INTRODUCTION

Eosinophilic ascites is a very uncommon condition of poorly understood etiology, characterized by elevated number of eosinophils in the abdominal fluid. This entity has been described in association with diverse conditions including abdominal lymphoma, Churg-Strauss syndrome, eosinophilic gastroenteritis, idiopathic eosinophilic peritonitis, hypereosinophilic syndrome, migrating visceral parasites, and peritoneal dialysis. Aspiration of ascitic fluid and corticosteroid therapy have been successfully utilized; however, the hypothesis of parasitic infections and their specific treatments must be also considered.

CASE REPORT

A 22 year-old man was admitted complaining of diffuse pain and increase in the abdominal volume. Episodic pain first appeared one year before, with moderate intensity, and worsened in the last two weeks, associated with vomiting and fever (37.9°C). He had antecedent of pyrosis not related with meals, which spontaneously relieved, in addition to loss of weight (3 kg in the last month). He had an uneventful appendectomy five years before admission. He denied tobacco smoking, alcohol abuse or drug use,
Figure. (A) Laparoscopic view of the bowel loops with conspicuous superficial vasodilation and showing sites (asterisks) where biopsies were performed. (B) Small collections of straw colored free peritoneal fluid (arrows) after its aspiration for laboratory studies.

DISCUSSION

The young male patient here described was admitted with recent ascites, vomiting and fever. There was history of recurrent episodes of mild diffuse abdominal pain, piorris, and weight loss. Peripheral blood count showed leukocytosis with 23% of eosinophils (2,461/mm³). The ascitic fluid was classified as exudate with very expressive number of eosinophils (1,489/mm³), and absence of microorganisms, parasites, or malignant cells. Of note, biopsies from the peritoneum and the inspissated intestinal walls did not reveal eosinophilic infiltration, and numerous eosinophils were seen inside the capillaires. Moreover, eosinophils were not found in the endoscopic samples from the stomach. As a whole, these data established the diagnosis of acute eosinophilic ascites and rule out other hypothesis, including eosinophilic gastroenteritis.5-6,13-20

The ascites of this patient improved without therapy with corticosteroid or antiparasitic drugs. Pilati et al.13 and Yassin et al.20 described similar spontaneous remission of eosinophilic ascites; however, there was association between ascites and eosinophilic infiltration of the gastrointestinal wall.13,20 Peripheral eosinophilia may lack in patients with eosinophilic ascites related to serosal type of eosinophilic gastroenteritis,5 as well as to spontaneous bacterial peritonitis by E. coli.15 Ascites without eosinophils may develop in patients with eosinophilic gastroenteritis; however, bone marrow study may show eosinophilia and reveal active disease.17 Exact pathogenesis of eosinophilic ascites is not entirely cleared, but studies about eosinophilic gastroenteritis might indicate a probable mechanism involved in eosinophil recruitment.6-8,16,17 The degree of cell degranulation plays a role on the severity of the
changes in eosinophilic gastroenteritis, that can be due to type 1 hypersensitivity or another immunologic phenomenon. Serosal immunoallergic involvement occurs in 10% of patients with that condition, which can be found associated with eosinophilic ascites. Moreover, in patients under dialysis IL-5 is elevated and peritoneal fluid eosinophils can be activated by EG2, CD11b, CD9, and CD69 expression. The accumulation of activated eosinophils in peritoneal fluid may be also associated with IL-8 and eosotakin, and to the mechanism of eosinophil transmigration through the endothelium. As a whole, literature data are indicative of allergic inflammatory phenomenon, hypothesis that is reinforced by the quick impressive clinical and pathological response to corticosteroids.

This case study aims to enhance the awareness of clinicians about this uncommon condition that is characterized by ascites of unknown etiology and containing high percentage of eosinophils.

DISCLOSURE

There is no potential conflict of interests relevant to the article to be reported.

REFERENCES