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A 24-Year-Old Man from Malawi With Skin Lesions and Breathlessness

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Clinical Presentation

History

A 24-year-old Malawian businessman presents to your clinic having noticed dark spots on his arm and leg for the last month. The lesions are progressing and he is now getting facial swelling.

On questioning, he also reports a 3-month history of cough and worsening shortness of breath. He has no constitutional symptoms of weight loss, fevers or night sweats. His cough is productive of white sputum. He has no history of previous tuberculosis. He tested positive for HIV a week before coming to your clinic and has not yet started antiretroviral medication.

Clinical Findings

The patient appears comfortable at rest with moderate facial oedema (Fig. 59.1). His temperature is 36°C (96.8°F), respiratory rate 32 breath cycles per minute and pulse 102 bpm. Widespread dark-purplish plaques are noted on the skin (Fig. 59.1) and palate. On respiratory examination, he has decreased air entry and dullness at the right lung base. He has swelling of his right leg from the foot to the knee, with prominent dark plaques which are coalescing (Fig. 59.2). The rest of the physical examination is normal.

Questions

1. What are your most important differential diagnoses?
2. How would you approach this patient?

Discussion

A young Malawian man presents with widespread dark purplish cutaneous and mucosal lesions. He also reports cough and shortness of breath for 3 months and there are some chest findings on examination of his right lung. He has recently been found to be HIV-positive.

• **Fig. 59.1** Facial swelling and dark-purplish skin lesions on chest and nose of the patient.

• **Fig. 59.2** Swollen right leg with prominent coalescing dark plaques.

Answer to Question 1

What Are Your Most Important Differential Diagnoses?

In a newly diagnosed HIV-infected patient with a chronic history of cough, the diagnosis of tuberculosis should always be considered and vigorous attempts made to exclude it. The skin lesions are typical for Kaposi's sarcoma (KS). The presence of palatal lesions supports this possibility and increases your suspicion of pulmonary involvement.

Answer to Question 2

How Would You Approach This Patient?

The patient should be assessed for possible pulmonary tuberculosis, which should include a urine LAM, sputum microscopy for acid-fast bacilli (AFB), Xpert MTB/RIF and chest radiograph where necessary. Where available, bronchoscopy remains the gold standard investigation for endobronchial KS. Dual pathology of pulmonary KS and TB is not uncommon, and a high index of suspicion for TB should be maintained, particularly as TB remains responsible for many HIV-related deaths.

The main concern of the patient and primary caregiver should be recorded to assist with prioritizing interventions that promote quality of life. These concerns may be physical, psychological, social or spiritual. General positive living advice, including safe sexual practice, screening for STIs and partner(s) and children testing for HIV, may also be addressed. The diagnosis should be explained to the patient in a style and language which is supportive and understandable. The practitioner should allow time for questions and exploration of relevant issues, which can assist with planning. Such communication can facilitate the development of realistic expectations from the start of the therapeutic process.

The patient should be started on antiretroviral therapy (ART) as soon as possible both to control HIV and as part of the therapeutic response to KS. There is a small possibility of KS immune reconstitution inflammatory syndrome, recognizable as worsening disease some weeks after commencement of ART.

Adjuvant palliative chemotherapy is indicated for patients with pulmonary KS.

The Case Continued…

His main concern was shortness of breath. His wife was also HIV-positive but not on ART, and his two children 6 and 4 years old had not yet been tested. His CD4 count was 134 cells/μL, HB 10.2 g/dL and MCV 88.4 fL. Other parameters were normal.

His chest radiograph showed bilateral patchy opacifications in the lower and mid zones of the lungs (Fig. 59.3). Peribronchovascular changes are typically seen in patients with pulmonary KS.

Sputum and GeneXpert tests were negative for the presence of tuberculosis. A bronchoscopy was attempted but failed because of technical difficulties. The patient made no improvement with a short course of oral antibiotics.

• **Fig. 59.3** Chest radiograph showing bilateral peribronchovascular infiltration in the lower and mid lung zones.

He was referred to start antiretroviral medication and palliative chemotherapy.

SUMMARY BOX

Kaposi's Sarcoma

KS is an incurable HIV-associated malignancy. The incidence of KS is on the decline globally as a result of prevention of disease because of early initiation of ART. KS is caused by human herpesvirus-8 (HHV-8), also known as Kaposi's sarcoma-associated herpes virus (KSHV). KS commonly affects the skin but may also involve lymph nodes, lungs and the gastrointestinal tract. Diagnosis of cutaneous disease is often made by clinical appearance though biopsy is recommended.

Endemic KS does occur in HIV-uninfected individuals, typically with a more indolent course. All HIV infected patients with KS should be started on ART. For those with more extensive cutaneous disease or visceral involvement, combining antiretroviral medication with chemotherapeutic agents promotes optimal tumour regression. Agents such as liposomal doxorubicin, paclitaxel, bleomycin, vincristine, vinblastine and etoposide can be considered. Drug availability, access to safe chemotherapy administration, contraindications and side effects of particular agents should be considered with reference to the patient and the setting. Tumour response to immunomodulating agents has been demonstrated in a small study in the USA. Outcomes remain poor for patients with extensive visceral disease (AIDS Clinical Trials Group stage T1). In these situations, quality of life remains the goal of care, involving patient and supportive family members to provide holistic palliative care, which should be initiated long before the end of life.

Pain and other symptoms should be assessed and managed. Low-dose liquid morphine has an established role for symptom relief of breathlessness once all other causes have been excluded and/or treated optimally. Non-drug measures to improve breathlessness, such as positioning and companionship to reduce distress and anxiety are also indicated.

Further Reading

1. Wood R. Clinical features and management of HIV/AIDS. In: Farrar J, editor. Manson's Tropical Diseases. 23rd ed. London: Elsevier; 2013 [chapter 10].

2. Malawi Guidelines for the Clinical Management of HIV in Children and Adults 3rd ed. Available from: https://aidsfree.usaid.gov/sites/default/files/malawi_art_2016.pdf.
3. Gonçalves PH, Uldrick TS, Yarchoan R. HIV associated Kaposi's Sarcoma and related diseases, AIDS 2017;31(14):1903–16. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6310482/.
4. Chin C, Booth S. Managing breathlessness: a palliative care approach. Postgrad Med J 2016;92:393–400. https://doi.org/10.1136/postgradmedj-2015-133578.
5. Caesarman E, Damania B, Known SE, et al. Kaposi Sarcoma. Nat Rev Dis Primers 2019;5:9. https://doi.org/10.1038/s41572-019-0060-9.