

## Case report

# Case of cryptosporidiosis in an Iraqi woman with ulcerative colitis

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## Introduction

*Cryptosporidium* is a coccidian protozoan parasite of the intestinal tract that causes severe, watery diarrhoea in immunocompromised patients and self-limiting diarrhoeal illness in immunocompetent individuals [1,2]. It exists naturally in animals as zoonoses [3,4].

Recently, cryptosporidiosis has gained attention because of its occurrence in patients with acquired immunodeficiency syndrome (AIDS) [1,5,6]. In addition, large urban waterborne or foodborne outbreaks have brought it to the attention of the public [7,8].

Cryptosporidiosis has been recorded as a cause of diarrhoea in veterinarians and animal handlers [9], in marrow transplant recipients [10], in household contacts of infected patients [4,11], homosexual men [12], travellers [13] and children in day-care centres [6,14-16].

The prognosis of cryptosporidiosis in immunocompetent patients is excellent with supportive treatment only [3,4,11-14]. However, there have been no reports on the relationship between cryptosporidiosis and chronic ulcerative colitis.

## Case report

A 30-year-old Iraqi woman, married with one child, complained of 7 months of bloody, watery diarrhoea, crampy abdominal pain, painful anal region, anorexia, vomiting, angular stomatitis and generalized weakness. Until that time, she had been in excellent health, did not take any medication and had no friends with a similar illness.

Physical examination showed the following: soft abdomen, tender, no organomegaly, bilateral leg oedema, no cough or chest pain, but there was scattered crepitation; blood pressure was 110/50 mmHg, pulse rate 120 per minute and temperature 39.5 °C. *Per rectum* examination showed a small painful swelling about 3 cm in diameter.

Laboratory data included a leukocytic count of 4200/mm<sup>3</sup>, with 65% neutrophils, 30% lymphocytes, 2% monocytes and 3% eosinophils. Haemoglobin level was 4.9 g/dl, platelet count was 25 000/mm<sup>3</sup> and erythrocyte sedimentation rate was 85 mm/h. The levels of serum albumin, total protein, globulin, blood urea nitrogen, creatinine and electrolytes were within normal limits. The levels of immunoglobulins (IgG, IgM, IgA) were also within normal

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limits. Blood film revealed a moderate number of anisopoik and normochromic erythrocytes. Colon biopsy was positive for ulcerative colitis.

Stool culture was negative for pathogenic bacteria. However, stool examination for ova and parasitic cysts was performed and showed *Cryptosporidium parvum*. Subsequent stool examination showed cryptosporidia. Faecal smears were prepared by the formalin-ether method and stained by the acid-fast technique [17]. Oocysts appeared as rounded, red (acid-fast) organisms, 4 µm in diameter. There was a large central or eccentric black dot(s) adjacent to a clear vacuole.

## Discussion

Our patient had no history of immunodeficiency or treatment with immunosuppressive drugs. Therefore, this report suggests that the potential severity of cryptosporidial diarrhoea is associated with chronic ulcerative colitis.

Several cases of cryptosporidiosis in humans have been reported, the majority being in immunologically compromised patients [1,18-20]; only a few cases have been reported in immunocompetent patients [1,7,11]. The clinical findings and the course of illness give no indication of the source of our patient's infection. *C. parvum*

lacks host specificity [4,7,21] and thus is a potential zoonosis [3,4,9].

Despite the large number of oocysts passed in cryptosporidiosis and the enormous volume of chronic diarrhoea, there have been no proven cases of human-to-human spread (although the anal-oral route is suspected among patients with AIDS), and the necessary inoculum size is unknown [22]. However, investigation of cryptosporidiosis in Iraq has indicated that the disease should be considered in the differential diagnosis of overwhelming diarrhoea [23].

Assessment of oocyst-shedding was carried out in our patient using both direct stain and formalin-ether methods. Both tests gave good results. It seems reasonable therefore to test apparently healthy people with undiagnosed chronic diarrhoea who are animal handlers, travellers to endemic areas, hospital workers, household contacts of infected patients and children in day-care centres.

This is the first reported case of cryptosporidiosis in association with chronic ulcerative colitis. No chemotherapy was given except supportive treatment, which included intravenous fluid administration and 2 pints of blood. When adequate food intake was re-established and the diarrhoea had ceased, the patient was discharged after 16 days in hospital.

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