

# Kaposi Sarcoma of the Lower Extremity with HIV and Kaposi's Sarcoma

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## Abstract

Kaposi's sarcoma is the most common malignancy seen with HIV infection. It is a lymphoangioproliferous tumor first described by Moritz Kaposi in 1872. It is characterized by bluish red or dark brown plaques and nodules, especially in the distal of the lower extremities, often the heels and feet. Organ involvement without skin findings is observed in approximately 15% of the cases. There are four clinical variants, the classical, endemic, iatrogenic and the epidemic associated with AIDS. Kaposi's sarcoma in AIDS cases apart from the skin, it can also be seen in the oral cavity, gastro-intestinal system and respiratory system. Antiretroviral therapy (ART) should be started immediately in newly diagnosed HIV infected patients. In this research, a 65 year old male patient, who was diagnosed AIDS and Kaposi's sarcoma at the same time, is described.

**Keywords:** Kaposi's Sarcoma, HIV, AIDS; Antiretroviral Therapy (ART).

## Introduction

Kaposi's sarcoma is characterized by bluish red or dark brown plaques and nodules, especially in the distal of the lower extremities, often the heels and feet. Visceral involvement may also be seen. Lower extremity lesions gradually progress proximally. Kaposi sarcoma is divided into four main types: classical, epidemic (related to AIDS), endemic and iatrogenic [1-3].

Treatments of Kaposi's sarcoma can be performed with different modalities such as local excision, cryotherapy, chemotherapy, immunotherapy and radiotherapy [4]. Among these modalities, radiotherapy is the most commonly used and reliable treatment that provides the most effective control. Since common superficial skin lesions of KS are quite radio sensitive, complete response rates are high [4].

## Case Report

Our case was a 65-year-old male patient. The patient's complaints started 3 months ago as weakness, weakening of up to 15 kg and purplish swelling on the feet. It first started between the toes and then spread to the back of the feet and legs. The general condition of the patient was good in the clinical examination. The patient had lesions on the bilateral foot and dorsal toes, and on the anterior aspect of the leg. No pathological condition was encountered in the routine laboratory tests of the patient.

Abdominal ultrasonography, chest radiography and thoracic tomography were unremarkable. Among the serological tests, EBV VCA IgM, Rubella IgM, CMV IgM, Toxoplasma IgM were negative and HIV test was positive. Anti-HIV antibody test was negative.

Histopathological examination revealed extravasated erythrocytes, increased vascularity, vascular clefts and fascicles composed of spindle cells. In immuno-histochemical staining, HHV-8: Positive, Ki67: 10%, CD34: Positive, CD31: weak positive was observed.

In radiological examinations; bilateral pleural effusion, more prominent on the left, was detected on the posterior-anterior (PA) chest radiograph, showing infiltrative in the lower zones of the left lung. In thoracic and abdominal tomography; multiple LAPs, the largest being 2 cm in diameter, that tend to merge in bilateral axillary, mediastinal, perivascular, pretracheal, aorta-pulmonary, precarinal, bilateral hilar, parailiac, para-aortic, para-iliac and inguinal areas, In the left lung upper lobe apico-posterior and right lung lower lobe ground-glass appearance in the anterior basal segment, compression atelectasis adjacent to the pleural fluid in the lower lobe of the left lung and pronounced vascular structures were detected. There was no hepatomegaly.

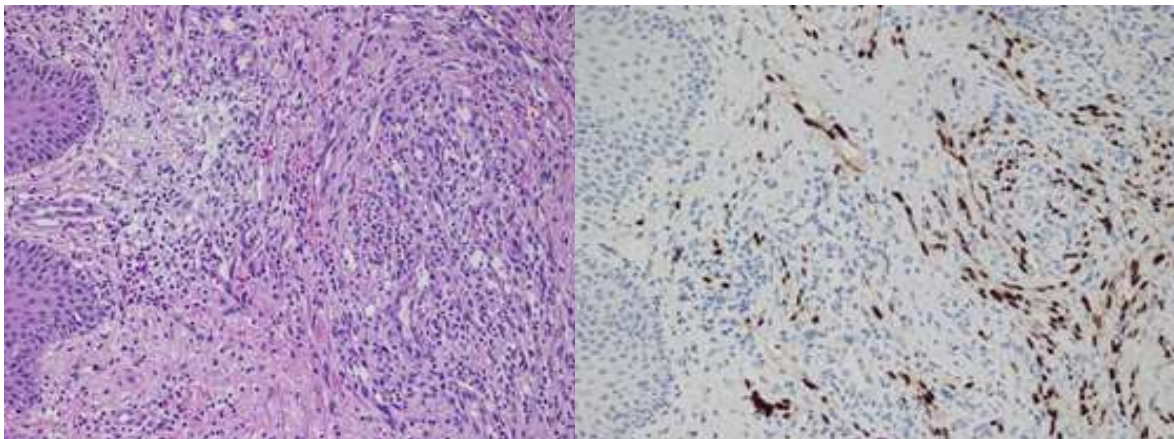
In light of these findings, the patient was considered to be HIV-positive CS and was consulted by the chest and internal medicine. Radiotherapy treatment was initiated in consultation with the medical oncology and radiation oncology departments.



**Figure 1.** Purplish plaques and nodules on the toe.



**Figure 2.** Purplish plaques and nodules on toe and toe dorsal.



**Figure 3, 4.** Extravasated erythrocytes, increased vascularity, vascular clefts and fascicles composed of spindle cells. (Hematoxylin eosin and HHV-8 immunoperoxidase)

## Discussion

Kaposi sarcoma (KS) is an angio proliferative disease associated with human herpes virus 8 (HHV-8) [5]. It is most common in individuals in the Mediterranean basin and Central and Eastern Europe [6]. There are four types of KS: classical, endemic, iatrogenic and epidemic [6]. Kaposi's sarcoma is a well-defined, rare vascular neoplasm that tends to show a multifocal distribution. Mucosa and skin involvement is seen especially in people with Acquired Immunodeficiency Syndrome. The endemic form of KS is common among homosexual and bisexual men

with AIDS and is aggressive [6, 7]. Keeping in mind that there may be multiple involvements in Kaposi's sarcoma in general, especially in immunocompromised patients, it is important to follow-up patients in terms of recurrence and lymphoma [8].

Teke et al. [6] were evaluated a total of 14 patients with CS in their study. One (7.1%) of these patients was related to AIDS and the other 13 (92.9%) were classic KS. There was no history of transplantation in any of the patients. There was no visceral organ involvement among these patients, and only skin involvement was present at the time of diagnosis.

Skin lesions were mostly observed in the lower and upper extremities. Our patient was serologically HIV positive, immunohistochemically HHV-8: positive, Ki67: 10%, CD34: positive, CD31: weak positive.

There are different modalities that can be used in the treatment of KS. Radiotherapy (RT), cryosurgery, laser surgery, electro surgery, excisional surgery, laser therapy, immunotherapy, intralesional or systemic chemotherapy (CT) can be used. Among these treatment methods, the modality that can provide effective control is RT, and the common superficial skin lesions of KS are highly radio sensitive. Radiotherapy was planned for our patient in consultation with the medical oncology and radiation oncology departments [9].

## Conclusion

We wanted to emphasize that CS is rarely observed, especially in HIV-positive patients, KS may be more common and may progress with multiple lesions.

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