Unusual presentation of Kaposi sarcoma in an HIV-negative woman

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Abstract

Kaposi sarcoma typically presents as violaceous macules and papules in immunocompromised, specifically HIV-positive, patients. Its distinct clinical features often facilitate rapid diagnosis. In this article, we report a case of Kaposi sarcoma presenting as a concerning yet nondescript lesion in an HIV-negative woman. Although Kaposi sarcoma is frequently part of the differential diagnosis for skin lesions affecting HIV-positive patients, it is less frequently considered in HIV-negative individuals. Additionally, this case differs from the classic clinical presentation of Kaposi sarcoma by resembling a squamous cell carcinoma or superficial basal cell carcinoma. Therefore, it illustrates the importance of suspicious lesion biopsies to ensure accurate diagnosis and appropriate treatment.

Keywords: Kaposi sarcoma, squamous cell carcinoma, HIV, treatment

Introduction

Kaposi sarcoma is a vascular neoplasm often presenting with red-purple macules and papules of the skin or mucus membranes in immunocompromised patients. Biopsy of such lesions classically demonstrates hypervascularity and spindle cells. Herein, we describe a woman in her 70s with a past medical history significant for plaque psoriasis who presented with a new, scaling pink papule on her right posterior arm. On clinical examination, the lesion was concerning for squamous cell carcinoma (SCC) or SCC in situ, superficial basal cell carcinoma, or even an irritated actinic keratosis. A biopsy was performed and histopathology and immunohistochemical staining revealed findings consistent with Kaposi sarcoma.

Case Synopsis

A 74-year-old HIV-negative woman presented to the dermatology clinic for a new, hyperkeratotic, 1-centimeter pink papule of the right posterior upper arm (**Figure 1**). The patient reported no pruritis or bleeding and was regularly followed by the dermatology department for a known history of plaque psoriasis. Supported by the clinical appearance and nonhealing nature, the lesion was biopsied secondary to concern for cancerous or precancerous lesions such as SCC or SCC in situ,

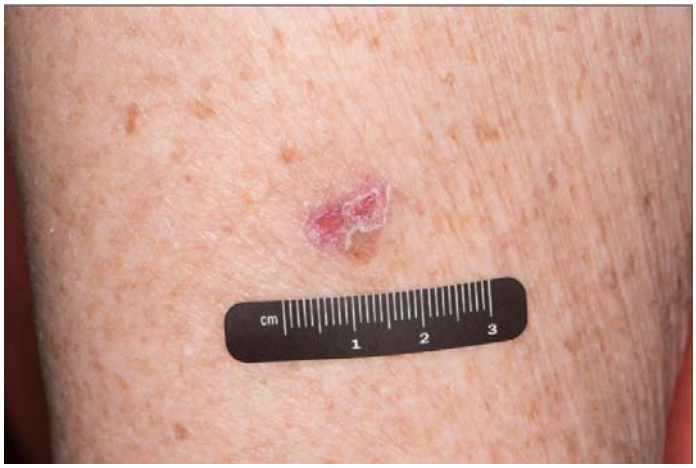

Figure 1. *Hyperkeratotic, pink papule on the right posterior upper arm confirmed as Kaposi sarcoma by biopsy.*

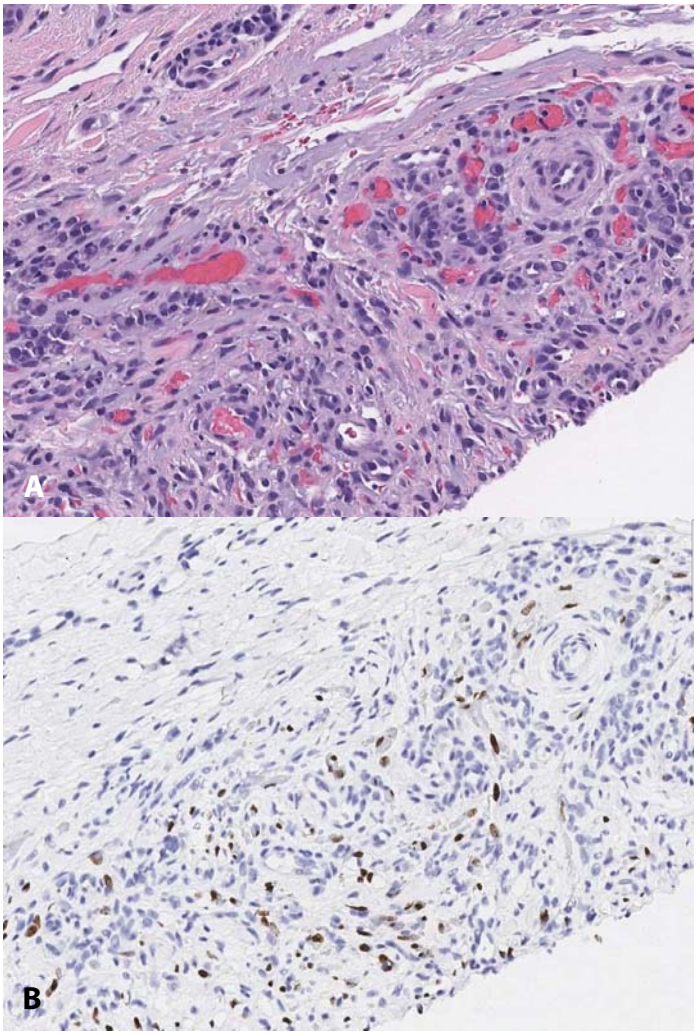

Figure 2. *Kaposi sarcoma. Histopathologic analysis of the biopsy specimen demonstrated extravasated erythrocytes interspersed between fascicles of spindled cells within the dermis **A)** on H&E at 20×, **B)** as well as positive human herpes virus-8 immunostaining, 20×*

superficial basal cell carcinoma, or even an irritated actinic keratosis.

On histopathology, numerous extravasated erythrocytes between fascicles of spindled cells were observed in the dermis (**Figure 2A)**. The lesional cells were positive for human herpes virus (HHV)-8, consistent with a diagnosis of Kaposi sarcoma (**Figure 2B)**. Routine laboratories confirmed HIV-negative status and were positive only for mild anemia. The papule was successfully treated with localized radiation therapy with no evidence of recurrence on follow-up. During staging, the patient was found to have papillary urothelial carcinoma; she underwent resection and is currently receiving Calmette-Guerin injection therapy. Computed tomography (CT) demonstrated no other findings, including evidence of metastatic disease.

Case Discussion

Kaposi sarcoma (KS) classically presents as non-blanching, violaceous macules and papules of the skin or mucous membranes of immuno-compromised individuals, especially those with HIV. Although often clinically distinct, a biopsy of KS lesions is useful because the differential diagnosis for KS includes conditions such as bacillary angiomatosis, that are both treatable and readily distinguishable by pathologic analysis. Classic findings include dermal vascular and spindle cell proliferation, inflammation, and extravasated blood forming hyaline globules and hemosiderin deposition [1].

Management of KS includes reducing immunosuppression in HIV-associated KS by initiating highly active antiretroviral therapy (HAART) or limiting immunosuppressive agents in iatrogenically-derived KS. Treatment of acquired immunodeficiency syndrome (AIDS)-related KS is supported by extensive evidence and is based on disease staging. Beyond the setting of AIDS, Kaposi sarcoma is approached by clinical experience and brief reports, as high-quality evidence is lacking. AIDS-related KS therapies include liposomal anthracyclines, paclitaxel, combined bleomycin and vincristine, interferon alpha, alitretinoin, and radiation therapy. Smaller studies support the use of imatinib, bevacizumab, interleukin-12, immunomodulatory imide drugs, proteasome inhibitors, PI3K-AKT-TOR pathway inhibitors, and drugs such as timolol and propranolol that inhibit beta adrenergic receptor-mediated signaling [1].

Prior to the widespread use of HAART, KS was found in one of three HIV-positive men who have sex with men, compared to one in 100,000 in the general population [2]. However, the case presented here in which biopsy-confirmed Kaposi sarcoma resembling a concerning yet nondescript lesion was identified in an HIV-negative patient demonstrates how Kaposi

sarcoma can deviate from the classic clinical presentation.

Conclusion

Kaposi sarcoma is an important part of the differential diagnosis for skin lesions in HIV patients. Multiple cases have demonstrated that KS should not be ruled out, though, when HIV-negative patients present with suggestive clinical findings. The case detailed here reinforces that KS is not only a disease of HIV-positive individuals while also illustrating the importance of acquiring biopsies of suspicious lesions to ensure accurate diagnosis and appropriate treatment.

Potential conflicts of interest

The authors declare no conflicts of interests.

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