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Crohn's colitis perforation due to superimposed invasive amebic colitis: A case report

İnvaziv amibik kolit nedeni ile oluşan Crohn koliti perforasyonu: Olgu sunumu

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The clinical and microscopic appearances of inflammatory bowel disease may be very similar to those of amebic colitis. The coexistence of invasive amebiasis with inflammatory bowel disease may have disastrous results. Patients with inflammatory bowel disease have a greater prevalence of amebiasis, but this association is more significant for ulcerative colitis. There have been very few reports in the literature presenting the superimposition of amebiasis on Crohn's disease. In this report, a rare case of Crohn's colitis with superimposed amebiasis resulting in colonic perforation is presented. Patients with inflammatory bowel disease traveling to endemic areas may benefit from receiving a course of prophylactic anti-amebic medication.

Key words: Inflammatory bowel disease, Crohn's colitis, amebiasis

İnflamatuar barsak hastalıklarının kliniği ve mikroskopik özellikleri amebik kolit ile karışabilmektedir. Amebiazis inflamatuar barsak hastalığı üzerine eklendiğinde oldukça şiddetli sonuçlar doğurabilir. İnflamatuar barsak hastalığı olan olgularda amebiazis daha sık görülmektedir ve bu birliktelik ülseratif kolitte daha sık gözlenmektedir. Literatürde Crohn hastalığı ile amebik kolit arasındaki ilişki üzerine yayımlanmış çalışma sayısı oldukça azdır. Bu çalışmada invaziv amebiazis nedeni ile kolonik perforasyon gelişen bir crohn kolitini sunmayı amaçladık. Amebiazisin endemic olduğu bölgelere seyehat eden inflamatuar barsak hastalığı olan hastalar profilaktik antiamebik medikasyondan fayda görebilir.

Anahtar kelimeler: İnflamatuar barsak hastalığı, Crohn koliti, amebiazis

INTRODUCTION

Amebiasis is a parasitic disease caused by Entamoeba histolytica. Prevalence is particularly high in the tropics and in areas where sanitation is suboptimal. The majority of infections are asymptomatic, whereas it may produce a spectrum of clinical presentations ranging from mild dysentery to abscesses of the liver or other organs (1). It may present in acute or chronic form. The clinical and microscopic features of inflammatory bowel disease (IBD) may be very similar to those of amebic colitis. Moreover, the coexistence and superimposition of invasive amebic colitis with IBD may have disastrous results. Patients with IBD in Turkey have a greater prevalence of E. histolytica / dispar infections (2). This association is more significant for ulcerative colitis. There have been very few reports in the literature presenting the superimposition of amebiasis on Crohn's disease. In this report, a rare case of Crohn's colitis with superimposed E. histolytica infection resulting in colonic perforation and intra-abdominal abscess is presented.

CASE REPORT

A 23-year-old female patient from Northern Europe who had resided in a touristic region of Turkey for the last four months presented to our emergency room with the complaints of diffuse abdominal pain, high fever and vomiting. Physical examination revealed a distended abdomen with low-pitched bowel sounds, diffuse rebound tenderness and muscular guarding. Leukocyte count was 16,800 and upright chest and abdominal X-rays showed bilateral sub-diaphragmatic free air. The

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patient's past medical history consisted of Crohn's disease and she was on maintenance therapy with 5-aminosalicylate (ASA) (Salofalk®). The patient's unique complaint related to Crohn's disease had been mild, intermittent diarrhea since the time of diagnosis. The patient was operated on with the diagnosis of viscus perforation.

Exploration through midline laparotomy revealed free purulent and fecaloid material in the abdomen. A 30 cm colonic segment between the mid-transverse colon and the left colon was observed to be thick-walled with loss of haustrations, severely inflamed and with a mesentery extending over the intra-peritoneal portion of the colon. There was a perforation of 3 cm extending from the intraperitoneal to the retroperitoneal part of the splenic flexura. Left colon was mobilized and a retroperitoneal abscess cavity was observed. A left hemicolectomy with transverse end-colostomy and sigmoid mucous fistula were performed. The abscess cavity was drained.

Empiric therapy was commenced with broad spectrum antibiotics. Postoperative course was without any serious problem. Drainage output decreased gradually and colostomy worked well. Our patient was discharged from the hospital on the postoperative 7th day without any complication.

Postoperative pathologic examination revealed the features of Crohn's colitis with inflammatory infiltration involving whole bowel wall (Figure 1). Numerous trophozoites of E. histolytica were found in subserosa and muscularis propria (Figure 2).

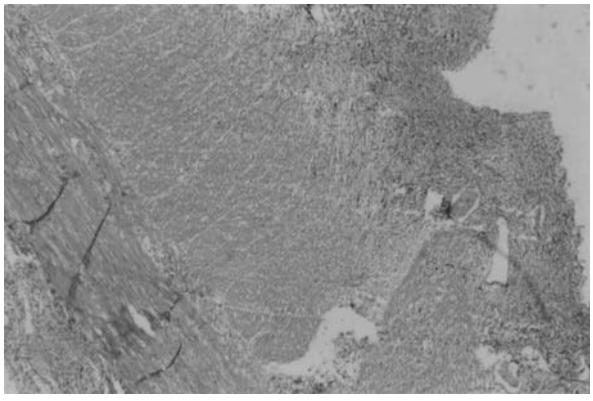

Figure 1. Transmural infiltration of bowel wall in Crohn's disease (H&E, x40)

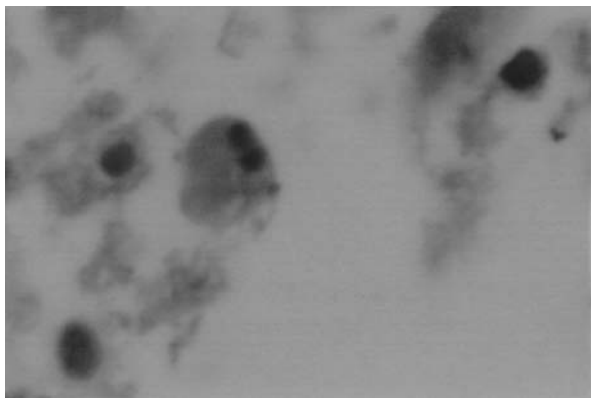

Figure 2. Trophozoites of *E. histolytica* in subserosa and muscularis propria

DISCUSSION

Amebiasis is the second leading cause of death from parasitic diseases, killing 40,000–100,000 people worldwide annually (1). In developed countries, it is usually a disease of immigrants and travelers. In the United States, most cases arise in immigrants from endemic areas and in people living in states that border Mexico (1). Travelers to endemic areas are also at risk. Ten percent of individuals with diarrhea after traveling to a developing country were diagnosed with amebiasis in one study (3), and 0.3% of German travelers returning from the tropics were found to be infected with E. histolytica (4). It has been suggested that in developed countries, amebic infection should be suspected in patients who have recently traveled to endemic areas, especially those who stayed in the endemic area for more than one month (5).

The prevalence of amebiasis in Turkey is between 0.4% and 18.4%, and it is endemic in the south and southeast regions of the country (6, 7). A recent study from Turkey investigating the prevalence of E. histolytica / dispar in 130 patients with ulcerative colitis and in 30 patients with Crohn's disease showed that trophozoites were found in 10% and 3.3% of the patients, respectively (2). The frequency of trophozoites in patients with Crohn's disease was not significantly different from the control group. Although a relatively higher incidence of E. histolytica infection has been reported, Crohn's colitis complicated by invasive amebic colitis has rarely been reported in the literature (8).

Our case was a young female patient from Northern Europe, who had stayed in a touristic region of Turkey for four months. She had been in good

health on 5-ASA management therapy and had never needed corticosteroid or immunosuppressant treatment. This mild and stable Crohn's disease abruptly turned into a severe colitis with perforation, which was associated with superimposed amebiasis. It has been suggested that the parasites invade the nutrient arterioles, causing occlusion and ischemia of the bowel wall, resulting in the progression of the initial superficial ulceration to transmural necrosis and perforation (9). The colonic wall damage caused by Crohn's disease can provide a suitable environment for the invasion of ex-cysting trophozoites. In addition, the environmental factors in crowded touristic areas, such as high temperature, humidity and poor sanitation, together with possible lower immune resistance against E. histolytica, could progress to Crohn's colitis complicated by invasive amebic colitis, and eventually to colonic perforation, as in our case.

It has previously been suggested that in refractory Crohn's disease in endemic areas, a full course of metronidazole should be administered to eradicate possible E. histolytica superinfection (8). Considering the disastrous results of the invasive E. histolytica superimposition, every patient with IBD traveling to endemic areas should receive a course of prophylactic anti-amebic medication until the end of his/her travel, even in the absence of laboratory evidence of amebiasis.

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