Gastrointestinal Kaposi Sarcoma in a Patient with Human Immunodeficiency Virus While on Antiretroviral Therapy

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Abstract
Kaposi Sarcoma (KS) is a known complication of human immunodeficiency virus (HIV). KS may affect the gastrointestinal (GI) tract in patients and generally occurs in patients with elevated HIV viral loads or low CD4 counts. It is less common for GI-KS to occur in patients with suppressed viral loads. We present endoscopic images of a patient with non-specific GI symptoms; this patient had developed GI-KS in the context of a persistently low CD4 count despite compliance with his antiretroviral therapy and a low HIV viral load. This case highlights that GI-KS should be considered in the differential diagnosis in all HIV-positive patients with unexplained/persistent GI symptomology, even if they have low viral loads. Early recognition and appropriate therapy of GI-KS leads to significantly improved outcomes.

Résumé
Les cas de sarcome de Kaposi (SK) touchant le tube digestif chez les patients dont la charge virale est supprimée sont rares. Nous exposons le cas d’un patient atteint du VIH qui présente un SK avec atteinte digestive. Nous fournissons une revue de la documentation, une analyse de l’évolution clinique du patient et les résultats de l’endoscopie. Bien que les cas de SK avec atteinte digestive soient rares dans ce contexte clinique, étant donné le risque que cette situation se produise même chez les patients présentant une suppression virale, cette affection doit être envisagée chez les patients à risque, même s’ils suivent leur traitement antirétroviral. Il est important de reconnaître rapidement cette affection grâce à une évaluation endoscopique appropriée pour s’assurer de ne pas retarder le traitement.

Keywords: HIV, endoscopy, effective antiretroviral therapy
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Case

A 42-year-old African male with human immunodeficiency virus (HIV) presented with a back rash, anal lesions, increased stool frequency, blood in stool, abdominal pain, and early satiety. He had been on antiretroviral therapy (ART) for over a year (at time of encounter: CD4 count 133 cells/ul & HIV viral load 44 copies/ml). Human herpes virus 8 (HHV-8) polymerase chain reaction testing was negative. Esophagastroduodenoscopy (EGD) showed diffuse stomach nodularity and ulcerations with normal esophagus and duodenum (Figure 1). Stomach biopsies were positive for *Helicobacter pylori*, Kaposi sarcoma (KS), and moderately active chronic gastritis. Duodenal biopsies demonstrated intra-epithelial lymphocytosis, no crypt hyperplasia, and preserved villous architecture. Colonoscopy showed diffuse ulceration and nodularity in the distal rectum (Figure 2) and patchy erythema and ulceration in the ascending, descending, and sigmoid colon (Figure 3). Colonic biopsies were positive for KS. The patient was diagnosed with gastrointestinal Kaposi Sarcoma (GI-KS) and started on chemotherapy.

KS is a multifocal neoplastic disease associated with HHV-8 infection and characterized by angio-proliferative cutaneous lesions. Four recognized variants include classic, endemic (African), iatrogenic (immunosuppression-related), and AIDS-associated. GI-KS is a variant of KS which is most often diagnosed in immunocompromised individuals. Importantly, 80% of patients may be asymptomatic. Risk factors for GI-KS include low CD4 counts (<100 cells/µL), elevated HIV viral load (>10,000 copies/mL), presence of cutaneous KS and no previous history of ART. While most patients on ART have CD4 count recovery, factors including increased age, increased duration of HIV infection, and low pre-ART CD4 count may prevent CD4 recovery in up to 30% percent of individuals. This patient’s persistently low CD4 count despite ART underscores the importance of maintaining a high index of suspicion for GI-KS in all HIV-positive
patients irrespective of their viral load, CD4 count, or adherence to ART. Diagnosing GI-KS remains challenging, especially when patients exhibit non-specific symptoms or have coexisting conditions. Screening endoscopies are essential for early detection and treatment initiation, as prognosis without treatment remains poor. In summary, GI-KS must be considered on the differential diagnosis of all HIV-positive patients, even in the presence of ART adherence and viral load control.

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DD & ZM: drafting/editing of original manuscript. FAB: procurement of data, analysis of data. WA: conception & design, critical review of original manuscript.

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None

**Competing Interests**

DD, ZM, FAB have none to declare. WA served as speaker, advisory board member, and/or clinical investigator for Abbvie, Amgen, BMS, Dynacare, Eli-Lilly, Janssen, Merck, Novartis, Pfizer, Prometheus, Sandoz, Sanofi, Takeda.

**Disclosures**

Informed consent was obtained from the patient for publication of this clinical image.

**References**