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Manage terminal ileum diverticulitis comparably to diverticulitis elsewhere

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ABSTRACT A critical appraisal and clinical application of Park HC, Lee BH. The management of terminal ileum diverticulitis. *Am Surg.* 2009 Dec;75(12):1199-202.

Keywords: *terminal ileum diverticulitis, management*

Clinical Context

A 73 year-old African American female with a past medical history of diverticulosis, hypertension, hyperlipidemia, hiatal hernia, and vertigo presenting with a chief complaint of abdominal pain that started one week ago. The patient described the abdominal pain as diffuse, crampy, continuous and progressively worsening. The patient also had fever, leukocytosis, episodes of non-bilious, non-bloody emesis and constipation. She denied chest pain, palpitations, dyspnea, dysuria or hematuria. Acute abdomen series and CT abdomen both showed mildly dilated bowel loops with air-fluid levels. CT abdomen also showed evidence of terminal ileum diverticulitis. The patient received cefoxitin and metronidazole, nasogastric tube decompression and IV fluids. General Surgery was consulted to determine whether the patient might benefit from surgical therapy.

Clinical Question

What is the best approach to treat patients presenting with terminal ileum diverticulitis?

Research Article

Park HC, Lee BH. The management of terminal ileum diverticulitis. *Am Surg.* 2009 Dec;75(12):1199-202.

Literature Review

Due to the rarity of this disease, a literature review through the PubMed and Google Scholar databases had limited data addressing this issue. Most articles were single case reports or focused on clinical and diagnostic findings. Four case reports described a surgical approach¹⁻⁴ and one case study used conservative medical management (IV antibiotics, bowel rest and parenteral alimentation), but focused on sigmoid diverticulitis. Another study focused on evaluating multiple detector CT as a diagnostic tool for terminal ileum diverticulitis. I chose the article by Park *et al.* because it offers a perspective for conservative medical management, whereas other articles discuss primarily surgical therapy.

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Critical Appraisal

This study reviewed 8612 patients with right lower quadrant abdominal pain. Three hundred and forty-six patients were treated for acute symptomatic right-sided diverticulitis and nine of those patients were found to have diverticulitis in the terminal ileum. All patients received IV antibiotics (second-generation cephalosporin and metronidazole), bowel rest, and parenteral alimentation as medical management. However, there were no control groups to evaluate the efficacy of this form of management, or a comparison with other possible therapies, such as a surgical approach. Without a control group, it is difficult to determine the number needed to treat. There were also no criteria mentioned for which patients qualified for non-operative management and which required surgery. One of the patients in this study had perforated ileum diverticulitis with abscess, a presentation that may merit surgical management or percutaneous draining, was managed with the same medical therapy as the other cases. The criteria used to separate patients between the conservative management and surgical groups would allow readers to more effectively compare this study with other studies. Details regarding treatment, such as antibiotic doses, were omitted in the methodology. Furthermore, while the authors included the number of days patients were on antibiotic therapy, they did not include the criteria they used for discontinuation of antibiotic therapy. There was no description of outpatient therapy or post-hospitalization recommendations for patients in this study.

Although the age, sex, WBC count, hospital stays, and antibiotics duration were reported in this study, there were too few cases to perform meaningful statistical analysis. As terminal ileum diverticulitis presents similarly to appendicitis, we do not know whether the variables mentioned may provide clues for the clinician to diagnose this disease.

In this study, the authors did not find recurrence in any of the patients. The follow-up time ranged from 12 to 84 months (median was 36 months). Another study that evaluated the long-term outcome of 118 patients with sigmoid diverticulitis treated non-operatively found recurrences up to 10 years after the initial episode⁵. They found that 29% of the patients had poor outcome at 5 years after the initial episode of diverticulitis. Although that study focused on sigmoid diverticulitis and not terminal ileum diverticulitis, it is possible that recurrences will similarly develop later in terminal ileum disease. The short follow-up time in this study may be insufficient to assess recurrence rates with non-operative management.

According to the Oxford Centre for Evidence-based Medicine (2009), this study falls under level 4. The lack of a control group for comparison makes it difficult to evaluate the effectiveness of this non-operative management with other therapies.

Clinical Application

The patient responded well to conservative therapy with antibiotics. Due to the rarity of this disease, there is no consensus on therapeutic management in patients with symptomatic terminal ileum diverticular disease.⁷⁻⁸ Both the case series reviewed and the clinical course of the patient described demonstrate that patients with terminal ileum diverticulitis can be effectively treated by a conservative non-operative approach. Our patient had a general surgery consultation, but improved symptomatically, so she did not have surgical intervention. We could tell the patient that she had a good chance of not having a recurrence based on the descriptive paper reviewed. The study also found that this approach was effective in two patients with perforated ileum diverticulitis. This paper does not address the issue of criteria for surgical versus conservative medical management of terminal ileum diverticulitis. Despite many limitations, this study suggests that terminal ileum diverticulitis can be managed with conservative treatment similar to patients with diverticular disease of other origins.

Learning points:

- 1.) Clinical decisions are necessary despite the lack of robust scientific literature.
- 2.) Extrapolation from one anatomic location to a different location always carries an unknown risk of harm; clinical judgment is required while caring for patients.

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