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Case Report

Chronic Diarrhea as the Sole Symptom of HIV Infection

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ABSTRACT

Background: Acquired immunodeficiency syndrome (AIDS) is a disease caused by the human immunodeficiency virus (HIV) that can affect all systems of the human body. Considering that there is no definitive treatment for AIDS, timely and accurate diagnosis is important. Symptoms of HIV infection may sometimes be nonspecific and should always be considered in high-risk individuals. We herein report a patient with HIV who was presented with chronic diarrhea as the sole symptom of HIV Infection.

Case description: A 40 years old man was admitted to hospital with complain of diarrhea that had started seven months ago. He also experienced extensive weight loss and complained of vomiting and abdominal pain in the past month without any fever. Abdominal computed tomography scan and colonoscopy and stool examination were normal. However, biopsy indicated active colitis. Laboratory tests for HIV, functional expression of the lymphoid chemokines, and anti-tissue transglutaminase antibody were negative, but hepatitis C viral load was positive. Because the patient had many tattoos on his body that were done in unsanitary places, AIDS was suspected. The related test was requested, and the result was positive. Finally the patient was prescribed with co-trimoxazole and referred to an AIDS consultation center.

Conclusion: We presented a case of HIV infection with chronic diarrhea as the only symptom without any others clinical findings. Our observations suggest that for better diagnosis and management of HIV infection, it is important to consider chronic diarrhea as one of the important complications of HIV even when not accompanied with any other symptom.

Keywords: Acquired immunodeficiency syndrome, diarrhea, HIV, colon

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INTRODUCTION

Acquired immunodeficiency syndrome (AIDS) is a serious disease that can affect all systems of the human body. The disease is mainly transmitted through bodily fluids and unprotected sexual intercourse. Symptoms of human immunodeficiency virus (HIV) infection depend on the phase of infection; therefore, HIV infected individuals can be asymptomatic or present few clinical manifestations for years before progression to AIDS. This disease weakens the immune system, making the body susceptible to other infections and treatment more challenging, leading to increased risk of certain comorbidities and mortalities in HIV-infected individuals. In addition, AIDS can involve different systems of the body including skin, nervous system, lymph glands, lungs, mucous membrane, and gastrointestinal (GI) tract (1-4). One of the common GI symptoms is diarrhea, particularly secretory diarrhea that can occur in all stages of HIV infection (5). This type of diarrhea can cause several complications and lead to death if left untreated (5-7).

AIDS can be diagnosed through blood or saliva testing, and CD4 cell count and viral load (HIV RNA) are useful for determining the stage of the disease (8).Stool and endoscopic examinations play main roles for differential diagnosis and evaluation of diarrhea in HIV infection (9).

Currently, there's no definitive cure for AIDS and available medications are for controlling the course of HIV infection and preventing complications (10).

Considering that incidence of diarrhea without other complications is rare and dangerous in HIV patients, in this study, we describe a case of AIDS who was presented with diarrhea only.

CASE PRESENTATION

A 40-year-old male patient admitted to hospital with complaints of chronic diarrhea, which had begun seven months ago. At first, he had suffered two episodes of loose stool per day, which then increased to four. The patient's stool was yellow and in liquid form, with no trace of blood. He also reported a weight loss of about 30 kg over the last six months. He complained of vomiting and abdominal pain in the last month as well but had no complaints of fever.

The patient had been evaluated in another hospital for diarrhea three months ago, and some areas of colon were erythematic with abnormal vascular patterns in the colonoscopy examination. He had then undergone biopsy examination through which a mild active colitis was found, and the patient was recommended for follow-up evaluations.

In immunological assessments, HIV (types 1 and 2), functional expression of the lymphoid chemokines and anti-tissue transglutaminase antibody were reported negative but we considered the possibility of false negative results. In addition, anti-hepatitis C virus (HCV) antibody was reported in a borderline state. Laboratory findings indicated presence of HCV viral load. The patient was then treated using a regimen of ciprofloxacin and metronidazole, but symptoms remained unaffected.

In physical examination, abdomen was soft and without tenderness, and bowel sounds were increased. Vital signs were normal. Colonoscopy examination did not show any gross abnormalities. A biopsy for microscopic colitis was performed, which revealed active colitis, without evidence of crypt destruction or lymphocytic/collagenous colitis (Figure 1). Spiral abdominopelvic computed tomography (CT) scan with intravenous (IV) contrast and abdominal sonography revealed no abnormalities. Stool examination and stool culture were normal.

Considering the fact that all paraclinical measures were normal and the patient had a history of tattooing his body in unsanitary places, HIV testing using PCR was performed on the patient which was reported positive. Ultimately the patient was prescribed with co-trimoxazole and referred to an AIDS consultation center.

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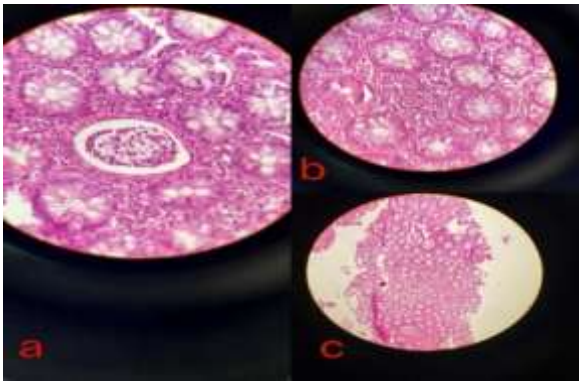

Figure1. **Hematoxylin and eosin staining of colon biopsy**. Besides normal transverse colon tissue, histologic microscopy shows round straight crypts and inflamed lamina propria involved by acute and chronic inflammation. There are cryptitis and crypt abscess formation. The images were taken under ×40 (a), ×10 (b), and ×4 (c) magnifications.

DISCUSSION

Opportunistic infections, uncommon malignant neoplasm, and persistent immunologic deficiency are AIDS allmarks (11). The gastrointestinal problems associated with AIDS include diarrhea, nausea, vomiting, bloating, abdominal discomfort, and changes in body weight. The nature of AIDS-associated diarrhea can be non-infectious and infectious. Bacteria, fungi, viruses, and protozoa are opportunistic pathogens that can cause infectious diarrhea. Since the advent of highly-active antiretroviral therapy, the incidence of infectious and non-infectious diarrhea has decreased and increased, respectively.

Exposure of naïve B and T cells to antigens in the gut-associated lymphoid tissue leads to their maturation into plasma cells and memory T cells. This process generates a baseline inflammatory state to provide chemokines and adhesion molecules, thereby attracting lymphocytes towards mucous layer. As HIV multiply inside lymphocytes, the GI tract becomes one of the most targeted areas and HIV-associated diarrhea can occur (12).

Presence of diarrhea as the only complication of HIV makes the disease difficult to diagnose. Given the importance of this symptom, prompt and timely diagnosis is essential.

CONCLUSION

Altogether our observations show that chronic diarrhea could be considered as the sole clinical manifestation of HIV-infected patients.

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Ethics approvals and consent to participate

A written informed consent was obtained from the patient. The patient received all the necessary clinical treatments and the study involved no intervention.

Conflict of interest

The author declares that there is no conflict of interest.

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