Acute colonic diverticulitis: Outpatient management and follow-up

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INTRODUCTION

Diverticular disease of the colon is common. Although often diagnosed in the emergency department, patients with uncomplicated disease who are otherwise well are often treated as outpatients. Additionally, all patients will require outpatient follow-up after resolution of their acute symptoms.

The outpatient management and follow-up of acute colonic diverticulitis is the focus of this topic. Initial triage and inpatient management are discussed in another topic. (See "Acute colonic diverticulitis: Triage and inpatient management".)

The epidemiology, pathophysiology, clinical manifestations, diagnosis, complications, and surgical treatment of diverticulitis are discussed elsewhere:

- (See "Colonic diverticulosis and diverticular disease: Epidemiology, risk factors, and pathogenesis".)
- (See "Clinical manifestations and diagnosis of acute colonic diverticulitis in adults".)
- (See "Diverticular fistulas".)
- (See "Colonic diverticular bleeding".)
- (See "Acute colonic diverticulitis: Surgical management".)

INITIAL OUTPATIENT CARE

Uncomplicated diverticulitis in patients who meet certain criteria can be managed entirely as outpatients. These criteria are outlined in this table (table 1) and discussed in detail elsewhere. (See "Acute colonic diverticulitis: Triage and inpatient management", section on 'Triage'.)

The initial care typically consists of pain control with oral analgesics (eg, acetaminophen, ibuprofen, oxycodone) and a liquid diet. Antibiotics are usually not required.

No oral antibiotics — Antibiotics used to be the cornerstone of diverticulitis treatment. However, such practice was largely based upon retrospective studies and clinical experience rather than high-quality evidence [1,2]. In an open-label randomized trial (DINAMO) of 480 patients with imaging-confirmed uncomplicated diverticulitis whose symptoms were adequately controlled in the emergency department, outpatient treatment with or without amoxicillin-clavulanic acid resulted in similarly low rates of unscheduled return visits (6.7 versus 7 percent) or hospitalization (6 versus 3 percent) [3]. Additional trials, mostly from Europe, also showed that antibiotics may not be necessary for selected patients with uncomplicated diverticulitis who are treated in the hospital. Inpatient treatment of diverticulitis is discussed elsewhere. (See "Acute colonic diverticulitis: Triage and inpatient management", section on 'Intravenous antibiotics'.)

The exclusion criteria used in the DINAMO trial were almost identical to the criteria used to determine need for inpatient treatment (table 1). Thus, we suggest that patients with uncomplicated diverticulitis without the characteristics suggestive of either severe disease or serious comorbidities be managed initially with pain control and a liquid diet but without antibiotics [3].

Our suggestion for the selective use of antibiotics to treat uncomplicated diverticulitis is consistent with recommendations from the American Gastroenterological Association (AGA) [4,5], American Society of Colon and Rectal Surgeons (ASCRS) [6], European Association of Endoscopic Surgery (EAES)/Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) [7], and American College of Physicians (ACP) [8].

However, clinicians may reasonably choose to use antibiotics for individual patients who have major medical comorbidities, have immunocompromising conditions, use medications causing immunomodulation, or show signs of systemic disturbance. Oral antibiotics appropriate for diverticulitis are listed in this table (table 2).

Outpatient diet — There is no evidence for dietary restrictions in acute uncomplicated diverticulitis. Some guidelines allow regular diet in patients who can tolerate it, while others endorse a "modified" diet [9]. One approach is to limit patients to a liquid diet until they can be

reassessed within a week, after which their diet can be liberalized to soft or regular if they demonstrate clinical improvement.

SUBSEQUENT OUTPATIENT CARE

Patients should be reassessed in the clinic within one week of their initial presentation to the emergency room or discharge from the hospital. Thereafter, all patients should be reassessed weekly until all symptoms resolve.

Patients who improve — Repeat imaging studies are not necessary in patients who continue to demonstrate clinical improvement. Upon resolution of all symptoms, patients should be monitored for any recurrence of symptoms and undergo colonoscopy in six to eight weeks if they have not done so within the previous year. (See 'Colonoscopy for all patients following diverticulitis' below.)

Patients who do not improve — Patients with worsening pain, new onset fever, or the inability to tolerate oral fluids should be admitted for inpatient treatment (algorithm 1). Abdominopelvic computed tomography (CT) imaging may be repeated to rule out a new complication. (See "Acute colonic diverticulitis: Triage and inpatient management", section on 'Inpatient treatment'.)

In a 2019 meta-analysis of 19 retrospective studies, the readmission rate for outpatient treatment of diverticulitis is low (7 percent, 95% CI 6-9) and comparable to that of inpatient controls [10].

PERSISTENT OR RECURRENT SYMPTOMS

A small proportion of patients who develop acute diverticulitis do not follow the classic pattern of disease progression. Such patients have been described as having "smoldering" diverticulitis [11,12]. Patients who have chronic smoldering diverticulitis typically have subacute but protracted symptoms of left lower quadrant abdominal pain, alteration in bowel habits, and/or rectal bleeding, often after cessation of antibiotics. These symptoms are chronic and may last for longer than six months.

In a two-year longitudinal study of patients participating in the DIABOLO (DIverticulitis: AntiBiotics Or cLose Observation?) trial [13], over one-third reported persistent symptoms such as flatulence (39 percent), rumblings (31 percent), many stools (30 percent), bloating (28 percent), fullness (28 percent), and severe urgency for defecation (27 percent) [14]. However, the

absolute quality-of-life scores for several of such symptoms were actually comparable to those for healthy individuals in other studies, and only 22 percent of patients with ongoing abdominal complaints experienced a recurrent episode of diverticulitis within 24 months. Thus, for patients with persistent complaints after acute diverticulitis, it is important to distinguish between true smoldering or recurrent diverticulitis and other disease entities such as irritable bowel syndrome. (See "Clinical manifestations and diagnosis of irritable bowel syndrome in adults" and "Acute colonic diverticulitis: Surgical management", section on 'Persistent symptoms'.)

Smoldering diverticulitis is characterized by the key feature of colonic inflammation, which can be demonstrated by repeat CT scan, lower endoscopy, or laboratory test (eg, fecal calprotectin) [15]. A lack of colonic inflammation suggests that the symptoms may be due to function disorders such as irritable bowel syndrome, which do not require a surgical intervention.

Patients with chronic smoldering diverticulitis should be referred for surgical evaluation [16]. Patients should be presented with the risks and benefits of colon resection so they can engage in shared decision making with the surgeon [15].

- In a randomized trial of patients with either smoldering or multirecurrent diverticulitis, elective colon resection resulted in better quality-of-life scores than conservative management at one and five years [17-19]. However, surgical complications included anastomotic leak (11 percent), reoperation (15 percent), and protective stomas (19 percent).
- In a systematic review, elective surgery reduced recurrence in patients with prior complicated, smoldering, or frequently recurrent diverticulitis [20].

ELECTIVE SURGERY FOR HIGH-RISK PATIENTS

After successful nonoperative management of acute diverticulitis, elective surgery should be offered to patients who are at high risk of developing serious complications or dying from recurrent diverticulitis, including those with complicated diverticulitis and those who are immunosuppressed.

Elective colon resection is generally not offered to immunocompetent patients with a history of uncomplicated diverticulitis, regardless of the number of past episodes [4,6]. However, surgery may be offered to those patients who travel extensively, and patients who live in remote areas of the country without ready access to medical care.

Complicated first episode — The 2020 American Society of Colon and Rectal Surgeons (ASCRS) guidelines recommended elective colon resection after successful nonoperative management of acute complicated diverticulitis [6]. There is evidence that patients with complicated diverticulitis are at higher risk of developing serious complications or dying from recurrent diverticulitis [21,22].

Patients with fistulae, obstruction, and stricture obviously require definitive surgical intervention. However, the optimal management of a healed diverticular abscess is less certain [23], as some evidence suggests that it is not as significant a risk factor for future complicated recurrence [24]. Thus, for patients with a healed diverticular abscess, we suggest basing the decision to operate on the persistence of symptoms and effect on quality of life, rather than mandating surgery solely to avoid recurrent episodes. This is especially true if the patient is medically complicated. This area, however, is controversial and continues to evolve [25]. (See "Acute colonic diverticulitis: Surgical management", section on 'Patients with prior complicated attack'.)

Immunosuppression — Patients who are immunosuppressed should also be considered for elective surgical resection. Compared with the general population, patients who are immunosuppressed are more likely to develop acute diverticulitis (0.02 versus 1 percent), more likely to require emergency surgery if they developed diverticulitis (10 to 25 versus 40 percent), and more likely to die if they underwent emergency surgery for diverticulitis (<5 versus 30 percent) [26-29].

In a retrospective study of 1332 immunosuppressed and 25,655 immunocompetent patients undergoing surgery for acute diverticulitis, immunosuppression was associated with a higher mortality rate after emergency surgery (odds ratio [OR] 1.79, 95% CI 1.17-2.75) but not elective surgery. After elective surgery, immunosuppressed patients were more likely to develop major complications (OR 1.46, 95% CI 1.17-1.83) or wound dehiscence (OR 2.69, 95% CI 1.63-4.42) compared with immunocompetent patients [30].

Acute diverticulitis is more severe in immunocompromised patients because their presentation is atypical and often delayed. Thus, most surgeons would offer elective surgery to immunocompromised patients who are medically fit after a single episode of diverticulitis because elective surgery carries much lower morbidity and mortality rates compared with emergency surgery [31]. The decision to pursue elective surgery, however, needs to be individualized, as some immunosuppressed patients may be poor surgical candidates due to comorbid conditions [6]. (See "Acute colonic diverticulitis: Surgical management", section on 'Patients who are immunocompromised'.)

Patients can become immunocompromised from chemotherapy; immunosuppression for organ transplant; long-term glucocorticoid therapy; or chronic medical conditions such as diabetes, renal failure, or collagen-vascular disorders such as lupus [32,33].

Patients with diabetes who present with acute diverticulitis have a higher incidence of complicated episodes but similar success with nonoperative management compared with patients without diabetes [7]. Patients with human immunodeficiency virus that is well controlled have similar postoperative complications to those of the general population; those with acquired immunodeficiency syndrome have higher morbidities and mortality [34]. Patients who are planning to undergo a limited course of chemotherapy should have their elective surgery delayed until after its completion.

COLONOSCOPY FOR ALL PATIENTS FOLLOWING DIVERTICULITIS

After the complete resolution of symptoms associated with acute diverticulitis (typically in six to eight weeks), we suggest that a colonoscopy be performed to assess the extent of a patient's diverticular disease and exclude a concomitant colonic cancer, unless one has been performed within the previous year.

The cancer detection rate by colonoscopy is consistently much higher after complicated diverticulitis than after uncomplicated diverticulitis [20]. In two meta-analyses, colorectal cancer was detected by colonoscopy in 8.3 to 10.8 percent of patients with complicated diverticulitis but only in 0.5 to 0.7 percent of those with uncomplicated diverticulitis [35,36]. Thus, there is no controversy that colonoscopy should be performed after any episode of complicated diverticulitis.

It is controversial, however, whether colonoscopy is necessary after an episode of uncomplicated diverticulitis. In this cohort of patients, the detection rate of colorectal cancer varies by study. In a single-center retrospective study of 978 patients who underwent colonoscopy or gastrointestinal surgery after CT diagnosis of diverticulitis, 2.7 percent were found to have colorectal cancer and 5 percent to have advanced adenoma [37]. In two retrospective studies of 545 and 185 patients with uncomplicated diverticulitis, however, routine colonoscopy did not detect any colorectal cancer [38,39].

The 2018 European Association for Endoscopic Surgery (EAES)/Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) guidelines failed to reach a consensus, with American experts in favor of routine colonoscopy but European experts against colonoscopy for patients with uncomplicated diverticulitis [7]. The 2020 American Society of Colon and Rectal

Surgeons (ASCRS) guidelines recommended colonoscopy after all complicated diverticulitis and after uncomplicated diverticulitis with imaging abnormalities or atypical courses [6]. The 2022 American College of Physicians (ACP) guidelines recommended colonoscopy after complicated diverticulitis [16].

Given the low risk of colonoscopy, we, along with other major societies [4], recommend colonoscopy for all patients after an episode of uncomplicated diverticulitis, unless they have had one in the previous year. (See "Clinical manifestations and diagnosis of acute colonic diverticulitis in adults", section on 'Exclusion of an underlying malignancy'.)

DIETARY MODIFICATION AND SUPPLEMENTS

In order to prevent recurrence, patients with a history of colonic diverticulitis should consume a high-fiber diet [4]. However, they do not need to avoid seeds, corn, and nuts. Further studies are required before mesalamine or other agents (eg, rifaximin, probiotics) can be recommended for prevention of recurrent diverticulitis [4].

- **Healthy lifestyle** – Patients should be advised to lead a healthy lifestyle, which entails tobacco cessation, physical activities and weight loss, and reduced meat intake [40,41]. A high-fiber diet is also recommended once the acute phase of diverticulitis has resolved [42]. This recommendation is based upon observational studies that suggested long-term fiber supplementation may reduce the incidence of recurrent diverticulitis [43,44]. Indirect support for fiber supplementation also comes from studies that demonstrated the protective effect of a high-fiber diet on the development of diverticular disease [45]. However, although a healthy lifestyle has been shown to prevent the first episode of diverticulitis, its role in secondary prevention in patients who already had diverticulitis is uncertain [46,47].

- **Seeds, corn, and nuts** – Patients with diverticular disease have historically been advised to avoid consuming seeds, corn, and nuts out of concern that undigested fragments of such food items could become lodged within the diverticulum and incite diverticulitis. However, this theory is completely unproven. In a large prospective study of 47,228 patients, nut, corn, and popcorn consumption did not increase the risk of developing diverticulitis or its associated complications (eg, bleeding) [48]. Thus, we do not counsel patients with a history of diverticulitis against consuming seeds, corn, and nuts.

- Mesalamine – Based upon the theory that chronic inflammation plays a role in diverticulitis, anti-inflammatory agents, such as mesalamine, have been used to treat

diverticulitis [49-53]. A 2017 Cochrane systematic review and meta-analysis of seven randomized trials, however, found no evidence of an effect when comparing mesalamine with control for prevention of recurrent diverticulitis (31.3 versus 29.8 percent; relative risk 0.69, 95% CI 0.43-1.09; very low quality of evidence) [54]. Therefore, we do not suggest mesalamine to prevent recurrent diverticulitis [7,16,20]. There is even less evidence to support the use of other agents such as rifaximin [55] and probiotics [56].

RECURRENT DIVERTICULITIS

Overall, between 16 and 42 percent of patients have one or more recurrent episode(s) after nonoperative management of acute diverticulitis [21,57-59]. Thus, most patients (58 to 84 percent) do not develop recurrent diverticulitis. Two large cohort studies followed tens of thousands of patients for four years after their first episode of acute diverticulitis and documented low rates of both hospital readmission and surgery:

- In an English study of over 65,000 patients managed nonoperatively for their first episode of diverticulitis, the readmission rate for recurrent diverticulitis after a minimum follow-up of four years was 11.2 percent; 0.9 and 0.75 percent required emergency and elective colectomy, respectively. Female sex, young age, smoking, obesity, and complicated initial disease were risk factors for readmission and emergency surgery by regression analyses [60].

- In a Canadian study of over 14,000 patients followed for a median of almost four years, the readmission rate was 9 percent, and 1.9 and 1.7 percent required emergency and elective colectomy, respectively. In regression analyses, complicated initial disease was a risk factor for both readmission and emergency surgery, while age <50 was a risk factor for readmission but not emergency surgery [61].

Studies show that recurrent diverticulitis is usually **not** more severe, or "virulent," than the initial episode:

- In 672 patients who were followed for five years after nonoperative management of diverticulitis, 36 percent had a recurrence at five years, but only 4 percent had a complicated recurrence (eg, abscess, perforation, or fistula) [57].

- In a retrospective study of 1300 patients with acute diverticulitis, frank perforation occurred in 25 percent of patients with their first episode, 12 percent with their second episode, 6 percent with their third episode, and only 1 percent thereafter [62].

Although surgery was once advised for patients who have had two or more uncomplicated episodes of diverticulitis, there is increasing evidence that such arbitrary guidelines should be abandoned [63-65]. The guidelines from the American Society of Colon and Rectal Surgeons (ASCRS) called for an individualized approach to recommending elective sigmoid colectomy after recovery from uncomplicated diverticulitis [6]. Considering the risk of colostomies associated with elective resection, the risk of ostomy is not lower after surgery than without surgery (4 versus 1.6 percent) [66]. The complication and colostomy rates associated with surgery after four episodes were no higher than after one episode [6]. Furthermore, more episodes of diverticulitis were not associated with a higher rate of conversion from laparoscopic to open surgery [67].

Surgery, however, may be indicated in patients with recurrent diverticulitis who develop symptoms. In a systematic review of 80 studies, 20 to 35 percent of patients managed nonoperatively developed chronic abdominal pain, compared with 5 to 25 percent of patients treated surgically [68]. Overall, approximately 15 percent of patients with acute diverticulitis will require surgical intervention at some time during the course of their disease [68], nearly all of whom have had either a complicated episode or several uncomplicated episodes of diverticulitis [6].

Recurrence after surgery for uncomplicated diverticulitis occurs in 6 percent of patients at one year and 16 percent at five years [66]; patients with a colosigmoid anastomosis where the distal resection did not extend to the rectum had four times as many recurrences as those with a colorectal anastomosis [69,70]. It is therefore extremely important that the distal level of resection extend up to the rectum. (See "Acute colonic diverticulitis: Surgical management", section on 'Operative considerations'.)

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" and "Society guideline links: Intra-abdominal infections in adults".)

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 5th to 6th 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 10th to 12th 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

- **Initial outpatient care** – Patients are initially managed with pain control with oral analgesics (eg, acetaminophen, ibuprofen, or oxycodone) and a liquid diet. For most patients who are appropriate candidates for outpatient management of acute uncomplicated colonic diverticulitis, we suggest **against** antibiotic treatment (**Grade 2B**). There appear to be similar outcomes regardless of antibiotic use. However, clinicians may choose to use antibiotics in patients who have major medical comorbidities, have immunocompromising conditions, or show signs of systemic disturbance. When indicated, appropriate oral antibiotics are listed in this table (table 2). (See 'Initial outpatient care' above.)
- **Subsequent outpatient care** – Patients should be reassessed clinically within a week of their initial presentation or discharge from the hospital, and weekly thereafter until the complete resolution of all symptoms. Repeat imaging studies are usually not necessary unless the patient fails to progress clinically. Patients who deteriorate or do not improve with outpatient therapy are (re)admitted for inpatient treatment (algorithm 1). (See 'Initial outpatient care' above.)
- **Persistent or recurrent symptoms** – After out- or inpatient treatment of acute diverticulitis, those who have persistent or recurrent symptoms may have chronic smoldering diverticulitis, which is distinguished from other common gastrointestinal disorders (eg, irritable bowel syndrome) by the presence of colonic inflammation. Patients with chronic smoldering diverticulitis may benefit from surgical consultation for possible elective colon resection. (See 'Persistent or recurrent symptoms' above.)

- **Candidates for elective surgery** – For patients who have had complicated diverticulitis (with the exception of some patients with a healed diverticular abscess and no symptoms) or who are immunosuppressed, we suggest elective colon resection (**Grade 2C**)**.** Such patients are at high risk of developing serious complications or dying from recurrent diverticulitis and emergency surgery. (See 'Elective surgery for high-risk patients' above.)

  Elective colon resection is generally not offered to asymptomatic, immunocompetent patients with a history of uncomplicated diverticulitis, regardless of the number of past episodes. However, surgery may be offered to patients who travel extensively, as well as patients who live in remote areas without ready access to medical care.

- **Colonoscopy and dietary modification** – All patient who are symptom free should undergo colonoscopy after six to eight weeks to rule out colon cancer unless one has been performed in the previous year. A high-fiber diet and a healthy lifestyle are also recommended to reduce the risk of recurrence, but not avoidance of nuts, corn, and seeds. (See 'Colonoscopy for all patients following diverticulitis' above and 'Dietary modification and supplements' above.)

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GRAPHICS

Indications for hospital admission for acute colonic diverticulitis

▪ Complicated diverticulitis (ie, frank perforation, abscess, obstruction, fistula)
▪ Sepsis or SIRS (>1 of temperature >38° or <36° Celsius, heart rate >90 beats per minute, respiration rate >20 respirations per minute, white blood cell count >12,000/mL or <4000/mL, C-reactive protein >15 mg/dL)
▪ Severe abdominal pain or diffuse peritonitis, and/or failure to reduce abdominal pain in the emergency department to <5 on a VAS
▪ Microperforation (eg, a few air bubbles outside of the colon without contrast extravasation or phlegmon)
▪ Age >70 years
▪ Significant comorbidities (eg, diabetes mellitus with organ involvement [eg, retinopathy, angiopathy, nephropathy], recent cardiogenic event [eg, acute myocardial infarction, angina, heart failure], or recent decompensation of chronic liver disease [≥ Child B] or end-stage kidney disease)
▪ Immunosuppression (eg, poorly controlled diabetes mellitus, chronic high-dose corticosteroid use, use of other immunosuppressive agents, advanced HIV infection or AIDS, B or T cell leukocyte deficiency, active cancer of hematologic malignancy, or organ transplant)
▪ Intolerance of oral intake secondary to bowel obstruction or ileus
▪ Nonadherence with care/unreliability for return visits/lack of support system
▪ Failure of outpatient treatment

SIRS: systemic inflammatory response syndrome; VAS: visual analog scale.

Graphic 130400 Version 2.0

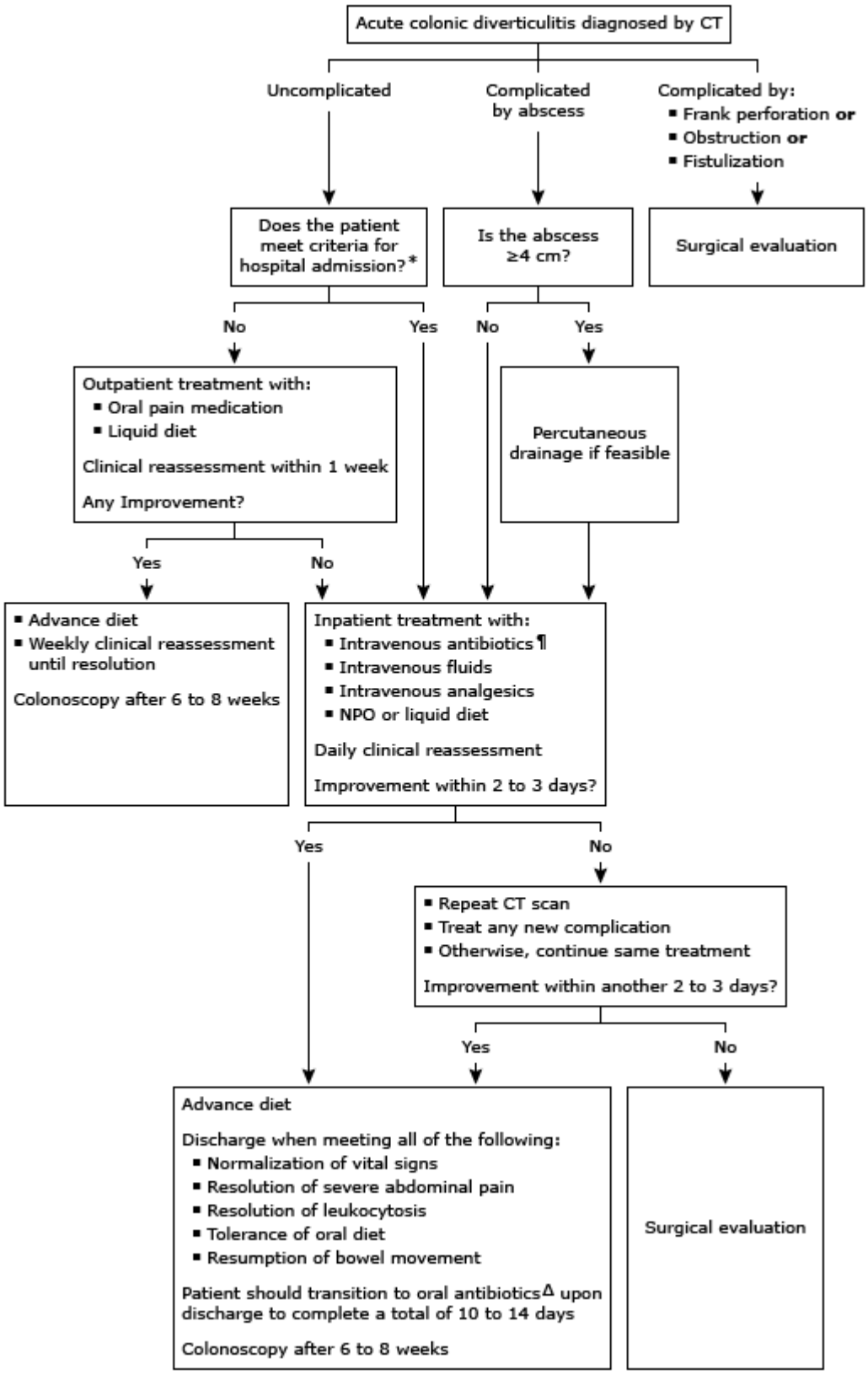
Oral antibiotics for acute colonic diverticulitis in adults

Ciprofloxacin (500 mg every 12 hours) **plus** metronidazole (500 mg every 8 hours)
Levofloxacin (750 mg once daily) **plus** metronidazole (500 mg every 8 hours)
Trimethoprim-sulfamethoxazole (1 double-strength tablet [contains sulfamethoxazole 800 mg and trimethoprim 160 mg] every 12 hours) **plus** metronidazole (500 mg every 8 hours)
Amoxicillin-clavulanate (1 tablet [contains 875 mg amoxicillin and 125 mg clavulanic acid] every 8 hours) **or** amoxicillin-clavulanate extended-release (2 tablets [each tablet contains 1 g amoxicillin and 62.5 mg clavulanic acid] every 12 hours)

- The local antibiogram should be consulted to avoid prescribing a regimen to which bacterial resistance exceeds 10%.
- Doses may need to be adjusted for kidney impairment or other factors; refer to drug monographs included within UpToDate for additional details.
- The total duration of treatment is 10 to 14 days (inclusive of both IV, if any, and oral antibiotics).

Graphic 134487 Version 5.0

Management of acute colonic diverticulitis



CT: computed tomography; NPO: nil per os.

* Criteria for inpatient management (only need to meet one):

- Complicated diverticulitis

- Sepsis or systemic inflammatory response syndrome evidenced by more than one of the following: Temperature >38°C or <36°C, heart rate >90 beats per minute, respiration rate >20 respirations per minute, white blood cell count >12,000/mL or <4000/mL, C-reactive protein >15 mg/dL
- Severe abdominal pain or diffuse peritonitis, and/or failure to reduce abdominal pain in the emergency department to <5 on a visual analog scale
- Microperforation (eg, a few air bubbles outside of the colon without contrast extravasation or phlegmon)
- Age >70 years
- Significant comorbidities (eg, diabetes mellitus with organic involvement [eg, retinopathy, angiopathy, nephropathy], a recent cardiogenic event [eg, acute myocardial infarction, angina, heart failure], or recent decompensation of chronic liver disease [≥Child B] or end-stage renal disease)
- Immunosuppression (eg, poorly controlled diabetes mellitus, chronic high-dose corticosteroid use, use of other immunosuppressive agents, advanced human immunodeficiency virus infection or acquired immunodeficiency syndrome, B or T cell leukocyte deficiency, active cancer of hematologic malignancy, or organ transplant)
- Intolerance of oral intake secondary to bowel obstruction or ileus
- Noncompliance with care/unreliability for return visits/lack of support system
- Failure of outpatient treatment

¶ The choice of intravenous antibiotics depends on disease severity. Refer to UpToDate topic for details.

Δ Oral antibiotics for diverticulitis include amoxicillin-clavulanate, ciprofloxacin/metronidazole, levofloxacin/metronidazole, or trimethoprim-sulfamethoxazole/metronidazole. Refer to UpToDate topic for dosages.

Graphic 107989 Version 8.0

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