



Medical Imagery

Chronic active Epstein–Barr virus (CAEBV) enteritis



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ABSTRACT

Background: Chronic active Epstein-Barr virus (CAEBV) enteritis is rarely observed in immunocompetent patients and can be often misdiagnosed as inflammatory bowel disease.

Case: We hereby present a case of CAEBV enteritis diagnosed with double-balloon enteroscopy and EBER in-situ hybridization.

Conclusion: This case demonstrates the clinical presentation and diagnosis of CAEBV enteritis and highlights the importance of early recognition of the disease.

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A 24-year-old male was admitted for intermittent fever, accompanied by skin rash and hematochezia. The patient denies a personal and family history of immunodeficiency. His viral panel was positive for EBV IgG, EBV VCA-IgG, with an elevated EBV-DNA titer of 4.34×10^6 and C-reactive protein of 52.8 mg/L. A subsequent PET/CT scan showed diffuse FDG uptake in the small intestines (Figure 1). A

double balloon endoscopy (DBE) revealed diffused shallow ulcers (Figure 2) along with lymphangiectasis (Figure 3) in the jejunum. Pathology revealed lymphoid aggregation under HE observation, while further Epstein–Barr encoding region (EBER) in situ hybridization confirmed the diagnosis (Figure 4). The patient was treated with oral corticosteroids with reported symptomatic relief and a

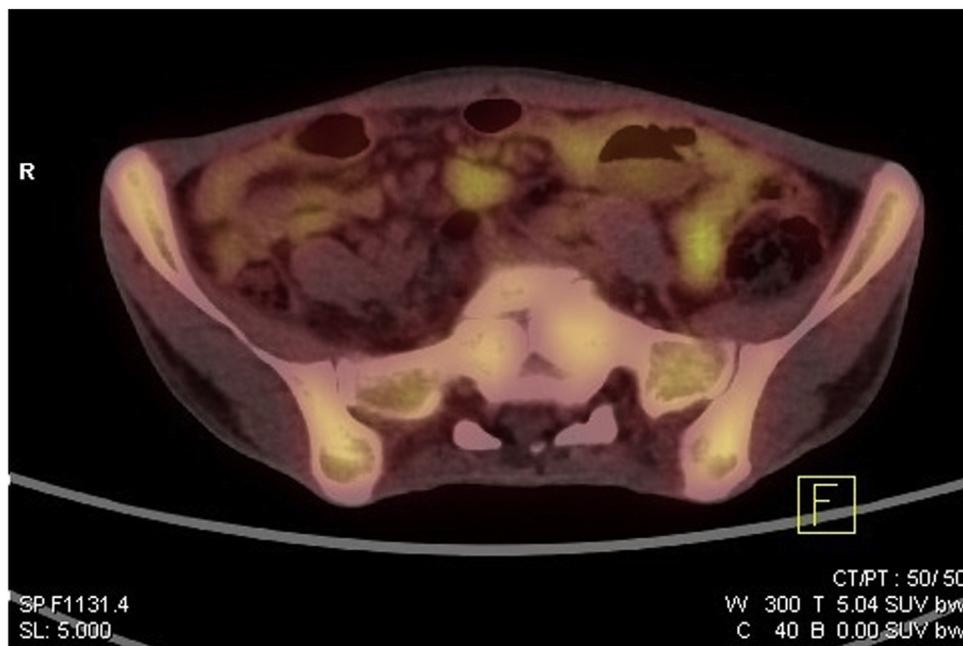


Figure 1. PET/CT revealed diffused FDG uptake in the small intestine.



Figure 2. Shallow ulcers were observed in the small intestinal mucosa.

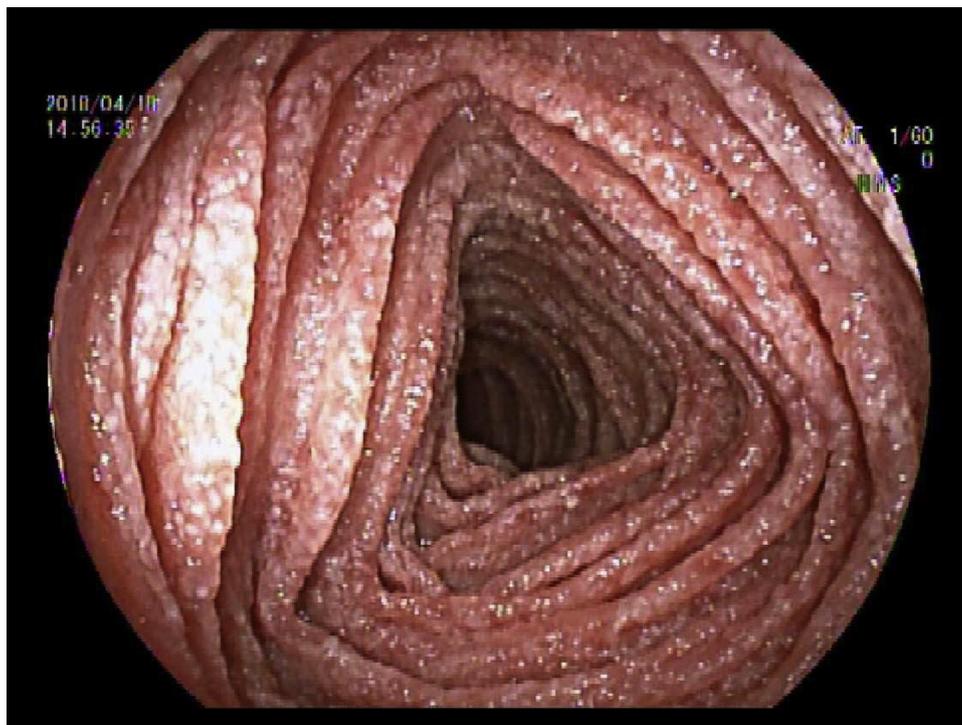


Figure 3. DBE revealed diffused lymphangiectasis.

decrease in EBV-DNA titer (1.13×10^5). However, a 3-month follow-up DBE did not show alleviation of small intestinal ulcers.

Chronic active Epstein–Barr virus (CAEBV) enteritis is rarely observed in immunocompetent patients and can often be misdiagnosed as inflammatory bowel disease (Na et al., 2013). Although limited, clinicopathologic features, such as fever,

hepatomegaly, splenomegaly, lymphadenopathy, and elevated C-reactive protein, Epstein–Barr virus DNA, intestinal tissue in situ hybridization for Epstein–Barr virus-encoded RNA, are characteristics to differentiate CAEBV infective enteritis and inflammatory bowel disease (Liu et al., 2018). Gastrointestinal symptoms and endoscopy findings are often nondistinctive. CAEBV is often

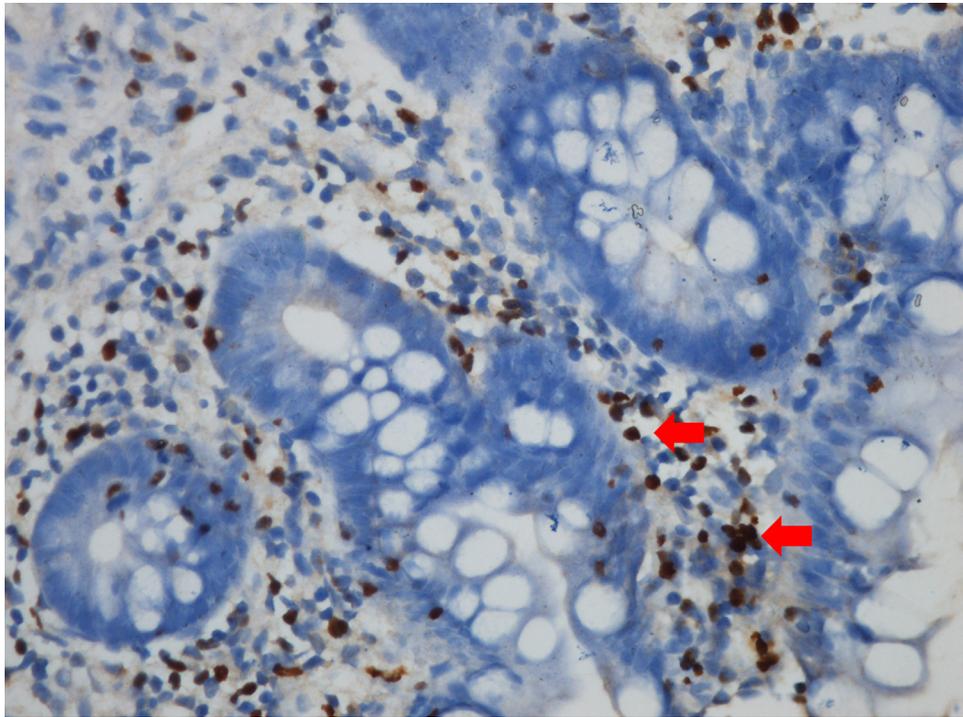


Figure 4. Pathology studies confirmed the diagnosis of EBV infection with in-situ hybridization.

associated with poor prognosis and a high mortality rate (Xuyang et al., 2018). Some patients develop lymphoid proliferative disorder and associated-lymphoma. Corticosteroids, immunotherapy and cytotoxic drugs may provide temporary relief, but only allogenic hematopoietic stem cell transplantation has been proven to be curative (Okano et al., 2005). This case and literature shown that early recognition and awareness of CAEBV, especially with EBER and Epstein–Barr virus DNA, is crucial for gastroenterologists.

Conflict of interest

Authors declare no conflicts of interest for this article.

Financial source

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Ethics approval

Institutional ethics approval was waived for the report of this case.

Contributions

YJ Tseng drafted the manuscript, WQ Ding and L Zhong performed the enteroscopy and supervised diagnosis, J Chen provided patient care and guidance for revision, ZG Luo reviewed the manuscript and provided critical comments.

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