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AIDS-Related Kaposi Sarcoma in a Tertiary University Hospital in Manila, Philippines: A Report of Six Cases

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Abstract

We report six cases of Kaposi sarcoma (KS) seen at the University of the Philippines–Philippine General Hospital, a tertiary university hospital with a 1,500-bed capacity in Manila, from 2017 to February 2020. All cases involved males (21–47 years old) infected with human immunodeficiency virus (HIV). Majority came from Metro Manila and had opportunistic infections at the time of KS diagnosis, most commonly pulmonary tuberculosis. Four patients presented with multiple hyperpigmented cutaneous patches. One patient had both cutaneous lesions and necrotic gingival mass. One patient presented with a gastrointestinal mass. One patient underwent systemic chemotherapy (liposomal doxorubicin) but was eventually lost to follow-up. Although considered the most common tumor arising from HIV-infected persons, KS is considered rare in the Philippines. No studies have been undertaken to determine its incidence. However, the incidence may be expected to rise due to the increasing number of Filipinos diagnosed with HIV daily.

Keywords
- AIDS
- HIV
- Kaposi sarcoma

Introduction

Between 2010 and 2018, the Philippines has witnessed an unprecedented 203% increase in the number of newly diagnosed cases of human immunodeficiency virus (HIV).[1] It is considered the fastest growing HIV epidemic in the Western Pacific.[2] Addressing this exponential rise in cases has become a major health priority in the country. Antiretroviral treatments (ARTs) are given for free by the Philippine government, and HIV testing hubs have been instituted across the country.

It is estimated that 77,000 adults and children are living with HIV.[1] The national prevalence remains low (0.1%). Of these individuals, only 76% know their status. Less than half (44%) receive ART. Of the 13,000 newly diagnosed cases among adults, 12,000 are men.[1]

With more people being infected with HIV, especially men having sex with men, the incidence of HIV-associated malignancies, particularly acquired immunodeficiency syndrome (AIDS)-related Kaposi sarcoma (KS), is also expected to increase.

AIDS-related KS is a common tumor arising in people living with HIV, but has been historically rare in the Philippines. KS commonly presents as cutaneous lesions, but can involve any site in the body. Due to the use of ART, its incidence has declined in the United States.[3] KS is also closely linked to human herpesvirus-8.[4]

The true prevalence of AIDS-related KS has not been established, and the disease continues to remain rare and underreported in the Philippines.

Here we report six cases of AIDS-related KS seen at the University of the Philippines–Philippine General Hospital, a tertiary national university hospital and an HIV-treatment hub, in Manila, Philippines, from 2017 to February 2020.

Cases of AIDS-Related Kaposi Sarcoma

The patients were initially seen at various points of entry in the hospital, including the surgery outpatient clinic, dermatology outpatient clinic, and the Sagip Clinic, the hospital's HIV treatment hub. The clinical details are summarized in ►**Table 1**.

All cases were males (21–47 years old) infected with HIV. Majority had opportunistic infections at the time of

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Table 1 Cases of AIDS-related Kaposi sarcoma

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6
Age (y)	30	47	23	43	29	21
Sex	Male	Male	Male	Male	Male	Male
Presenting symptom of Kaposi sarcoma	One-month history of gingival mass	Eight-year history of multiple erythematous and violaceous patches on the face, more prominent on perioral area, and left side of chest	Violaceous smooth plaque on right elbow	Multiple papules and plaques on plantar aspects of both feet; similar lesions seen in trunk	Multiple violaceous and black plaques on the extremities, chest, and abdomen	Violaceous plaque on the right elbow
Year of Kaposi sarcoma diagnosis	2017	2018	2017	2017	2018	2020
CD4 counts (in cell/mm^3)	Information not available	100 (June 2017)	Information not available	Information not available	15 (June 2018)	144 (January 2020)
Number of sexual partners for past 5 y	3 male sexual partners	Multiple male and female sexual partners	8 male sexual partners	8–9 male sexual partners	4 male sexual partners	Multiple male partners
Histopathologic findings	Gingival mass: Capillary hemangioma	Chin skin punch biopsy: Kaposi sarcoma - proliferation of narrow, jagged, slit-like mature and immature vessels, proliferation of spindle-shaped cells, presence of siderophages	Left flank skin punch biopsy: Kaposi sarcoma - proliferation of blood vessels dissecting through collagen bundles with siderophages in the dermis	Chest skin punch biopsy: Kaposi sarcoma - proliferation of narrow, jagged, slit-like mature and immature vessels, proliferation of spindle-shaped cells, presence of extravasated red blood cells, siderophages	Forearm skin punch biopsy: Kaposi sarcoma–proliferation of blood vessels and endothelial lining with spindle cell proliferation Gastric mass biopsy: spindle cell proliferation	Elbow skin punch biopsy: Kaposi sarcoma - proliferation of blood vessels and endothelial lining with spindle cell proliferation
Use of ART at the diagnosis of Kaposi's sarcoma	No	No	Yes	Yes	Yes	Yes
Treatment received for Kaposi sarcoma	No	Yes. ART: efavirenz, lamivudine, and tenofovir	Yes. ART	Yes. ART: efavirenz, lamivudine, and tenofovir	Yes. ART and liposomal doxorubicin	Yes. ART: efavirenz, lamivudine, and tenofovir

Abbreviations: AIDS, acquired immunodeficiency syndrome; ART, antiretroviral treatment.

KS diagnosis, most commonly pulmonary tuberculosis. Four patients presented with multiple brown, erythematous and violaceous patches and plaques (►**Fig. 1**), while one patient presented with a solitary violaceous plaque on his right elbow. One patient had both cutaneous lesions and necrotic gingival mass. One patient presented with gastrointestinal involvement.

Only one patient (case 5) received systemic chemotherapy (liposomal doxorubicin) for visceral involvement. He was able to receive three cycles of chemotherapy, but was eventually lost to follow-up.

Discussion

Although considered the most common HIV-related malignancy, KS is considered rare in the Philippines. Its incidence is currently unknown but is expected to rise due to the increasing number of Filipinos diagnosed with HIV infection daily. It has a variable course, and may present as a minimal disease or as a rapidly progressing neoplasm.

KS can involve any site in the body, but cutaneous disease is the most common presentation. The cutaneous lesions often appear on the lower extremities, face, oral mucosa, and genitalia; the lesions may be mistaken as purpura, hematoma, angiomas, dermatofibromas, or nevi.

KS can also present as a visceral disease[5] and usually affects the oral cavity, bone marrow, bone, and skeletal muscle. Visceral involvement has become less common[6] likely due to the use of combination ART for HIV.

It is staged using the AIDS Clinical Trails Group staging system of the National Institutes of Health,[7] which divides patients into good or poor risk prognostic categories, taking into account the extent of tumor, immune status, and severity of systemic illness.

Goals of treatment are palliation of symptoms, shrinkage of tumor, and prevention of disease progression.[8] Virtually all

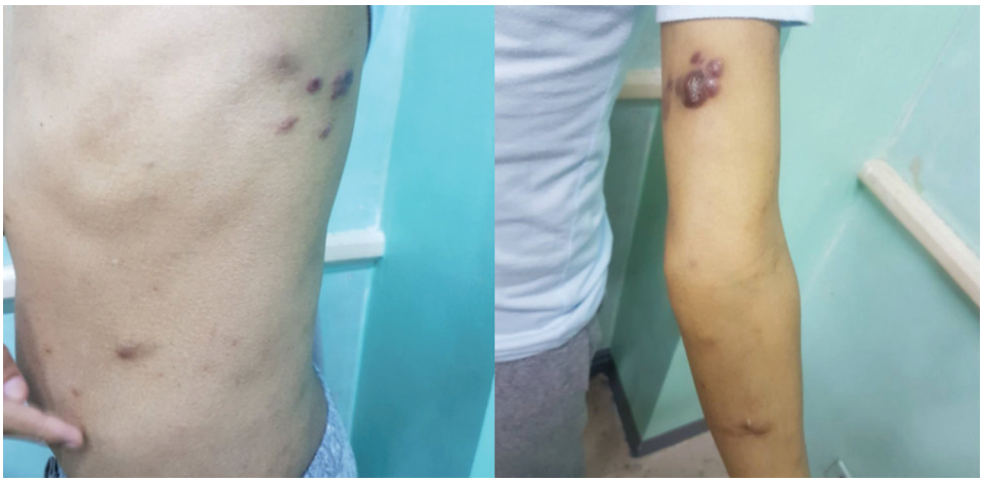

Fig. 1 Multiple brown, erythematous and violaceous patches and plaques on the trunk and arms.

patients with AIDS-related KS are recommended to undergo treatment with combination ART.[6,9] Local symptomatic therapy—in the form of intralesional chemotherapy with vinblastine[10] or topical alitretinoin[11]—plays a role in cosmesis and in the management of bulky KS lesions.

Systemic chemotherapy is used with more advanced KS or in cases with rapid disease progression. Accepted indications for the addition of chemotherapy to ART are as follows[12]:

- Widespread skin involvement (e.g., more than 25 lesions)
- Extensive cutaneous KS that is unresponsive to local treatment
- Extensive edema
- Symptomatic visceral involvement
- Immune reconstitution inflammatory syndrome
- Progression of KS on ART alone

If systemic chemotherapy is indicated, the recommended first-line treatment is pegylated liposomal doxorubicin or liposomal daunarubicin.[13] Single-agent chemotherapy with paclitaxel, bleomycin, vinblastine, vincristine, and etoposide have also been used.[14] In resource-limited settings, paclitaxel with ART is superior to oral etoposide plus ART or etoposide and vincristine plus ART.[15]

Conflict of Interest
None declared.

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