A Kaposi black eye

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A 24-year-old homosexual man presented to the hospital with a one-month history of a black eye and shortness of breath (SOB). He had recently been released from jail where he had experienced progressive constant SOB and fatigue. His black eye had appeared near the same time, and the patient related it to recent dental work. Examination revealed an oval shaped lesion 3 cm in length below the right eye (Figure 1) which was mildly painful to palpation; he had multiple similar lesions on the chest, back, and lower extremities. Intraoral examination revealed violaceous non-blanching plaques along the hard and soft palate (Figure 2). Lung and cardiac examinations were normal. White blood cell count was 3.15 K/μL, and hemoglobin was 11.6 gm/dL. His chemistry panel was normal. HIV screening was positive, the HIV-1 RNA viral load was 581,000 copies/mL, and the CD4 count was 41 cells/μL. Initial chest x-ray showed a reticular nodular pattern bilaterally. Biopsy of skin lesions revealed atypical vascular proliferation consistent with nodular Kaposi's sarcoma (Figure 3 and Figure 4). Computed tomography of the chest showed multifocal airspace disease suspicious for *Pneumocystis jirovecii* pneumonia or possibly Kaposi's sarcoma. The patient was admitted to the hospital, and treatment was started with Dolutegravir 50 mg BID and Entricitabine-Tenofovir 200 mg-300 mg QD. The patient's hospital course was otherwise unremarkable, and he was discharged 10 days later with improvement in presenting symptoms. After discharge, the patient was followed by Infectious Disease, Pulmonology, and Oncology in the outpatient clinics. Further workup included bronchoscopy and lymph node biopsy which confirmed metastatic Kaposi's sarcoma with pulmonary involvement.

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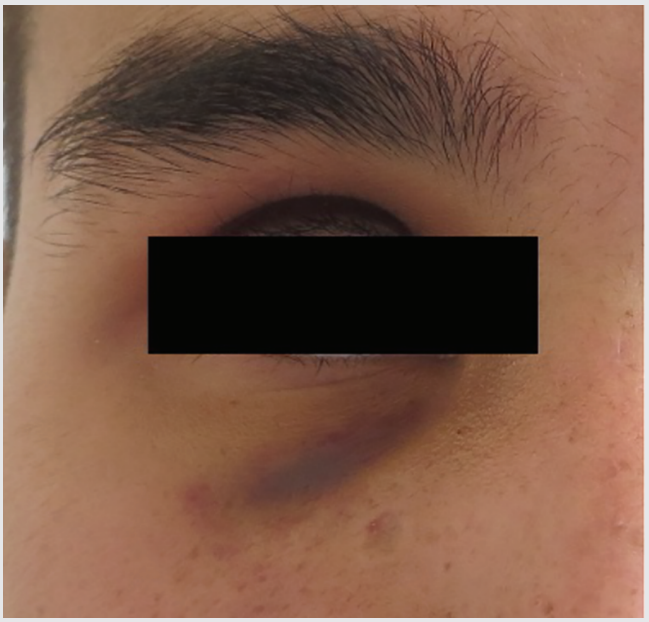

Figure 1. Patient's right eye with Kaposi lesion appearing as a "black eye".

Discussion

Kaposi's sarcoma, a relatively indolent disease, has become increasingly rare with improved treatment and screening for HIV/AIDS. It now occurs at a rate of about 6 cases per million people each year.[1] The disease is caused by infection with the human herpes virus 8 (HHV-8). The classification of the disease is divided into 4 groups: Classic, originally described by Dr. Moritz Kaposi in 1872, endemic (occurring mainly in sub-Sahara Africa), iatrogenic, and AIDS-associated. Due to his presentation and prevalence of *Pneumocystis jiroveci*, this patient was initially started on treatment for *Pneumocystis jirovecii* in addition to anti-retroviral therapy (ART). The treatment, however, did not improve his symptoms, thus warranting bronchoscopy. The primary treatment of Kaposi's sarcoma

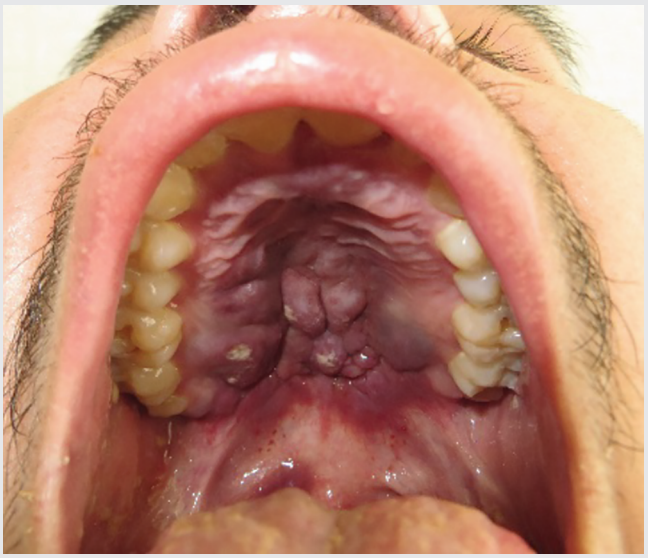

Figure 2. Violaceous non-blanching plaques along hard and soft palate.

is treatment of HIV infection using ART. Oral lesions can be treated with vinblastine[2]; therapy for individual lesions can be initiated with local management such as radiation.[3] There is currently no consensus

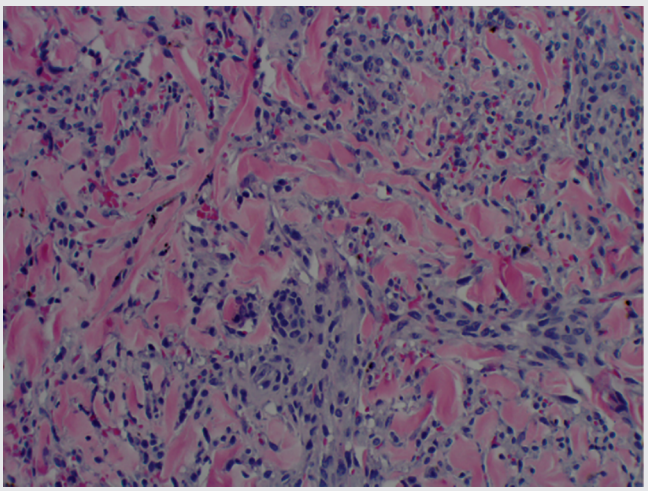

Figure 3. Atypical vascular proliferation consistent with nodular Kaposi's sarcoma. 40× Magnification.

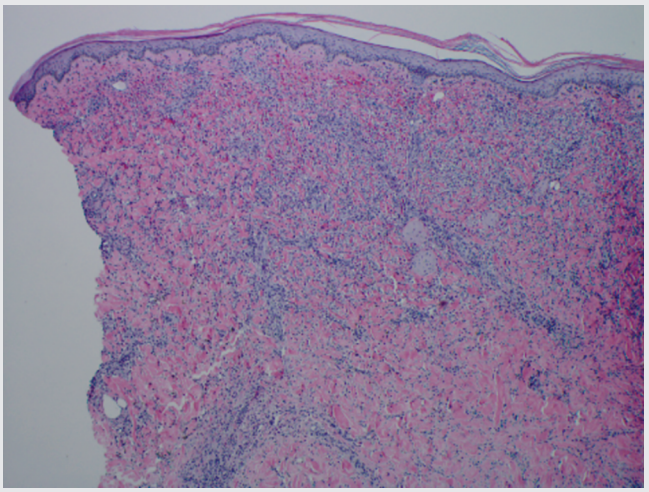

Figure 4. Atypical vascular proliferation consistent with nodular Kaposi's sarcoma. 4× Magnification.

on systemic treatment; however, in individuals with progressive or severe Kaposi's sarcoma, combination of highly active anti-retroviral therapy (HAART) and chemotherapy (liposomal doxorubicin, liposomal daunorubicin, or paclitaxel) reduced the disease progression to a greater extent than HAART alone.[4]

Paradoxically, initiation of ART or HAART for a patient who has already been diagnosed with Kaposi's sarcoma can lead to immune reconstitution inflammatory syndrome (IRIS) and subsequent Kaposi's sarcoma exacerbation leading to significant increase in morbidity and mortality.[5,6,7] Involvement of visceral organs is infrequent, and therefore image staging is not routinely completed. "In the multivariate analysis, staging (T1), CD4 cell count (<200 cells/µl), [and] positive HHV8 DNA in plasma, at the time of diagnosis, predict evolution towards death or the need of chemotherapy."[8] Kaposi's sarcoma has also been found to present in the lungs[9], which is a possible manifestation for this patient. Additionally, the patient's symptoms of SOB and fatigue have appeared in other patients with pulmonary Kaposi's sarcoma.[10]

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References

1. What Are the Key Statistics About Kaposi Sarcoma? 2017, at https://www.cancer.org/cancer/kaposi-sarcoma/about/what-is-key-statistics.html
2. Ramírez-Amador V, Esquivel-Pedraza L, Lozada-Nur F, et al. Intralesional vinblastine vs. 3% sodium tetradecyl sulfate for the treatment of oral Kaposi's sarcoma. A double blind, randomized clinical trial. Oral Oncol 2002;38(5):460–7.
3. Donato V, Guarnaccia R, Dognini J, et al. Radiation therapy in the treatment of HIV-related Kaposi's sarcoma. Anticancer Res 2013;33(5):2153–7.
4. Gbabe OF, Okwundu CI, Dedicoat M, et al. Treatment of severe or progressive Kaposi's sarcoma in HIV-infected adults. Cochrane Database Syst Rev 2014;(8):CD003256.
5. Leidner RS, Aboulafia DM. Recrudescent Kaposi's sarcoma after initiation of HAART: a manifestation of immune reconstitution syndrome. AIDS Patient Care STDS 2005;19(10): 635–44.
6. Achenbach CJ, Harrington RD, Dhanireddy S, et al. Paradoxical immune reconstitution inflammatory syndrome in HIV-infected patients treated with combination antiretroviral therapy after AIDS-defining opportunistic infection. Clin Infect Dis 2012;54(3):424–33.
7. Stover KR, Molitorisz S, Swiatlo E, et al. A fatal case of Kaposi sarcoma due to immune reconstitution inflammatory syndrome. Am J Med Sci 2012;343(5):421–5.
8. El Amari EB, Toutous-Trellu L, Gayet-Ageron A, et al. Predicting the evolution of Kaposi sarcoma, in the highly active antiretroviral therapy era. AIDS 2008;22(9):1019–28.
9. Zibrak JD, Silvestri RC, Costello P, et al. Bronchoscopic and radiologic features of Kaposi's sarcoma involving the respiratory system. Chest 1986;90(4):476–9.
10. Joshi M, Markelova N, Palacio D, et al. A patient with HIV, dyspnea, and multiple pulmonary nodules. CHEST 2006; 130(6):1924–8.