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LETTER TO THE EDITOR

AIDS-related Gastric Kaposi's Sarcoma before and after Treatment with Pegylated Liposomal Doxorubicin

Kaposi's sarcoma (KS) is a multicentric angioproliferative malignancy of endothelial origin occurring in an immunodeficiency background (HIV infection or transplantation). The incidence of KS has decreased in the United States and Europe during the current highly active antiretroviral therapy (HAART) era.[1] However, KS remains the second most frequent tumor in HIV-infected individuals worldwide, and it has become the most common malignancy in sub-Saharan Africa.[1] HAART is the first treatment step for slowly progressive KS. Systemic chemotherapy with HAART is indicated for the visceral and/or rapidly progressive illness. We report a case of an HIV-infected patient having gastric and cutaneous KS lesions with lymphedema, and its favorable outcome by therapy with pegylated liposomal doxorubicin (PLD) and HAART.

A 42-year-old homosexual male patient with HIV infection presented with a history of edema of both lower limbs. He had

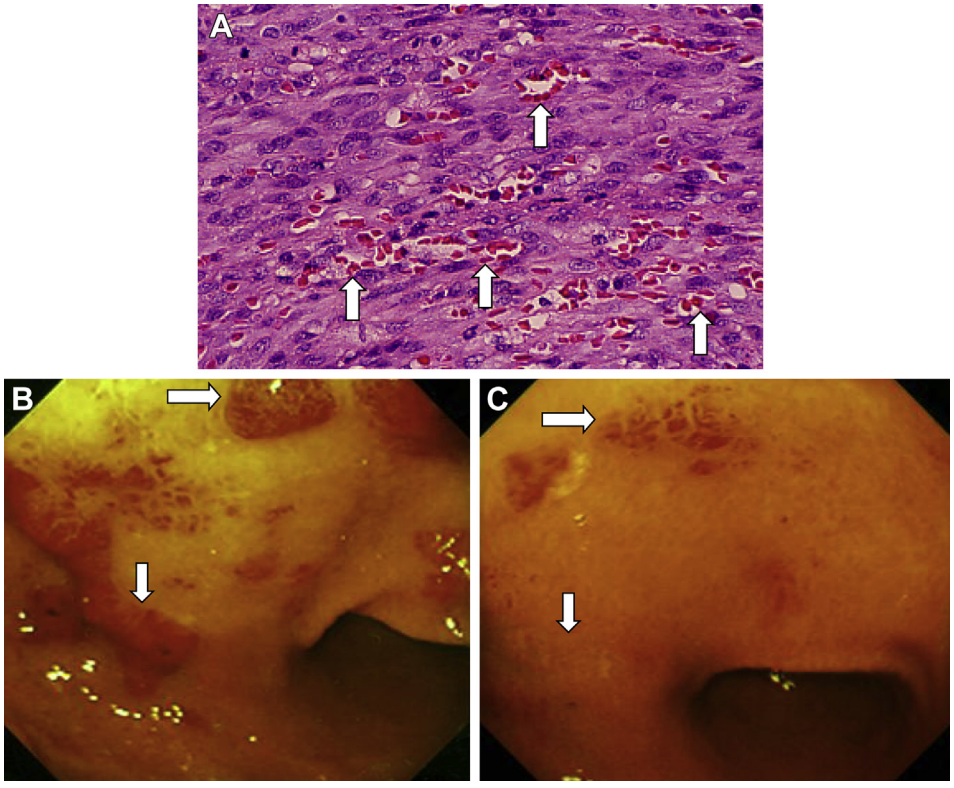

Figure 1 Multiple erythematous cutaneous nodules are proven to be cutaneous Kaposi's sarcoma (KS) by skin biopsy, (A) of which the histopathological findings show vessel-like structures with red blood cells (arrows) in clusters consisting of atypical spindle cells. (B) A gastric endoscopic examination reveals multiple hematocystic lesions on the lower body wall (arrows), indicating gastric involvement of KS based on the gross appearance similar to cutaneous KS. (C) After the completion of six cycles of pegylated liposomal doxorubicin (20 mg/m^2) every 3 weeks, regression of the gastric KS (arrows) is observed with improvement of the cutaneous KS and lymphedema.

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received HAART (sanilvudine/lamivudine/ritonavir/saquinavir at doses of 80 mg/300 mg/800 mg/800 mg per day) 9 months since. Multiple erythematous cutaneous nodules over the trunk and limbs were observed and were proven to be cutaneous KS via skin biopsy, of which the histopathological findings showed vessel-like structures with red blood cells (Figure 1A) in clusters consisting of atypical spindle cells. A gastric endoscopic examination revealed multiple hematocystic lesions on the lower body wall (Figure 1B), indicating the gastric involvement of KS because of a gross appearance similar to cutaneous KS. A biopsy for gastric lesions was not performed because it was deemed that this procedure might induce severe hemorrhage from the biopsy sites.[2] Pelvic computed tomography images showed right inguinal lymphadenopathy. The AIDS Clinical Trial Group staging classification for AIDS-related KS was $Tumor_1$ (lymphedema, gastric lesions)/Immune $system_0$ (CD4 lymphocyte count 277 cells/mm^3)/Systemic $illness_1$ (thrush), suggesting poor risk.[3] We considered systemic chemotherapy for the lymphedema and gastric lesions with HAART continuation.

The patient completed six cycles of PLD (20 mg/m^2) every 3 weeks as an outpatient in a clinic. Regression of his gastric KS (Figure 1C) was confirmed with an improvement of the cutaneous KS and lower limb edema combined with disappearance of the inguinal lymphadenopathy. He continued to receive HAART without adverse events.

KS involvement in the gastrointestinal tract is common in AIDS patients and can also occur in non-HIV patients. The disease is usually asymptomatic, and biopsy diagnosis is possible in less than 25% of cases owing to tumor growth in the submucosa.[4] Upper gastrointestinal hemorrhage due to gastric and duodenal KS has been reported,[5] and clinicians should select other histopathological approaches including biopsies of the skin and/or lymph node. Cryotherapy (liquid nitrogen) with HAART is given for AIDS-related cutaneous KS lesions.[6] However, when an HIV individual has a poor risk ($Tumor_1$/Systemic $illness_1$), it would be better if the patient can receive systemic chemotherapy with HAART in resource-rich settings. Twenty-eight HIV patients receiving either naïve or failing HAART with moderate-advanced KS were randomly chosen to begin a new HAART plus PLD or the new HAART alone.[7] After 48 weeks, better response rates were observed in the HAART plus PLD group. Thus, PLD therapy appears to be effective and safe for HIV outpatients.

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