

# Disseminated Kaposi's sarcoma as a presenting sign of HIV in an Indian male: A case report with dermoscopic findings

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## Abstract

Kaposi's sarcoma (KS) is one of the AIDS-defining illnesses, which tends to occur at low CD4 count. It is the most common malignancy associated with HIV disease. Yet, there is a paucity of Indian case reports of KS in the English literature. We report the case of a 45-year-old HIV-positive heterosexual male with an unusual presentation of KS in the form of unilateral lymphedema mimicking cellulitis. We also describe the dermoscopic findings of the same.

**Key words:** Dermoscopy, HIV, Kaposi's sarcoma

## INTRODUCTION

Kaposi's sarcoma (KS) is one of the AIDS-defining illnesses, which tends to occur at low CD4 counts.<sup>[1]</sup> However, the seroprevalence of human herpes virus 8 (HHV 8), the causative organism of KS, is very low in India in spite of the high prevalence of HIV and AIDS, thus accounting for the low number of cases of KS. To date, close to 25 cases of KS have been reported from India, with most cases involving the oral cavity.<sup>[2,3]</sup> We report the case of a HIV-positive heterosexual male with an unusual presentation of KS in the form of unilateral lymphedema mimicking cellulitis. We also describe the dermoscopic findings of the same.

## CASE REPORT

A 45-year-old-male, a lorry driver by occupation, was referred to the dermatology clinic for painful, unilateral swelling of the left leg of one-month duration. He had a history of low-grade fever with loss of weight (>10%)

and appetite for the past 6 months. There was no history of cough or diarrhea. He was married with two children. On further probing, he revealed a history of unprotected heterosexual genitogenital contacts with multiple partners. On examination, he was emaciated and had generalized lymphadenopathy. Cutaneous examination showed diffuse induration of the left leg, which was studded with violaceous-to-hyperpigmented papules coalescing to form plaques [Figure 1]. There was warmth and tenderness over the left leg. Similar hyperpigmented-to-violaceous, discrete, succulent papules and plaques varying in size from 0.2 cm × 0.2 cm to 0.5 cm × 0.5 cm were also seen disseminated over the thighs, trunk, and oral cavity (tongue and hard palate) [Figures 2 and 3]. Hemogram revealed hemoglobin of 8.9 g/dl, but renal function tests and liver function tests were within

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normal limits. Chest X-ray and ultrasonography of the abdomen and pelvis were normal. Serology for HIV-1 was positive, and CD4 count was 156/mm<sup>3</sup>. Screening for hepatitis B antigen, anti-hepatitis C virus antibodies, and Venereal Disease Research Laboratory test was negative. Based on the clinical findings, we thought of differential diagnoses of KS, malignant melanoma, and disseminated histoplasmosis. On dermoscopy, an ill-defined bluish-red discoloration was seen, and there was no pigment network [Figure 4]. Histopathology of the skin revealed slit-like proliferation of dermal vessels with dilated lymphatic-like spaces mainly in the superficial dermis with solid cords and fascicles of spindle cells in between the vascular channels [Figure 5]. There was focal lymphoplasmacytic infiltrate in the dermis. Hence, based on these clinical and investigative findings, he was diagnosed to have KS.

Unfortunately, soon after the patient came to know of his retropositive status, he absconded from the hospital and no further evaluation could be performed.

## DISCUSSION

KS is caused by HHV 8. Co-infection of HIV and HHV 8 increases the oncogenic potential of HHV 8.<sup>[1]</sup> KS is the most common malignancy associated with HIV disease.<sup>[4]</sup> Yet, there is a paucity of Indian case reports of KS in the English literature.<sup>[5]</sup> This may be attributed to the low prevalence of HHV 8.<sup>[6]</sup> Out of nearly 25 cases reported in the Indian literature, 50% of cases have been reported from Mumbai, with the most common presentation being the involvement of oral mucosa. It has been observed that patients with oral mucosal involvement had higher mortality than those patients with only skin lesions.<sup>[3,7]</sup>

AIDS-associated KS, frequently reported among homosexual men, presents as asymptomatic violaceous macules, papules, and nodules, with initial lesions presenting on the face and trunk along the relaxed skin tension lines.<sup>[8]</sup> The lesions over the extremities occasionally coalesce to constricting plaques, forming an armor-like plate. This may impair the drainage of extremities and cause lymphedema. In addition, the lower leg lesions are more likely to become secondarily infected.<sup>[9]</sup> As opposed to classic KS, AIDS-associated KS is characterized by rapid clinical course, multifocal dissemination, and rapid internal organ involvement. Oral mucosa is more frequently involved.<sup>[8]</sup>

Dermoscopy has become a routine noninvasive investigation in dermatology in recent times. Apart from pigmented lesions, dermoscopy helps us to diagnose various vascular lesions. The presence of chromophore, hemoglobin in the vascular lesions, appears as red, purple, and bluish-red color in dermoscopy. The color



**Figure 1: Diffuse induration of the left leg studded with violaceous-to-hyperpigmented papules coalescing to form plaques**



**Figure 2: Scattered violaceous oval plaques in the left thigh**



**Figure 3: Hard palate showing bluish-red plaque**

variation is due to the degree of oxidation and depth of hemoglobin in the tissue. The dermoscopic features of KS are scaling, bluish-red discoloration, multicolored areas, lacuna, and brown globules. Multicolored areas



**Figure 4: Nonpolarized dermoscopy showing bluish-red discoloration**

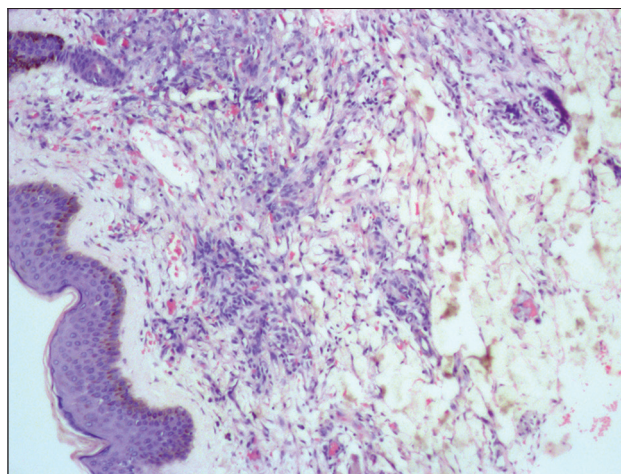
(or rainbow effect) are the circumscribed structureless areas seen in KS and are believed to be due to the diffraction phenomenon when white light is split into various wavelengths while passing through closely arranged slit-like vascular channels.<sup>[10]</sup> In our patient, dermoscopy of the KS skin lesion showed bluish-red discoloration of the plaques, which was suggestive of vascular pathology. In a study done by Hu *et al.*<sup>[11]</sup> on 141 KS lesions (seven patients), bluish-red coloration was the most common dermoscopic pattern seen in 84% of the lesions. The other findings are rainbow effect seen in 36% of the lesions, followed by scaly surface (29%), and brown globules (15%).<sup>[11]</sup> However, in their study, they concluded that “*Rainbow pattern*” was seen only under polarized dermoscopy, which was not performed in our case.

Our patient had widespread cutaneous involvement with edema and CD4 count <200 cells/mm<sup>3</sup> and had systemic illness. Hence, according to the AIDS Clinical Trials Group, our patient was staged as T1 L1S1 (indicating poor risk).<sup>[12]</sup> Treatment options in such cases include liposomal anthracyclines (doxorubicin and daunorubicin), paclitaxel, and interferon alpha.<sup>[13]</sup>

We report this case due to paucity of KS cases reported in the Indian literature and its presentation as lymphedema in a heterosexual male. We also intend to highlight the dermoscopic findings of KS. Survival with AIDS is truncated by fatal infections, so the incidence of cancers in people living with HIV/AIDS (PLHA) in India is low. With improving care of HIV and better management of infections, especially tuberculosis, the longer survival of PLHA in India will likely to increase the importance of cancer as a clinical problem in India.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and



**Figure 5: Histopathological examination showing multiple slit-like vascular spaces, proliferation of spindle cells, and extravasation of red blood cells (H and E, original magnification ×100)**

other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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### Conflicts of interest

There are no conflicts of interest.

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