Kaposi’s Sarcoma in A Patient with AIDS

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Abstract
We report a case of a 40 year old HIV infected male, citizen of Somalia who presented with multiple painful, livid reddish brown plaques, papules and nodules on both lower limbs and purplish red nodules on the hard palate. The cutaneous nodular lesions on biopsy showed characteristic features of Kaposi’s sarcoma. This case is reported due to paucity of Kaposi’s sarcoma in Indian literature.

INTRODUCTION
Kaposi’s sarcoma (KS) is the most common multicentric malignancy affecting skin and various internal organs in patients with AIDS from developed countries. On the basis of clinical and epidemiological features, four types of KS have been recognized: classic, endemic (African), iatrogenic and epidemic (AIDS related). The course of Kaposi’s sarcoma ranges from indolent, with only skin manifestations to fulminant with extensive visceral involvement. Demonstration of Human herpes virus 8 (HHV-8) DNA sequences in tumor cells and peripheral blood mononuclear cells of patients with all forms of KS shed a light on the possible etiopathogenetic mechanism of the disease.

CASE REPORT
A 40 years old African male hailing from Somalia, presented with painful elevated dark colored skin lesions over the right leg and foot since 6 months. The pain was associated with swelling of the leg and used to get aggravated on standing and walking. There is a past history of tuberculous psoas abscess, chronic erosive herpes and oral candidiasis for which patient received treatment. The personal history revealed that he was a chronic smoker and alcoholic and had a history of multiple sexual exposures. The clinical examination showed that the patient was cachetic, pallor and icterus was present, the axillary and inguinal lymph nodes were enlarged.

Cutaneous examination revealed multiple well defined firm, tender, dark dusky violaceous papules and nodules over both the lower extremities. The lesions were noted below knee joint, on the dorsal aspect of the toes and on the plantar aspect of the foot. The right lower leg in addition showed brawny edema. Oral cavity also showed dark red to purplish nodules on the hard palate. Systemic examination was normal at the time of presentation.

Laboratory investigations revealed hemoglobin of 9.7 gm%, total white blood cell count 7300 /cu mm and differential count P85%, L10%, M3%, E 2%. Antibodies to HIV1 were positive by tridot test and CD 4 cell count of 8 cells / cu mm. X-ray chest showed a fibrotic scar over right apical region. The MRI & ultrasonography showed right sided psoas abscess, the histopathology of which confirmed tuberculosis etiology.

Histological examination from the violaceous skin nodule showed normal epidermis and a spindle cell tumor in the dermis. The tumor composed of angiomatic slit like vascular spaces containing red blood cells surrounded by spindle cells. The spindle cells were arranged in fascicles and their nuclei did not show any atypical features or mitotic activity. In between tumor cells deposition of hemosiderin pigment and infiltration by mononuclear cells was identified. The histological features of skin biopsy were suggestive of Kaposi’s sarcoma.

The patient was treated with 3 drug antiretroviral therapy (Lamivudine 150 mg BD, Stavudine 30 mg BD, and Efavirenz 600 mg HS) for three months and was continued on antituberculosis treatment (HRE) and Cotrimoxazole prophylaxis. There was no improvement in patient’s condition and he died within 7 months after
Fig. 1a: Shows well defined dark, dusky violaceous papules and nodules over the plantar aspect of the foot.

Fig. 1b: Shows Kaposi’s sarcoma of leg with brawny edema and hyperpigmentation of the skin.

Fig. 1c: Shows Kaposi’s sarcoma on the left side of the hard palate.

Fig. 2a: Histopathology shows an intact epidermis and spindle cell tumor with vascular channels in the dermis (H&E x 100).

Fig. 2b: Histopathology shows proliferating spindle cells and slit-like vascular channels containing erythrocytes (H&E x 400)

Diagnosis. The post mortem examination revealed that his death was due to disseminated tuberculosis.

DISCUSSION

AIDS-associated Kaposi’s sarcoma occurs with increased frequency in all HIV transmission groups and at a particularly high rate among men who have sex with men (MSM). It differs from the classic disease in the rapid evolution of the lesions, and atypical distribution affecting the trunk and mucous membrane. Kaposi’s sarcoma usually presents initially as violaceous skin lesions, but oral, visceral, or nodal KS may precede cutaneous involvement.3

Despite rapid growth in the prevalence of AIDS in India very little is known regarding the spectrum of neoplasm in patients with AIDS. The first report of AIDS associated Kaposi’s sarcoma in India was described in the year 1993 since then very few case reports of AIDS associated Kaposi’s sarcoma are described in Indian
literature (Table 1). Shroff HJ in 1993 reported a case of AIDS-associated Kaposi’s sarcoma in an Indian female that was treated with intralinsional injection of vincrystine and Alpha interferon (sublingually) with some regression of skin lesions however this patient subsequently died due to disseminated tuberculosis.  

Kumarasamy N in 1996 described another case of Indian drug user male showing cutaneous lesions of Kaposi’s sarcoma, the outcome of this patient is not known. In 2002 Chandan K reported one more case of AIDS-associated KS in an Indian heterosexual male. This patient had extensive cutaneous lesions comprised of purpuric macules, lichenoid papules, keratotic violaceous plaques and nodules and in addition to cutaneous lesions patient showed Kaposi’s sarcoma of lung. Krishna A Gopala reported a case of Kaposi’s sarcoma in a 39 year old male. This patient was previously diagnosed case of malignant schwannoma; subsequently on follow-up visits he showed antibodies to HIV1 and multiple nodulo-ulcerative lesions on limb. Shenoy VV described a case of Kaposi’s sarcoma in a 45 year old male, this patient had severe thrombocytopenia. The low prevalence of Kaposi’s sarcoma in our country may be explained due to low prevalence of HHV 8 in our population. Staging of Kaposi’s sarcoma is done on the basis of the AIDS Clinical Trials Group (ACTG) staging system, over the regular TNM staging. It characterizes patients as “good” (0) or “poor risk” (1) based on tumor burden (T), immune function (I), and presence of systemic illness (S), our case was in stage 1 (poor risk) as per ACTG staging system. Several modalities of treatment have been used for Kaposi’s sarcoma including surgical excision, radiation therapy, Highly Active Anti-Retroviral Therapy (HAART) and intra lesional chemotherapy. Four cases reported in the Indian literature (including our case) received HAART of shorter duration however these cases showed rapid progression and succumbed.

**REFERENCES**


**Table 1 : Reports of AIDS associated Kaposi’s sarcoma in Indian literature**

<table>
<thead>
<tr>
<th>Reference No.</th>
<th>Year</th>
<th>Age</th>
<th>Sex and origins Indian</th>
<th>Antibodies to HIV</th>
<th>Sites of KS</th>
<th>Systemic involvement</th>
<th>Treatment</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>1993</td>
<td>35 yrs</td>
<td>Indian Female</td>
<td>HIV-1 &amp; 2</td>
<td>Cutaneous and mucous membrane</td>
<td>Not involved</td>
<td>Vincristine, Alpha interferon and Radiotherapy</td>
<td>Not known</td>
</tr>
<tr>
<td>5</td>
<td>1996</td>
<td>19 yrs</td>
<td>Indian Male</td>
<td>HIV</td>
<td>Cutaneous and mucous membrane</td>
<td>Not involved</td>
<td>Not known</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2002</td>
<td>39 yrs</td>
<td>Indian Male</td>
<td>HIV1</td>
<td>Cutaneous lesions</td>
<td>Lung involvement</td>
<td>HAART and doxorubicin, bleomycin, vincristine</td>
<td>Died</td>
</tr>
<tr>
<td>7</td>
<td>2004</td>
<td>35 yrs</td>
<td>Indian Male</td>
<td>HIV1</td>
<td>Cutaneous lesions</td>
<td>Lung involvement</td>
<td>HAART</td>
<td>Not Known</td>
</tr>
<tr>
<td>8</td>
<td>2005</td>
<td>45 yrs</td>
<td>Indian Male</td>
<td>HIV</td>
<td>Cutaneous lesions</td>
<td>Not involved</td>
<td>HAART</td>
<td>Skin lesions resolved</td>
</tr>
<tr>
<td>Present case</td>
<td>2007</td>
<td>40 yrs</td>
<td>African Male</td>
<td>HIV1</td>
<td>Cutaneous and mucous membrane</td>
<td>Not involved</td>
<td>HAART</td>
<td>Died due to TB</td>
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