KAPOSI’S STRIKES BACK: HOW A ONCE-COMMON CAUSE OF AIDS-RELATED MORBIDITY IN HIV RE-EMERGED.

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BACKGROUND
• Prior to the introduction of the highly active antiretroviral therapy (HAART) in 1996, Kaposi Sarcoma (KS) was the most common neoplasm in patients with HIV, and an important cause of morbidity and mortality in AIDS.1 The incidence of KS and AIDS-defining malignancies have decreased significantly in the era of HAART.2
• Clinicians unfamiliar with KS and its complications may experience delays in diagnosis and treatment.

CASE PRESENTATION
Pertinent Past Medical History
• A 59-year-old Caucasian male with a 20-year history of HIV and a history of biopsy-proven skin KS 15 years prior to admission.
• During period of consistent HAART use, from 2006-12, HIV was suppressed (CD4>1000) and KS was in remission. He was lost to care from 2013-18.
• He was admitted to outside hospital in April 2018 with dyspnea. Pneumocystis jiroveci pneumonia (PJP) was positive in bronchoalveolar lavage (BAL) per nucleic acid amplification test (NAAT), CD4=5, and HIV viral load > 6 log.
• He initially responded in hospital to TMP/SMX and was discharged on 4 L oxygen, and to complete TMP/SMX course. He was referred back to ID clinic when he was prescribed HAART which he never re-started.

Hospital Course
• Chief complaint: He presented to ASLMC with worsening dyspnea, and dry cough.
• Vitals: T 97.8°F, BP 118/60, HR 78, RR 25, PO2 91% on 6L of oxygen.
• Physical Exam: Cachectic male in respiratory distress, scattered wheezing bilaterally, and right leg skin lesions suggestive of KS (image 3).
• Imaging: CXR reveals extensive bilateral pulmonary infiltrates (image 2).
• Initial management: Re-started on TMP/SMX, and prednisone. HAART was initiated. Shortly after admission to medical floor, he developed severe hypoxic respiratory failure necessitating ICU transfer and eventual intubation.
• Further evaluation: Bronchoscopy revealed normal airway anatomy and appearance. BAL negative for PJP per direct fluorescent antibody (DFA). A random transbronchial biopsy was suggestive of KS (image 3).

Patient Outcome
• Hematology/Oncology was consulted, and one dose of liposomal doxorubicin was administered.
• The patient continued to have refractory hypoxia despite being maximized on the ventilator. He was made comfort care by family given the poor prognosis.

DISCUSSION
• KS is a low-grade vascular tumor associated with human herpesvirus-8 (HHV-8). Studies have shown that environmental stressors such as hypoxia, and poor T-cell immunity can stimulate its proliferative potential and promote oncogenesis activity.3
• Patients with HIV have a significantly increased risk of malignancies including KS due to immunosuppression. Since the introduction of HAART in 1996, the incidence of AIDS-defining cancers has significantly declined.4
• The control of KS is directly related to Low CD4 count and viral load. This patient has had a long history of HIV with significant interruptions of care and HAART, which were a major reason for KS progression and visceral spread of the malignancy.5
• Prevention of AIDS-defining cancers and other sequelae of HIV is best achieved by immediate and uninterrupted HAART.1,5,6
• Despite the decline in KS in recent years with the era of HAART, its pulmonary manifestations have been linked to interruption or lack of HIV care.7
• Pulmonary KS should be considered promptly in patients with dyspnea or pleural effusion in all patients with a history of KS, especially when the CD4 count is low and/or there is a history of interruptions of HAART.

REFERENCES
7 Epelbaum, O; Go, R; Patel, G; and Braman, S. (2016). Pulmonary Kaposi’s Sarcoma and Its Complications in the HAART Era: A Contemporary Case-Based Review

Image 1: On right leg and dorsum of the right foot, multiple poorly demarcated coalescing purple papules and plaques with thick scale present. On right plantar foot, poorly demarcated purple-to-deep black thin papules, coalescing into plaques. Dystrophic, necrotic-appearing toenails present.

Image 2: CXR shows extensive bilateral infiltrations.

Image 3: Transbronchial biopsy reveals fragments of alveolar parenchyma and bronchial mucosa containing spindle cell proliferation in the H/E stain (left). Immunostaining for HHV-8 is positive (right).

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