

CMV Enteritis in an Immunocompetent Young Male

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Abstract: *This case report highlights a rare presentation of CMV enteritis in an immunocompetent young male with persistent gastrointestinal symptoms and severe anemia. The diagnosis was established through clinical evaluation, endoscopic findings, and histopathology. Early recognition and antiviral therapy were crucial for managing this potentially life-threatening condition.*

Keywords: CMV enteritis, immunocompetent host, gastrointestinal symptoms, antiviral therapy, case report

1. Introduction

Cytomegalovirus (CMV), a member of the Herpesviridae family (HHV-5), is a ubiquitous virus that commonly infects humans. CMV infection is typically asymptomatic in immunocompetent individuals, but it may occasionally cause a mononucleosis-like syndrome. Gastrointestinal involvement with CMV is rare in immunocompetent hosts but can lead to significant morbidity and mortality. This report describes a case of CMV enteritis in a young, immunocompetent male who presented with unusual symptoms.

2. Case Details

A 26-year-old male presented with a one-month history of easy fatigability, generalized weakness, and recurrent oral ulcers. He also reported abdominal pain and 3-5 episodes of semi-solid stools per day for the past month, with occasional vomiting associated with the pain. There was no history of melena, hematochezia, or hematemesis. The patient had no known comorbidities, no significant family history and no recent travel history.

He had been previously evaluated at another hospital where he was diagnosed with severe anemia but did not undergo further evaluation. On examination, he had marked pallor. Cardiovascular examination revealed an ejection systolic murmur in the aortic area radiating to the carotids, but other systemic examinations were normal. ECG and 2D echocardiogram were normal, suggesting a flow murmur due to anemia. Fundus examination was also normal.

Blood investigations revealed:

- Hemoglobin: 4.4 g/dL
- Total leukocyte count: 5,100/mm³
- Platelets: 370,000/mm³
- Low serum iron levels and borderline elevated TIBC levels
- Peripheral smear: Dimorphic anemia with features of both microcytic hypochromic anemia and megaloblastic anemia

Stool studies were negative for occult blood loss, ova, and cysts. HIV serology was negative. The patient received two

pints of packed red blood cells (PRBCs), folic acid, and vitamin B12 supplements.

Abdominal ultrasonography revealed mild hepatosplenomegaly. Esophagogastroduodenoscopy revealed scalloped and attenuated duodenal folds in the D2 segment. Colonoscopy was normal. Multiple biopsies were taken from the ileum, right colon, left colon, rectum, D2 part of the duodenum, and body and antrum of the stomach. IgA antibody for tissue transglutaminase (TTG) was negative.

Biopsy findings:

- Chronic active proctocolitis with activity score D1C1A1 in the rectum and left colon, negative for granuloma and microorganisms (Giardia, Cryptosporidium, Cryptococcus, Mycobacterium, H. pylori)
- Chronic active duodenitis with partial villous atrophy, patchy low-grade glandular dysplasia, a few glands showing nucleomegaly, irregular nuclear margin, smudged chromatin, and prominent nucleoli with focal low-grade dysplasia.

Considering the duodenal biopsy findings, CMV infection was suspected. Anti-CMV IgM antibody titers were elevated, confirming the diagnosis.

3. Discussion

CMV infection is typically asymptomatic in immunocompetent individuals. However, this case highlights that CMV can rarely cause significant gastrointestinal disease even in healthy individuals. The patient presented with nonspecific symptoms such as fatigue, weakness, and abdominal pain, which could be attributed to various other conditions. The diagnosis of CMV enteritis was made based on the combination of clinical presentation, endoscopic findings, and histopathological examination of the duodenal biopsies.

This case emphasizes the importance of considering CMV infection in the differential diagnosis of gastrointestinal symptoms, even in immunocompetent patients. Early diagnosis and treatment with antiviral therapy, such as ganciclovir, are crucial to prevent complications and improve outcomes.

4. Conclusion

CMV enteritis, though rare in immunocompetent individuals, demands early diagnosis and antiviral treatment to avert severe outcomes. This case demonstrates the importance of maintaining a high level of clinical suspicion in atypical presentations of gastrointestinal symptoms

Significance of the study: This case underscores the need for clinicians to consider rare infections like CMV in the differential diagnosis of gastrointestinal symptoms, even in immunocompetent patients

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