

Esophageal and gastric ulceration due to synchronous herpes simplex virus, cytomegalovirus and Epstein-Barr virus infection

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To the editor,

The authors report the case of a man of 71 years-old, with a previous history of type 2 diabetes mellitus, hypertension, and renal transplantation in 2013 due to chronic kidney disease. He was under immunosuppression with prednisolone, mycophenolate mofetil and tacrolimus. The patient was admitted by worsening of his health status lasting for one month, with progressive asthenia, anorexia weight loss, and marked backache with movement limitation. Analytically he presented with microcytic anemia *de novo* (hemoglobin 9.6 g/dL), hypoalbuminemia and a slight increase of liver tests. Initially a thoraco-abdominal computerized tomography was performed and revealed the presence of multiple nodules in the liver parenchyma, suggestive of metastases. In this context it was decided to carry out endoscopic work-up for malignancy screening. The upper endoscopy showed two superficial and longitudinal ulcers in the distal esophagus and in the gastric antrum there were two other larger ulcers with regular edges (Figs. 1 and 2). Histological evaluation revealed the presence of morphological findings compatible with ulcerated lesions (Fig. 3), with immunohistochemical analysis inconclusive for cytomegalovirus (CMV), while the evaluation by molecular biology (polymerase chain reaction – PCR) strongly positive for herpes simplex virus (HSV) type 1, CMV and Epstein-Barr virus (CMV) synchronous infection. Later it was performed a colonoscopy that revealed the presence of a malignant neoplasm in sigmoid colon, confirmed after histological evaluation. The patient was then referred for symptomatic treatment.

With the increased use of immunosuppression for organ transplantation as well as chronic inflammatory diseases and chemotherapy along with the AIDS epidemic, infections with *Candida* species, herpesvirus, and cytomegalovirus (CMV) have become relatively common (1). In particular, CMV infection occurs almost only in immunocompromised patients, particularly transplant recipients (2). The involvement of the esophagus by infectious agents such as HSV and CMV is relatively common in these patients, while the gastric involvement has been less reported in the literature (3). Gastric involvement can be localized or diffuse. However, the



Fig. 1



Fig. 2

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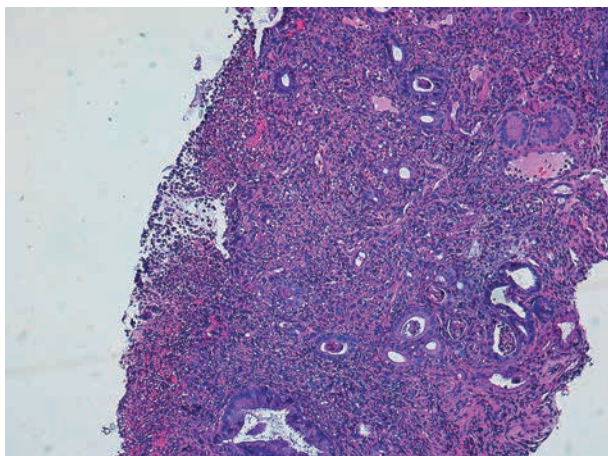


Fig. 3

presence of both pathologic agents in the same process is rare and there are few cases described in the literature (4). Gastrointestinal diseases secondary to EBV are even less common, and have been reported in immunocompromised and immunocompetent patients (5). In our case,

the patient was profoundly immunosuppressed after a renal transplant with simultaneous infectious and malignant complications, and the remarkable aspect was the positive esophageal and gastric ulceration PCR analysis showing a triple infection involving HSV, CMV, and EBV. This is the first case reporting the involvement of three different viral agents in an esophago-gastric ulcerative disease.

References

1. VIDAL A.P., PANNAIN V.L., BOTTINO A.M. Esophagitis in patients with acquired human immunodeficiency syndrome : an histological and immunohistochemistry study. *Arq. Gastroenterol.*, 2007 Oct-Dec., **44** (4) : 309-314.
2. BAROCO A.L., OLDFIELD E.C. Gastrointestinal cytomegalovirus disease in the immunocompromised patient. *Curr. Gastroenterol. Rep.*, 2008 Aug., **10** (4) : 409-416.
3. HOKAMA A., TAIRA K., YAMAMOTO Y., KINJO N., KINJO F., TAKAHASHI K. *et al.* Cytomegalovirus gastritis. *World J. Gastrointest. Endosc.*, 2010 Nov 16, **2** (11) : 379-380.
4. VODOVNIK A, CERAR A. Synchronous herpes simplex virus and cytomegalovirus esophagitis. *Zeitschrift fur Gastroenterologie*, 2000, **38** (6) : 491-494.
5. PAPE M., MANDRAVELI K., SIDIROPOULOS I., KOLIOUSKAS D., ALEXIOU-DANIEL S., FRANTZIDOU F. Unusual Epstein-Barr esophageal infection in an immunocompetent patient : a case report. *J. Med. Case Rep.*, 2009 Jun 29, **3** : 7314.