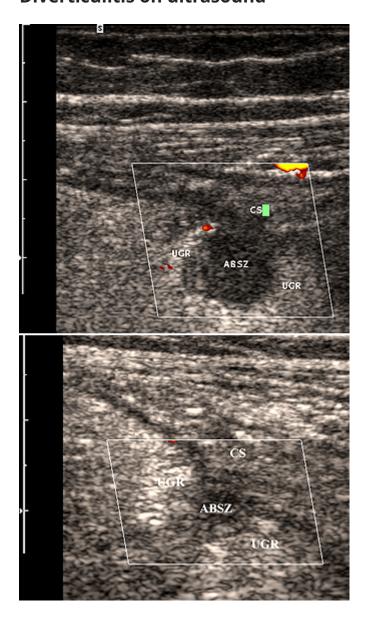
Single axial CT scan of the pelvis demonstrates an abscess surrounding and compressing the sigmoid colon (arrow) which is markedly narrowed. There is a small amount of gas within the abscess (arrowhead).

CT: computed tomography.

Courtesy of Norman Joffe, MD.

Graphic 75134 Version 3.0

### **Diverticulitis on ultrasound**



Ultrasound images showing a hypoechoic region adjacent to the sigmoid colon representing a diverticular abscess (ABSZ top panel). Regression was demonstrated after five days of conservative treatment (bottom).

Courtesy of Christoph F Dietrich, MD.

Graphic 56822 Version 3.0

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