Recurrent gastrointestinal bleeding caused by cytomegalovirus duodenitis

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CASE REPORT

A 78-year-old male hospitalized due to acute pneumonia presented with hematemesis, melena and hypotension. His past medical history included prostate cancer with bone and lung metastasis under systemic chemotherapy. Upper gastrointestinal endoscopy revealed a 50 mm serpiginous ulcer in the second portion of the duodenum with a visible vessel (Forrest IIa). Hemostatic therapy with adrenaline, polidocanol and one clip placement was performed (Fig. 1). Biopsies of the ulcer were also obtained.

During hospitalization, the patient developed recurrent gastrointestinal bleeding, requiring several red blood cell transfusions and endoscopic reintervention. Further histopathologic evaluation revealed chronic duodenitis caused by cytomegalovirus (CMV) infection (Fig. 2). Considering the poor performance status and successful hemostasis with ulcer healing, antiviral treatment was not initiated. The patient died a few weeks later due to neoplastic disease progression.

DISCUSSION

CMV infection is common, with a seroprevalence as high as 83 % (1). Typically, the virus remains latent with no symptoms. CMV reactivation often manifests with gastrointestinal complications affecting organs such as the esophagus, stomach and colon (2). Although CMV duodenitis is rare, CMV infection should be on the differential diagnosis of gastrointestinal ulcer etiology, especially in immunocompromised patients. Early recognition and antiviral treatment may be crucial to achieve bleeding control (3).

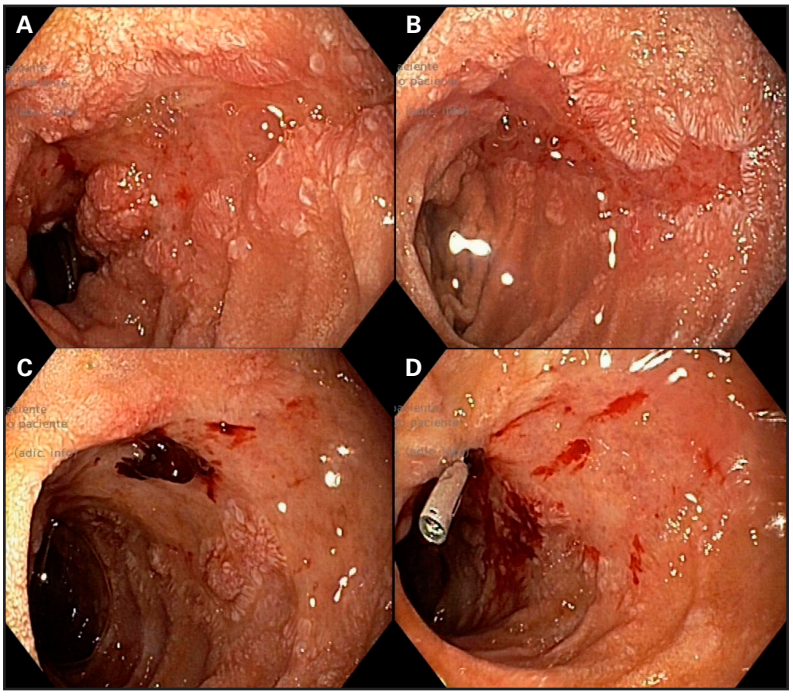

Fig. 1. *A-C. Image of the 50-mm serpiginous ulcer in the second portion of the duodenum (A and B) with a visible vessel (C). D. Endoscopic appearance after endoscopic therapy with adrenaline and polidocanol injection and one clip placement.*

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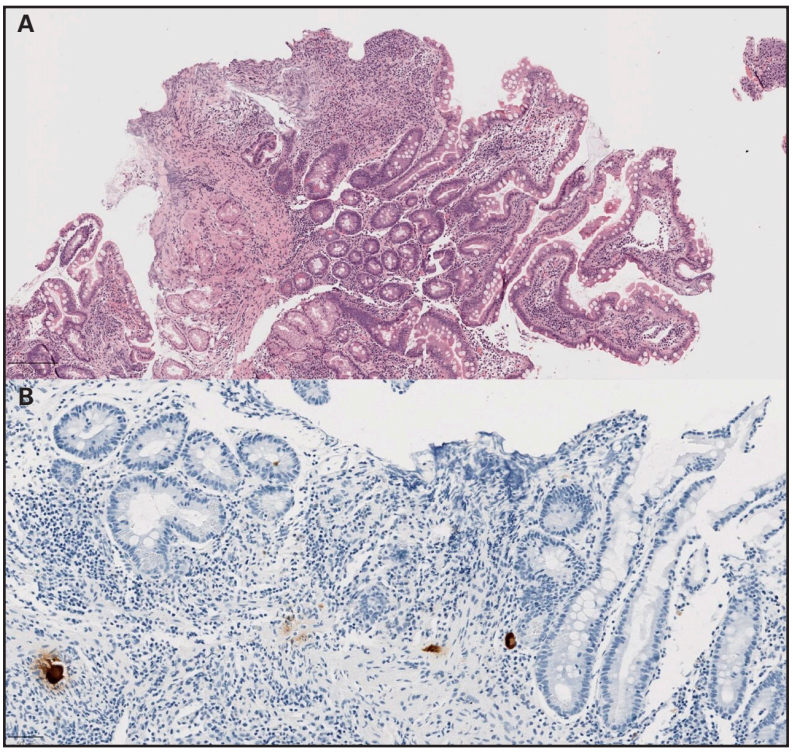

Fig. 2. *A. Mild to moderate chronic duodenitis with mild activity and superficial erosions (hematoxylin and eosin). B. Immunohistochemical staining for cytomegalovirus (CMV) was positive in CMV-infected cells.*

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REFERENCES

1. Zuhair M, Smit GSA, Wallis G, et al. Estimation of the worldwide seroprevalence of cytomegalovirus: a systematic review and meta-analysis. Rev Med Virol 2019;29(3):1-6. DOI: 10.1002/rmv.2034
2. O'Hara KM, Pontrelli G, Kunstel KL. An introduction to gastrointestinal tract CMV disease. JAAPA 2017;30(10):48-52. DOI: 10.1097/01.JAA.0000524712.40590.76
3. Shen L, Youssef D, Abu-Abed S, et al. Cytomegalovirus duodenitis associated with life-threatening duodenal hemorrhage in an immunocompetent patient: a case report. Int J Surg Case Rep 2017;33:102-6. DOI: 10.1016/j.ijscr.2017.02.029

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COMMENTARY

Colitis and esophagitis are the two most common gastrointestinal infections caused by cytomegalovirus (CMV) (1). Therefore, as discussed in this case, CMV ulcers in the second portion of the duodenum are rare. Furthermore, gastrointestinal bleeding is the most frequent manifestation and a prognostic factor in both immunocompromised and immunocompetent patients. Early diagnosis and effective antiviral treatment can significantly reduce in-hospital CMV mortality (2). Unfortunately, given the patient's poor general condition, antiviral treatment was not initiated.

Jesús García-Cano
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REFERENCES

1. Nguyen AD, Shorman M. Cytomegalovirus Infections. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2025.
2. Yeh PJ, Wu RC, Tsou YK, et al. Comparative Analysis of Cytomegalovirus Gastrointestinal Disease in Immunocompetent and Immunocompromised Patients. Viruses 2024;16:452. DOI: 10.3390/v16030452