

Toxic Megacolon in a Patient with Clostridium Difficile Infection with Diverticulitis. Case Report

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ABSTRACT

Toxic megacolon is a fatal condition defined as a rare, life-threatening, acute colonic dilatation of colitis. The case of a 41-year-old male with a history of irritable bowel syndrome is presented, who starts with diarrhea on more than 20 occasions accompanied by blood and mucus, emesis is added, and a fever of 39°C.

Laboratories with hemoglobin 8.1g/dL, positive clostridium difficile toxin AB, positive glutamate dehydrogenase, simple abdominal tomography with distended intestinal loops, and presence of rectovesical fistula, performing total colectomy with ileostomy reporting ischemic colitis, perforation with ulcerated areas and pseudopolyps. Continued with well tolerated feeding. There are case reports of megacolon as a complication of inflammatory bowel disease and clostridium difficile infection. Total colectomy plus ileostomy is the surgical procedure of choice when conservative treatment fails. Inflammatory bowel pathology can show in its spectrum various clinical characteristics of debut or evolution, so a multidisciplinary approach and management must be taken from the diagnosis.

KEYWORDS: kaposi, clostridium, diverticulitis, colonic

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INTRODUCTION

Toxic Megacolon (TM) is a fatal condition defined as an acute colonic dilatation, greater than 6 cm in diameter, of the transverse colon. The incidence secondary to Clostridium Difficile (CD) is approximately 4.3%, it can present from asymptomatic colonization to fulminant colitis. It is associated with high mortality and morbidity and surgical management is necessary in most cases^{1,2}.

BACKGROUND

It is a rare and potentially fatal complication of infectious colitis¹. The term was first described in 1930 as colonic dilatation associated with sepsis² but it was not until 1950 that Marshak made a detailed study of the disease in patients

with ulcerative colitis. The incidence depends mainly on the etiology¹. Greenenstein, et al. reported in a 20-year retrospective study an incidence of 6% in patients with inflammatory disease. Greek, et al. reported an incidence of TM in patients with ulcerative colitis between 1 to 2.5% and 1 to 6% for Crohn's disease. A recent prospective study found an incidence of 7.9% in patients admitted to intensive care. TM due to colitis secondary to CD was 0.4–3% at the end of the last century; however, this has increased to 23% as reported by Zilberberg et al¹ due to the excessive use of broadspectrum antibiotics³. Mortality rises to 41.5% when there is colonic perforation and 8.8% in those who do not. they have evidence of perforation². The diagnostic criteria published by Jalan et al, and which are still valid, help to

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avoid confusion with other entities and include fever, tachycardia, leukocytosis, or anemia. The use of vancomycin and/or metronidazole via oral or intravenous is indicated in all cases^{2,3}. The case of a patient in the second level of care is reported.

CLINICAL CASE

A 41-year-old male with a history of irritable bowel syndrome of 5 years of evolution, with quinolone-based treatment for an indefinite period. He presented diarrhea on more than 20 occasions accompanied by blood and mucus, added emesis, fever of 39°C, with an initial diagnosis of inflammatory bowel disease, being treated with rifaximin, mesalazine, and prednisone for 8 days, persisting with difficult-to-control fever, adding abdominal distension and persistent generalized pain intensity 8/10, urination with fecaloid remains and hematuria, dyspneic dry cough. Laboratories with hematocrit of 24%, hemoglobin 8.1g/dL; white blood cells 11,300/mm, platelets 312,000/mm, urea 47 mg/dL, creatinine 0.6 mg/dL;

Na 132 mEq/L, K 4.8mEq/L; Cl 95 mEq/L, albumin 2.0g/dL; LDH 250 IU/L, positive clostridium difficile toxin AB, positive glutamate dehydrogenase, for which oral vancomycin and intravenous metronidazole were started. Simple abdominal tomography shows distension of intestinal loops, and presence of rectovesical fistula, performing total colectomy with ileostomy reporting ischemic colitis with transmural necrosis, hemorrhage, and perforation with ulcerated areas and pseudopolyps with granulation tissue typical of toxic megacolon. At 72 hours he evolved with an acute abdomen, tachycardia and oliguria requiring expansion of 30 ml/kg. Presenting new febrile peaks of up to 39.5°C with biochemical deterioration, leukocytes of 18,000/mm³, albumin 1.9 g/dl; Na 115 mEq/l, therefore a second surgical intervention was performed with peritoneal cavity lavage. He continued with a triple antibiotic regimen (piperacillin/tazobactam, metronidazole, and vancomycin) for 15 days. Parenteral nutrition was started for 7 days, continuing with a well-tolerated oral diet.

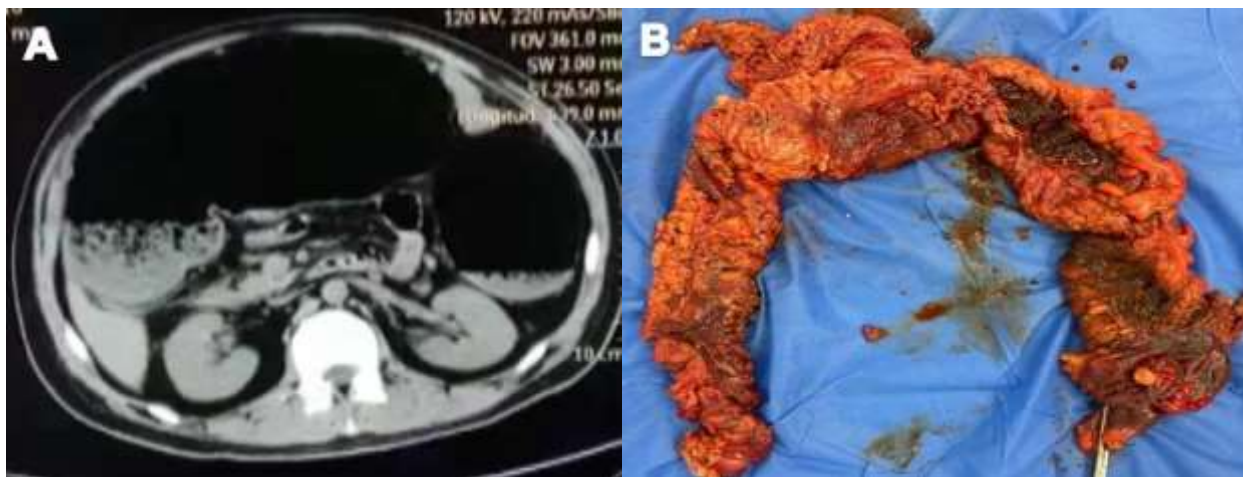


Figure 1. A) Abdominal CT scan of the transverse colon with increased volume and dilation of more than 10cm, thickening of the walls and alterations in the pericolic fat. B) Surgical specimen of the colon with areas of hemorrhage, transmural necrosis, and perforation.

DISCUSSION

Patients with Inflammatory Bowel Disease (IBD) have a considerably increased risk of incidence of infection due to CD and complications associated with it, including exacerbations of the disease, increased costs associated with hospitalizations and a worse evolution of the disease, including, multiple visits to the emergency department and increased mortality; Likewise, it is estimated that up to 10-35% of patients in this situation will require colectomy for developing from pseudomembranous colitis to toxic megacolon⁴.

The risk factors that seem to have more weight in the case of patients with IBD would be those related to the treatments, including the use of antibiotics (preferably quinolones, clindamycin, cephalosporins and penicillin, as well as proton pump inhibitors or immunosuppressants, Furthermore, the use of steroids would triple the risk of infection and double mortality^{4,5}.

In a review of the world journal of gastroenterology, the impact of CD disease on IBD was analyzed, where contrasting results were reported with respect to colectomy rates; some studies reported high rates of colectomy while others found discrepancies regarding rates of surgery since they included patients admitted for elective surgery and patients who responded rapidly to treatment⁵.

There are case reports of megacolon as a complication of inflammatory bowel disease and CD infection. The development of non-obstructive segmental colonic dilatation >6 cm is known as megacolon and with the addition of systemic toxicity it is known as toxic megacolon and is associated with high rates of intestinal perforation and mortality; in these cases, there are case reports of patients who avoid surgery with early treatment with infliximab⁶.

In drug-refractory patients or patients with toxic megacolon, early surgery leads to better outcomes, including

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mortality. Total colectomy plus ileostomy is the surgical procedure of choice when conservative treatment fails^{3,7}.

CONCLUSIONS

Inflammatory bowel pathology can show in its spectrum various clinical characteristics of debut or evolution, so a multidisciplinary approach and management must be taken from the diagnosis. Toxic megacolon has a low incidence and prevalence in inflammatory processes of the colon; however, its severity requires urgent surgical management. Given the progressive acute deterioration of the patient, this complication should be suspected.

CONFLICTS OF INTEREST: None reported.

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