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Case report

Aids Related Kaposi's Sarcoma: Report of Two Libyan Patients and Review of the Literature

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Abstract
Kaposi Sarcoma is a vascular proliferation characterised by mucocutaneous violaceous lesions and oedema, as well as involvement of nearly any organ. Any mucocutaneous surface may be involved, but areas of predilection include the hard palate, trunk, penis, lower legs, and soles. Recent work has clearly identified human herpes-8 virus-like DNA sequences in Kaposi's sarcoma, both those with and without additional HIV infection. It is much more common in homosexuals than in others at risk, such as drug abusers or haemophiliacs. HIV-Associated KS was first recognized in 1979, when an epidemic of Kaposi's sarcoma was identified in the homosexual community in New York. It is usually developed in the later stages of the disease and is rarely a presenting feature of HIV infection. It is an aggressive form of the disease, with a median survival of 18 months if left untreated. Since the introduction of anti-retroviral therapy (ART), there has been a marked decrease in morbidity and mortality. For patient with symptomatic visceral diseases, aggressive skin disease, marked oedema and pulmonary disease, systemic chemotherapy is indicated We report two Libyan patients of extensive Kaposi sarcoma and AIDS: A 32 years-old male with CD4 count of 394 cells/ml and A 45 years-old male, drug abuser with CD4 count of 116 cells/ml, who were admitted in our department with multiple, asymptomatic, papulo-nodular lesion scattered over upper, lower extremities, trunk, and perianal and mouth mainly the palate and gums. To the best of our knowledge, these are the first two cases of extensive KS involving the skin and mucous membranes reported by the dermatology department at Tripoli Central Hospital.
Keywords. Kaposi's Sarcoma, Anti-Retroviral Therapy, AIDS

Introduction

Kaposi's sarcoma is a vascular neoplasm that was rarely seen before the AIDS era [1]. The lesions present as violaceous or brown-red macules and probably occur as a multicentric rather than a metastatic disease in AIDS. Lesions are often multifocal and widespread when first detected [1]. Any mucocutaneous surface may be involved, but areas of predilection include the hard palate, trunk, penis, lower legs, and soles [36]. More than half of the patients have generalized lymphadenopathy at the time of first examination [1, 2]. Recent work has clearly identified herpes virus-like DNA sequences in Kaposi's sarcoma patients, both those with and those without additional HIV infection [4,15,16]. The diagnosis of KS is established by skin biopsy, which should be taken from the centre of the most infiltrated plaque [36]. KS can be divided into 4 subsets based on clinical and epidemiologic criteria [13].

Classic Kaposi's Sarcoma generally appears on the foot or lower legs, beginning as violaceous macules and patches and progresses very slowly to form plaques and nodules. It appears commonly in the elderly males of Eastern European or Mediterranean origin [1, 10,17]. The progression of this disease is slow, although lymph node and visceral involvement can occur.

Endemic Africans KS is a common neoplastic disorder in the Sub-Saharan region of Africa [18]. More rapidly progressive, in which lymph node involvement is predominant, and skin lesions are infrequent [5,11]. There are cutaneous and lymphatic forms. The cutaneous form: typically occurs in men as nodules on the lower legs; lymph node or systemic involvement is uncommon. The lymphadenopathic form is seen in children younger than 10 years of age with a poor prognosis [18].

Kaposi's sarcoma associated with immunosuppressive states is seen in the transplant patient and after cytotoxic chemotherapy. Azathioprine, cyclophosphamide, cyclosporine, and prednisolone singly or in combination have been implicated in sporadic cases of KS. Some tumours regress after therapy was withdrawn, and others responded to radiation [7,12]. Both systemic and cutaneous involvement may occur, and the progress of the disease may be aggressive, causing death of the patient [19, 20].

AIDS related KS [21, 22]; this variant was first recognized in 1979 [23, 24, 35], when an epidemic of KS was identified in the homosexual community in New York. Since that time, it has become firmly associated with the later stages of HIV infection [25,26]. It is more common in homosexuals than in other at-risk groups, such as drug abusers or haemophiliacs. Kaposi's sarcoma usually develops in the later stages of the disease and is rarely a presenting feature of HIV infection. The face and mucus membranes, such as the soft palate, are frequently involved, but the lesions may occur anywhere on the body. The prognosis is poor [36].

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Cases presentation

Case 1

A 32-year-old Libyan male, admitted in the dermatology department, Tripoli central hospital, with multiple nodules all over the body for 6 months duration. It started on the nose as a single painless, firm dark nodule, gradually increasing in size. Later on, multiple nodules appeared all over the body (face, upper limbs, Lower limbs, trunk, genitalia, and mucus membrane of the mouth). Patient passed black stool (melena) 3 days before admission, and gave a history of productive cough (sputum was yellowish, brown in colour, sometimes mixed with blood). He denied taking any hard drugs or having any sexual contact, and a history of blood transfusion was negative. He gave a history of previous admission in the surgical department, where an appendectomy was done in 1990. Clinical examination revealed enlarged palpable lymph nodes at the occiput, left axilla, and submental region. There was a huge violaceous nodular lesion over the nose and right eye (Figure-1), with multiple nodules scattered all over the body, mainly on the legs, forearms, and mouth (palate and gums) (Figures-2 and 3), trunk (Figure 4). These nodules were painless and firm in consistency. Cardiovascular, respiratory, and abdominal examination did not detect any abnormality.

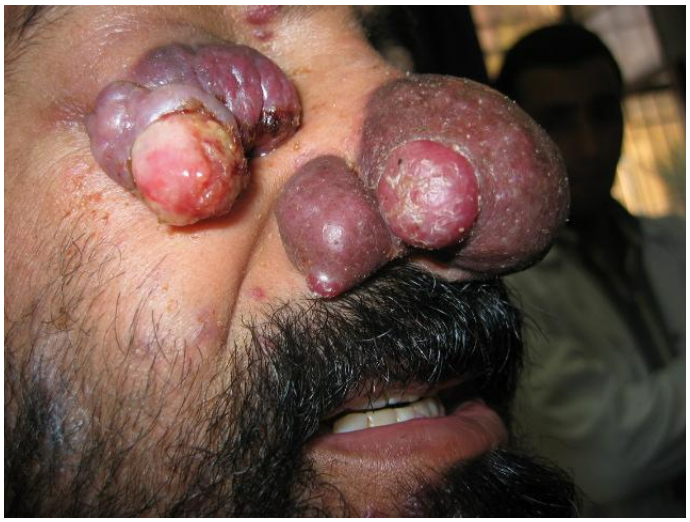

Figure 1. huge violaceous nodules over the nose and right eye

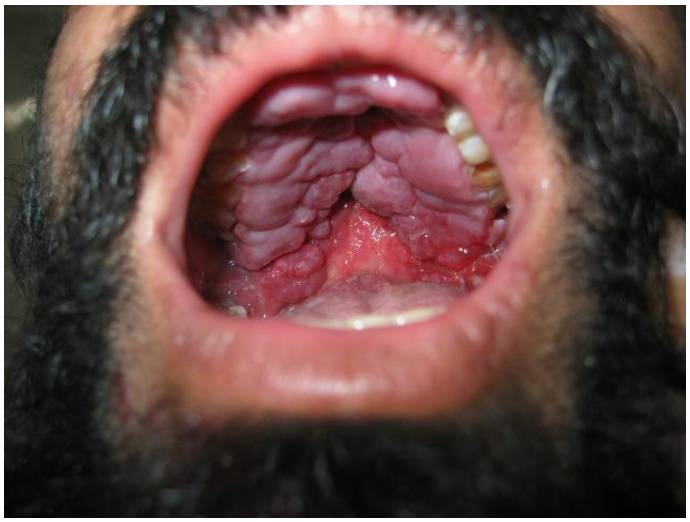

Figure 2. diffuse thick violaceous infiltration of the hard palate and gums

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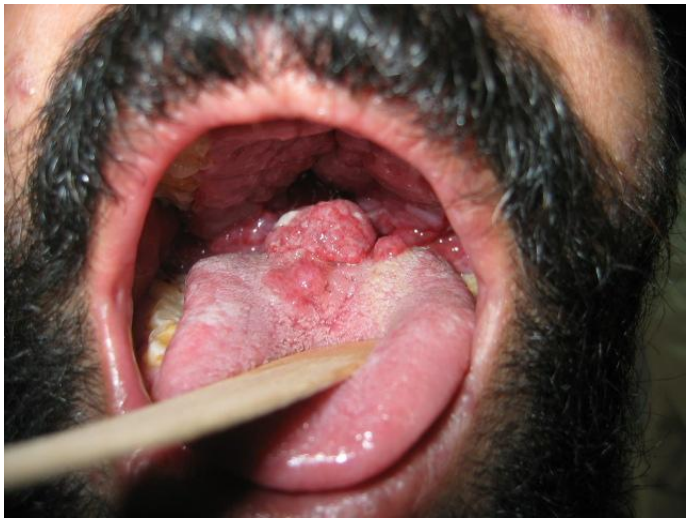

Figure-3. Multiple nodules over the dorsum and the root of the tongue

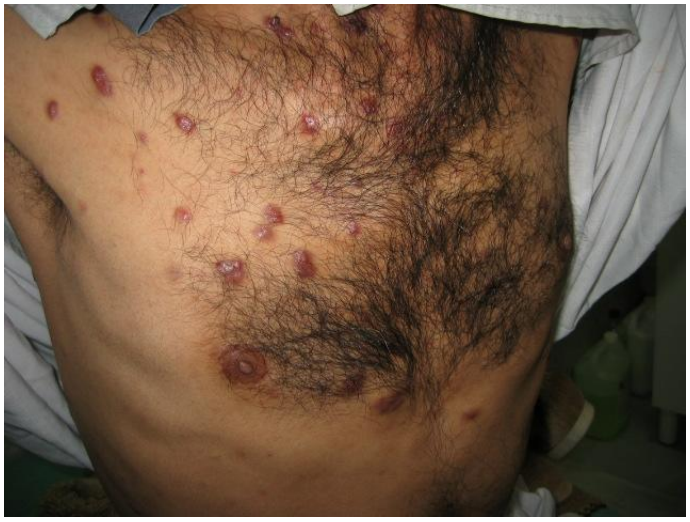

Figure 4. Multiple dark nodules and plaques over the trunk.

CBC (Hb 9.3, MCV 86, MCH 27, WBC 5000, lymphocyte count 2.0x103), Urea, Electrolyte, and LFT were within normal limits. ESR was 75 m/h. Sputum for culture showed growth of normal flora. Viral screen: HIV positive, HCV & HBSAg were (-ve). CD4 count was 394 cells/ml. PCR (347,000 viral particles). Ultrasound abdomen showed a small hyperechogenic lesion less than in the left lobe of the liver. CT scan of the chest and abdomen revealed a nodular hypodense lesion (segment III) of the liver with mild nodular interlobular septal thickening. The chest was normal. An incisional biopsy was taken from the skin lesions and sent for histopathology, which showed normal epidermis. In the dermis, there were multiple nodules composed of spindle cells and vascular spaces and slits of different sizes and shapes, some of which make the characteristic honeycomb-like pattern and are filled with RBCs. There were also extravasated RBCs, siderophages, and chronic inflammatory cells infiltrating, and a few lymphatic spaces. The nodules were surrounded by collagen bundles. The HAART regimen started, and the patient was referred to the HIV and oncology clinic in the Tripoli medical centre for further management. 1 cm

Case II

A 45-year-old male Libyan patient, married and had 2 sons and 1 daughter, smoker, alcoholic, and drug addict with needle sharing, admitted in our department with painful unilateral vesiculobullous skin eruption on erythematous base on the right axilla and right arm (herpes zoster Rt T3, T4). The patient also had asymptomatic reddish-brown and purplish colored nodules and plaques commonly on the upper and lower extremities and trunk. These lesions started 4 years back on both feet, then spread all over the body. An incisional biopsy was taken, and histopathology showed normal epidermis. In the dermis, there are multiple nodules composed of spindle cells and vascular spaces, and of different sizes and shapes, some of which make the characteristic honeycomb-like pattern and are filled with RBC. There is also extravasation of blood, siderophages, and chronic inflammatory cells infiltrate. There are also a few lymphocytic spaces. The nodules are surrounded by collagen bundles. These findings confirm the diagnosis of Kaposi's sarcoma. He has been a known case of HIV and HCV for 2 years, not registered in the HIV clinic and not on treatment for HIV, with no history of blood transfusion.

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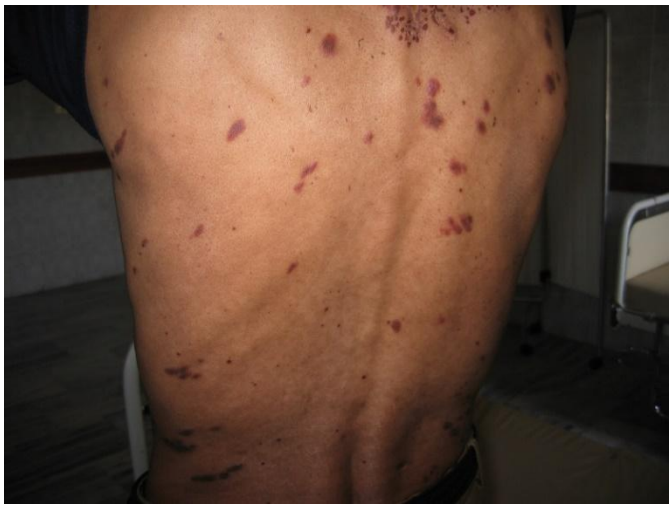

Figure 5. Multiple violaceous patches and plaques with herpes zoster lesions.

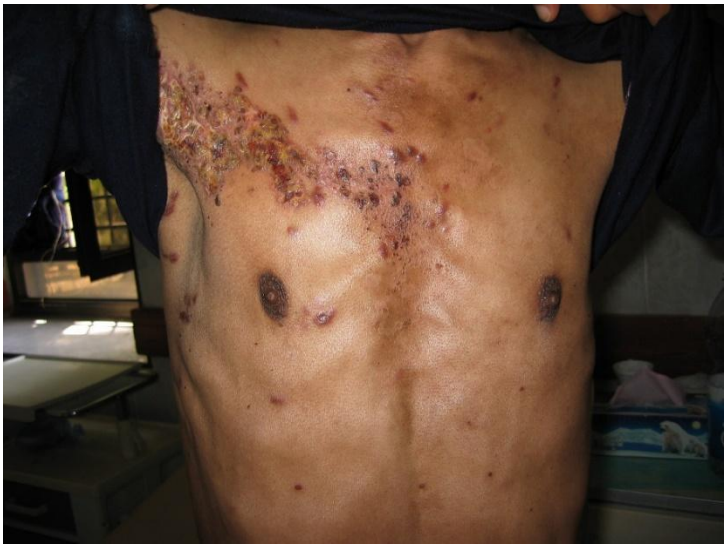

Figure 6. Multiple dark plaques and papules are scattered over the trunk with dermatomal herpetic lesions

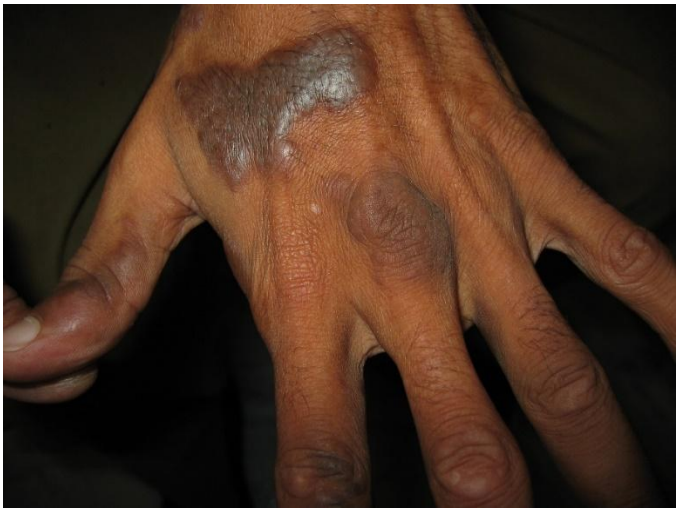

Figure 7. large flat violaceous plaque over the dorsum of the left hand

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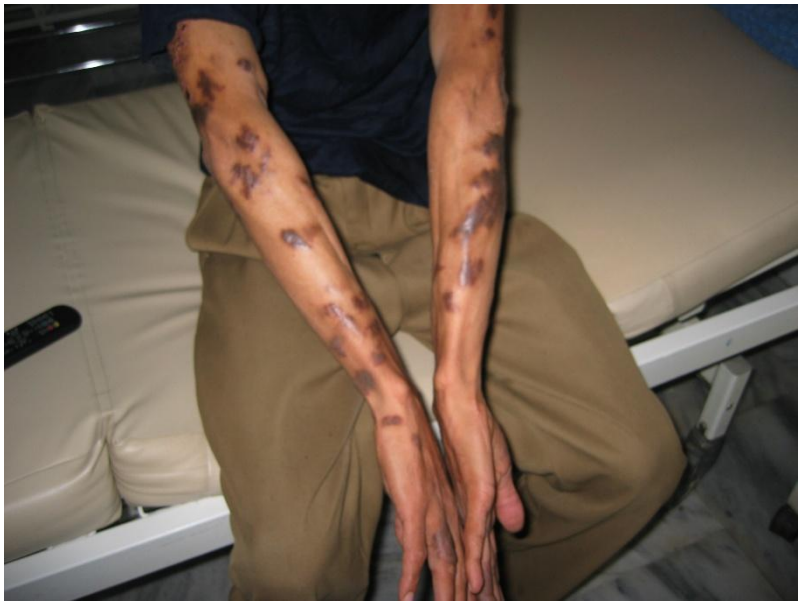

Figure 8. Multiple hyperpigmented plaques over both forearms

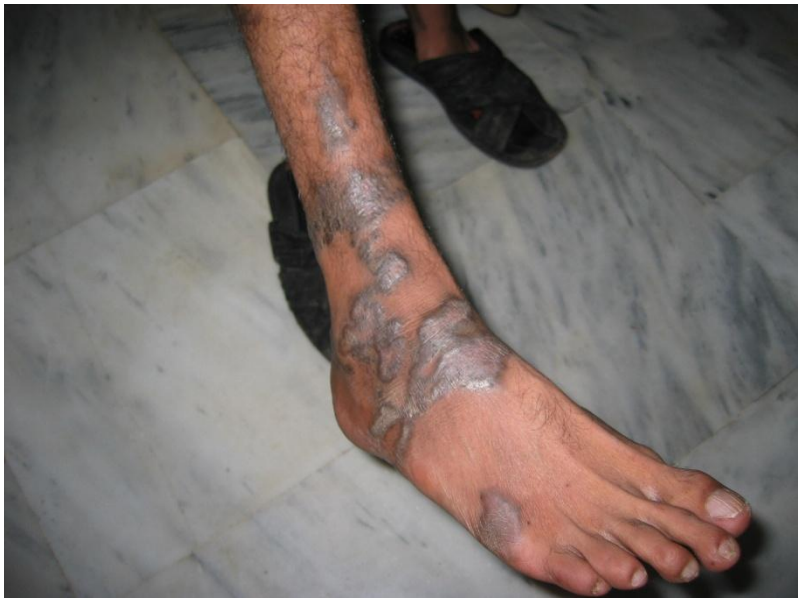

Figure 9. Multiple dark flat plaques over the dorsum of the right foot

On Examination, the patient was stable, with no pallor or jaundice, and an enlarged anterior cervical lymph node. Cardiovascular, Respiratory, and Abdominal examination did not detect any abnormality. CBC, DLC, Urea & Electrolytes, and LFT were within normal limits. Viral screen showed HCV (+ ve), HIV positive (+ ve), HBSAg (-ve). CD4 count was 116 cells/ml. Ultrasound of the abdomen did not show any abnormality. Patient received Zovirax infusion 500 mg in 250 ml of normal saline/ 8 hourly, together with Anti-Retroviral Therapy as: Lamivir tablets 150 mg twice daily, Zidovir tablets 300 mg twice daily, and Nelfinavir tablets 250 mg.

Discussion

Kaposi Sarcoma is a vascular proliferation characterised by mucocutaneous violaceous lesions and oedema, as well as involvement of nearly any organ. Any mucocutaneous surface may be involved, but areas of predilection include the hard palate, trunk, penis, lower legs, and soles. Recent work identified human herpes-8 virus-like DNA sequences in endothelial cells of Kaposi's sarcoma. HIV related KS is much commoner in homosexual men than in drug abusers or haemophiliacs. HIV-Associated KS was first recognized in 1979, when an epidemic of Kaposi's sarcoma was identified in the homosexual community in New York. It is usually seen in the later stages of the disease and is rarely a presenting feature of HIV infection. It is an aggressive form of the disease with a median survival of 18 months if left untreated. The lesions have a dark-blue or purplish colour. Initially, they may be almost macular. There are a few subjective symptoms; pain may be felt in nodules on pressure areas. The lesion may involute to leave pigmented scars or become eroded, ulcerated, or fungating. The lymph node, mucosal surfaces, and internal organs, particularly the small intestine, may all be involved as the disease progresses [30-32]. KS may at times start in other organs and run its course without skin manifestation. Visceral involvement is the common pattern

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in African children, with the lymph nodes being the main tissue involved. An association with lymphoma and other malignancies has been reported. The pathological differential diagnosis in the early stages will include a simple angiomatous malformation, and on the lower legs, a venous dermatitis. Arteriovenous malformation, sometimes known as pseudo-Kaposi's sarcoma, may cause problems. Another condition to be considered in the differential diagnosis is the bacillary angiomatosis of AIDS [27,2, 29], which was first described in 1983 by Stoler et al [28] and thereafter by Cockrell et al [29]. The early lesion is most likely to be confused with a benign vascular proliferation. It must also be distinguished from histiocytoma or from other types of sarcomas. In prolonged venous hypertension of the lower leg, nodules with a close resemblance to Kaposi's sarcoma may develop; they differ, however, in lacking the progression, and spindle cell proliferation is not seen in the histological section [33]. When small areas are involved, excision or radiotherapy can be used. Superficial radiotherapy is rapid and effective and is the treatment of choice for the majority of patients with nodular disease of the extremities [31]. Extensive disease can be treated by cytotoxic drugs such as chlorambucil [32], cyclophosphamide, vinblastine, or actinomycin [34]. Interferon alfa was demonstrated to be effective in a limited number of studies [9, 37]. HAART has reduced the incidence of KS in HIV-infected patients by 10-fold and may help in the treatment of HIV-related KS. HAART alone may not be adequate in controlling KS, and liposomal doxorubicin may need to be added to their treatment [36].

Conclusion

Kaposi's sarcoma remains a complex vascular neoplasm strongly associated with HIV infection and human herpesvirus-8. Its clinical spectrum ranges from indolent cutaneous lesions to aggressive visceral disease, particularly in immunocompromised patients. Advances in antiretroviral therapy have significantly reduced incidence and improved outcomes, yet optimal management often requires a multimodal approach combining HAART, chemotherapy, and radiotherapy. Continued research into viral pathogenesis and immune modulation is essential to refine therapeutic strategies and improve survival.

Conflict of Interest

The authors declare no conflict of interest related to this study.

Ethical Approval

This study was conducted in accordance with ethical standards. Ethical approval was obtained from the institutional review board, and all procedures adhered to the principles outlined in the Declaration of Helsinki.

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