COMMENTARY

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Acute left-sided colonic diverticulitis: A surgeon's perspective on the ACP guidelines

The updated guidelines on the management of acute left-sided colonic diverticulitis from the American College of Physicians (ACP), published in 2022,[1,2] are practice-changing, with a push for less-aggressive management of uncomplicated diverticulitis in selected patients. This change is based on a better understanding of the underlying etiology of diverticulitis and on data from recently published randomized controlled trials.

Because diverticulitis is a common disease encountered by both surgeons and internists, this commentary reviews the updated ACP guidelines from a surgical perspective. The updated ACP guidelines closely echo those published recently by the American Society of Colon and Rectal Surgeons (ASCRS),[3] reflecting a growing consensus in the management of uncomplicated diverticulitis.

In the ACP guideline recommendations discussed here, the grading of strength of recommendation is conditional and the grading of certainty of evidence is low (conditional recommendation; low-certainty evidence). Complicated disease resulting in perforated bowel, intestinal obstruction, pericolic abscess, or fistulae is typically managed surgically or by interventional radiology and is not addressed here.

ACP recommendation: Use abdominal computed tomography when there is diagnostic uncertainty with suspected acute left-sided colonic diverticulitis

The diagnostic modality of choice for acute diverticulitis is cross-sectional imaging of the abdomen and pelvis with computed tomography (CT). This recommendation is shared by the ACP, the American Gastroenterological Association, and the ASCRS in patients with suspected diverticulitis when there is diagnostic uncertainty.[1,3,4] The differential diagnosis for lower abdominal pain is wide, particularly in females. CT is highly sensitive and specific for diverticulitis and can simultaneously rule out other underlying causes of abdominal pain. It can also be used to assign a modified Hinchey classification, which categorizes diverticulitis into 4 stages of severity.[5] Pericolic and pelvic abscesses (stage Ia/Ib and stage II) represent uncomplicated disease that can typically be managed with antibiotics and a drain placed by interventional radiology. Purulent and feculent peritonitis (stages III and IV) represent complicated disease that may require emergency surgery.

CT imaging can quickly differentiate uncomplicated from complicated disease, with the potential to alter management decisions. Further, the severity of inflammation seen on CT is prognostic of treatment failure, risk of disease recurrence, and risk of future stricture formation.[6–8] The use of oral and intravenous (IV) contrast is preferred, although noncontrast CT has similar diagnostic utility and can be used in patients with poor kidney function.

CT may not always be readily available in the outpatient setting and may not be needed. For example, a 50- to 60-year-old patient with diverticulosis on a previous screening colonoscopy who presents with typical symptoms of left lower quadrant abdominal pain may not need abdominal imaging if another diagnosis is unlikely. Red-flag symptoms such as severe abdominal pain with high fever, rectal bleeding, signs of intestinal obstruction, peritonitis identified on examination, or suspected underlying malignancy warrant admission to a center with CT capabilities and a surgical team for prompt assessment.

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If available, outpatient CT should be ordered liberally, particularly for patients presenting with their first episode of suspected diverticulitis. Complicated disease most frequently presents during the index episode of diverticulitis, and confirming the diagnosis on imaging may prove useful in future treatment planning.[6] In-office ultrasonography can help rule out other differential diagnoses, such as gynecologic pathologies, although it is user-dependent and generally ineffective in evaluating the colon.

ACP recommendation: Manage most acute uncomplicated left-sided colonic diverticulitis in an outpatient setting

The ACP guidelines suggest that most patients with uncomplicated diverticulitis can be managed safely in the outpatient setting. Although that is applicable to most patients, we recommend judicious decision-making based on clinical presentation and the results of testing. US hospitals admit more than 300,000 patients for diverticulitis annually at an estimated annual cost of $2.6 billion per year.[9,10] Many of these patients do not benefit from admission, which represents a target for improving value of care in an already financially burdened healthcare system.

Inpatient vs outpatient outcomes for uncomplicated diverticulitis were assessed in the DIVER trial,[11] where 132 patients were randomized to inpatient or outpatient care. Both groups received a 10-day course of antibiotics. No statistically significant differences were seen in the rate of readmission, need for emergency surgery, or quality of life at a follow-up of 2 months.[11]

The DIVER trial is the first and only randomized controlled trial to address this question, but multiple observational studies have reported similar results.[12–14] The healthiest patients were carefully selected for inclusion in these studies, so physicians in clinical practice should avoid generalizing these results to all patients with uncomplicated diverticulitis. Of the 453 patients with diverticulitis initially evaluated in the DIVER trial, only 132 were ultimately selected for randomization.[11]

Patients should be assessed for severity of disease with a thorough history, physical examination, and basic laboratory tests before being sent home. Fitness for outpatient management requires immunocompetence, well-controlled comorbidities, tolerance of a liquid diet, and strong support at home with the ability to follow up. High fevers, poor oral intake, rectal bleeding, a palpable mass on digital rectal examination, or focal peritonitis with guarding are concerning and generally warrant admission. Inflammatory markers like C-reactive protein (CRP) and white blood cell count are useful adjuncts to the history and physical examination. In a validated prediction model, a CRP less than 100 mg/dL, a white blood cell count less than 1.5×10^9/L, and no guarding on physical examination have a negative predictive value of 96% when assessing for complicated diverticulitis.[15]

ACP recommendation: In selected patients with acute uncomplicated left-sided colonic diverticulitis, manage initially without antibiotics

The underlying pathophysiology of diverticulitis has recently been called into question. Inflammation, genetics, and gut microbiome appear to play a greater role in the development of diverticulitis than primary infection of pre-existing diverticula. Prescribing antibiotics for patients without perforation or abscess may therefore do little to shorten symptom duration or prevent progression of disease. Evidence from multiple randomized controlled trials now supports selective use of antibiotics. Although this is a conditional recommendation by ACP, it is a strong recommendation (grade 1A) from ASCRS.

In the Swedish multicenter AVOD trial,[16] 623 patients with CT-confirmed uncomplicated diverticulitis were randomized to receive either 7 days of antibiotics or IV fluids alone. There was no difference in time to recovery, complications, serious events, or need for emergent colectomy between groups.[16] We now know that the most severe episode of diverticulitis is typically the first one and that cases of recurrent disease tend to be the same or milder.[17] Nearly 40% of the patients in the AVOD trial presented with recurrent diverticulitis.[16] The investigators may have therefore inadvertently selected for patients who were unlikely to have adverse events, irrespective of the assigned treatment arm. This limitation was addressed in the Dutch DIABOLO trial,[18] where 528 patients presenting with their first episode of uncomplicated diverticulitis were randomized to receive antibiotics or IV fluids. Again, no differences in progression to complicated disease, readmission, need for colectomy, or adverse events were observed between groups.[18]

Subsequent trials published after the 2022 ACP recommendations further support selective use of antibiotics in patients with uncomplicated diverticulitis in the outpatient setting.[19] Evidence is also accumulating that patients with pericolic abscesses (Hinchey stage Ib) fare no better with antibiotics. However, antibiotics should be prescribed for these patients until this question is addressed in larger randomized studies.

A pragmatic approach to incorporating this new recommendation into clinical practice is to first determine if the patient's condition warrants hospital admission. Patients deemed fit for outpatient management meet the same criteria as those for management without antibiotics. Ideally, patients should have imaging to support the diagnosis of uncomplicated diverticulitis and should have ample support at home with the ability to quickly return to the hospital if symptoms become worse. Antibiotics are still appropriate for higher-risk patients who have comorbidities, are immunosuppressed, or have signs of systemic infection.

ACP recommendation: Refer for colonoscopy after an initial episode of complicated left-sided colonic diverticulitis in the absence of recent colonoscopy

Six weeks after a first episode of diverticulitis, the patient should be referred for colonoscopy to rule out underlying malignancy or inflammatory bowel disease.[1,2] Generally, a patient who has had a normal screening colonoscopy within 2 years of an episode of uncomplicated diverticulitis can stick to their current screening schedule. The risk of finding an underlying malignancy in these patients is comparable to that of the general population.[20,21] Unexplained weight loss, rectal bleeding, or narrowing of the stool in relation to an episode of diverticulitis should raise concern for malignancy and warrants colonoscopy regardless of a recent normal colonoscopy. All patients who present with complicated diverticulitis should undergo colonoscopy in 6 weeks to assess for underlying malignancy, which is present in 7.9% to 11% of patients.[22,23]

ACP recommendation: Discuss the merits of elective surgery to prevent recurrent diverticulitis after initial treatment with patients who have either uncomplicated but persistent or recurrent diverticulitis or complicated diverticulitis

Elective sigmoidectomy has been shown to decrease symptom recurrence and improve quality of life in select patients with recurrent or chronic "smoldering" diverticulitis.[24] Patients should be informed that elective surgery reduces but does not eliminate the risk of recurrent diverticulitis.[2] In a retrospective study of patients treated for 2 or more bouts of uncomplicated diverticulitis, the recurrence rate was 15% at 5 years after elective sigmoidectomy compared with 61% in those treated nonoperatively.[25]

As with any surgery, there are associated risks. The decision to pursue elective sigmoidectomy should be individualized for each patient based on a discussion of potential benefits, harms, costs, and the patient's preferences. Most patients with uncomplicated diverticulitis will not have another episode, but the risk of recurrence increases with each subsequent flare. In a large retrospective study of more than 181,000 patients, 23% of patients admitted for 2 attacks were admitted a third time. Of these, 37% were admitted for a fourth time.[26]

Patients who are frequently hospitalized, must take time off work or miss family events, or have persistent low-grade symptoms should be referred to a surgeon to discuss the pros and cons of elective sigmoidectomy. In the elective setting, this surgery can often be performed via a minimally invasive approach and does not typically require an ostomy. All patients who present with an initial episode of complicated disease should be referred to a surgeon for evaluation for elective sigmoidectomy, as the risk of readmission and future complicated episodes is higher in this group.[23]

Medical treatments for recurrent diverticulitis such as 5-aminosalicyclic acid (mesalamine), probiotics, or rifaximin have not been shown to improve outcomes and are not recommended by the American Gastroenterological Association.[2] Patients should be encouraged to eat a diet high in fiber from fruits, vegetables, and grains and to exercise regularly. Despite widespread opinion to the contrary, there are no compelling data to support avoiding nuts or seeds to prevent future attacks.[27]

PRACTICE APPLICATIONS

Diverticulitis is commonly encountered by surgeons and internists. The most recent society guidelines from both specialties conclude that we have been overtreating many patients with this disease and that admission for bowel rest and antibiotics is often unnecessary. However, admission and medical treatment do play a critical role in all but the healthiest patients presenting with uncomplicated diverticulitis. It is incumbent on physicians to identify patients at risk for failure of medical treatment and to escalate care appropriately. Along with a thorough history, examination, and laboratory tests, imaging with CT is generally helpful and should be ordered frequently, particularly at the index episode of diverticulitis. If there is any question of perforation on imaging or examination, a surgical consult is indicated.

DISCLOSURES

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