

Exophytic Papule on the Hand

Shawn Afvari, MD; Avani Kolla Patel, MD; Adam Rubin, MD; Miriam Keltz Pomeranz, MD

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A man in his 70s with a history of hypertension was admitted to the hospital for symptomatic bradycardia. On the day of admission, he reported a growth on the left second digit of 1 month's duration, for which dermatology was consulted. The patient said the growth was asymptomatic but occasionally would get caught on objects. He denied any recent fevers, weight loss, or fatigue. He also denied any trauma to the area or other inciting factors. The patient reported there were no lesions anywhere else on the body, but he did mention a similar mass had been excised from his face several years prior. He noted that he had immigrated to the United States from Eastern Europe within the past several years.

Results of laboratory testing at the current presentation, including a basic metabolic panel, complete blood count with differential, hepatic function panel, thyroid-stimulating hormone level, and HIV antigen/antibody testing, were unremarkable. Physical examination revealed a single, well-circumscribed, 6×6-mm, round, red, exophytic papule with a collarette of scale on the volar surface of the left second digit. The skin on both arms was otherwise unremarkable. There was no evidence of lymphadenopathy or mucosal involvement. A shave biopsy of the lesion was performed.

WHAT'S YOUR DIAGNOSIS?

- amelanotic melanoma
- angiosarcoma
- Kaposi sarcoma
- pyogenic granuloma
- squamous cell carcinoma

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From the Ronald O. Perelman Department of Dermatology, New York University Grossman School of Medicine, and NYC Health + Hospitals/ Bellevue, New York, New York. Dr. Afvari also is from New York Medical College School of Medicine, Valhalla.

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Correspondence: Miriam Keltz Pomeranz, MD, Ronald O. Perelman Department of Dermatology, 240 E 38th St, 11th Floor, New York, NY 10016 (Miriam.Pomeranz@nyulangone.org).

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THE DIAGNOSIS: Kaposi Sarcoma

Histopathology revealed a serum crust on the surface of the specimen, and the dermis contained compact collections of spindled cells with interspersed erythrocytes (Figure 1). Human herpesvirus 8–stained sections highlighted many lesional cell nuclei (Figure 2). A diagnosis of Kaposi sarcoma (KS) was made based on these findings. The patient expressed interest in surgical excision; however, he was lost to follow-up.

Kaposi sarcoma is an indolent, multifocal, angioproliferative tumor that predominantly affects mucocutaneous sites with less frequent involvement of visceral organs. Kaposi sarcoma is categorized into 4 subtypes: epidemic, iatrogenic, endemic, and classic. Human herpesvirus 8, primarily transmitted through saliva or sexual contact, plays a central role in the pathogenesis of KS, as it drives disease development across all subtypes. The virus causes proliferation of endothelial cells and the formation of angioproliferative lesions characteristic of KS.¹

Prevalence is highest in the epidemic subtype, in which patients with advanced HIV and low CD4 T-cell counts may develop KS lesions. Although KS is associated most commonly with HIV, it also has been observed in men who have sex with men regardless of their HIV status.² Patients undergoing immunosuppressive therapy also may not maintain immune tolerance to previously or newly acquired human herpesvirus 8, leading to the development of iatrogenic KS. This subtype particularly manifests in patients receiving therapy for autoimmune

conditions or organ transplants and often only regresses if immunosuppressive therapy is withdrawn.^{3,4}

The endemic and classic subtypes of KS may occur in patients without any known immunocompromise. Endemic KS demonstrates a predilection for pediatric populations in Africa and exhibits less pronounced sex disparity.⁵ In Uganda and Zimbabwe, endemic KS is the leading cancer in men and the second most frequently occurring cancer in women.⁶ In contrast, classic KS generally affects older men of Eastern European and Mediterranean descent or Ashkenazi Jewish ancestry. Patients with classic KS generally exhibit a less aggressive disease trajectory relative to other subtypes; however, these patients have a substantial risk for a secondary hematologic malignancy, which may already coexist at the time of diagnosis or emerge subsequently.^{1,7}

Our patient, a native of Eastern Europe, was negative for HIV and was in a monogamous relationship with his wife; therefore, he was likely to have had the classic subtype of KS. As KS is a multifocal disease, lesions may independently emerge at different times and locations on the body. Our patient presented with a new lesion on the hand several years after excision of a similar lesion on the face. Lesions suspicious for KS include slow-growing, painless, red or violaceous patches, nodules, plaques, or patches on the extremities, most commonly manifesting on the feet and ankles. Our differential diagnosis included pyogenic granuloma, amelanotic melanoma, squamous cell carcinoma, and angiosarcoma.

The prognosis in patients with classic KS is favorable, as it often is limited to cutaneous sites and less commonly manifests on visceral organs. Nonetheless, pulmonary and gastrointestinal involvement manifesting as hemoptysis and rectal bleeding, respectively, can occur. This underscores the potential for more serious complications in instances with visceral involvement. Treatment focuses on managing symptoms and

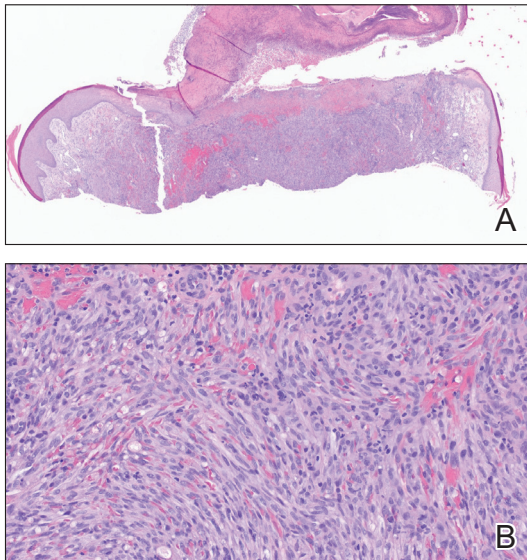


FIGURE 1. A and B, Microscopic findings showed serum crust on the surface of the specimen, and the dermis contained compact collections of spindled cells with erythrocytes interspersed between them (H&E, original magnification $\times 40$ and $\times 100$).

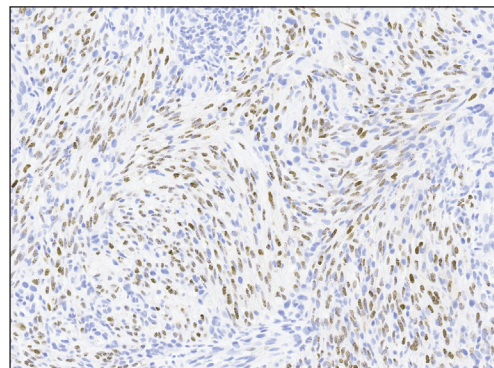


FIGURE 2. Human herpesvirus 8–stained sections highlighted many lesional cell nuclei (original magnification $\times 100$).

PHOTO CHALLENGE DISCUSSION

preventing growth and progression of individual lesions. Additionally, treatment strategies aim to improve cosmetic outcomes and address any underlying immunosuppression that may exacerbate the condition.⁸ For most patients, local therapies such as surgical excision, cryotherapy, laser therapy, or intralesional chemotherapy will remove or reduce individual lesions. Patients with widespread cutaneous or extracutaneous disease may require immunomodulatory agents such as interferon α or chemotherapeutic agents such as anthracyclines or paclitaxel.⁸

Our case highlights the importance of considering risk factors beyond HIV status when including KS as part of the differential diagnosis in patients with atypical vascular lesions. Early recognition enables timely evaluation of potential associated conditions and informs subsequent management decisions.

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