Lethal pseudomembranous colitis in an immunocompetent patient

Key words: Pseudomembranes, Colitis, Cytomegalovirus, Immunocompetence, Infection, Severe disease, Surgery.

Dear Editor,

The most common etiology of diarrhea in hospitalized patients is *Clostridium difficile* (CD). This bacterium can cause pseudomembranous colitis (PC), although there are other agents that also can produce this illness, such as cytomegalovirus (CMV) that, occasionally, can affect immunocompetent patients.

We present a case of severe pseudomembranous colitis by CMV in an immunocompetent patient, after a clean elective surgery for ovarian cyst.

Case report

A 69-year-old woman, who underwent laparoscopic left oophorectomy for benign ovarian cyst 6 days before, without requiring prophylactic antibiotherapy. She was readmitted to the hospital because of diarrhea initiated the first postoperative day.

The CT scan showed colonic dilation and inflammatory changes in the sigma and rectal wall (Fig. 1). Flexible sigmoidoscopy demonstrated pseudomembranes and ulcerations in the mucous membrane. It was oriented as a PC (with compatible biopsies) establishing treatment with metronidazole. The detection in stool samples of toxin A and B for CD was negative as well as the stool culture and serology for HIV.

Because of a torpid evolution with vomiting and megacolon without toxemia, she was urgently operated and a subtotal colectomy with ileostomy was carried out, twelve days after admission.

In the postoperative period, she was admitted to the Intensive Care Unit needing vasoactive drugs due to a multiple organ failure and treated with piperazilin-tazobactam.

On the 5th day, she became hemodynamically unstable due to upper gastrointestinal hemorrhage and signs of ischemia in the ileostomy. The upper endoscopy showed a friable, necrotic and ulcerated mucosa from the esophagus to the duodenum. The results of the surgical specimen (Fig. 2D) reported pseudomembranous colitis with inclusion bodies (Fig. 2) (immunohistochemical technique) (1) (Fig. 2C), treated with foscarnet but the patient developed a multisystem failure dying the eighth day. The initial sigmoidoscopy biopsies were reviewed without evidence of inclusion bodies.
Discussion

Although in 96-100 % of the cases of PC the cause is CD (2), it also can be caused by other agents, like CMV.

The clinical spectrum ranges from a simple diarrhea to a fulminant colitis with a mortality rate of up to 80 % (3).

Its diagnosis, in addition to the sigmoidoscopy, involves the search for the causative agent by stool cultures, serology... Nowadays, it has been using the CT scan as an initial complementary test because of its quick results. Typical findings are dilation and thickening of the colonic wall, “sign of the accordion” and ascites.

In an immunocompetent host, CMV infection is usually mild but severe cases have also been described (4,5) in immunocompetent patients, although they usually are elderly, with comorbidity (6) and/or underlying intestinal inflammatory illness.

Although CMV can affect any part of the gastrointestinal tract, the most frequent affected are colon and rectum (7-9). Common endoscopic findings are erosions and ulcerations (4,8), but it has also been described pseudomembranes in 2 % case (2,10)

CMV colitis may be complicated with massive hemorrhage, toxic megacolon (7)..., requiring surgery and the best technical election is subtotal colectomy with ileostomy.

The possibility of a specific treatment is hindered by usual late diagnosis. Furthermore, the use of ganciclovir and foscarnet is controversial in the immunocompetent subject due to their toxicity.
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References


