Our Dermatology Online

Case Report

Diagnostic challenges in identifying Kaposi's sarcoma: A case report

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ABSTRACT

Kaposi's sarcoma (KS) is a soft tissue neoplasm of vascular origin arising from cells expressing markers of endothelial smooth muscle and macrophages. Epidemiologically, KS is not considered a common tumor worldwide; however, alongside non-Hodgkin's lymphomas, it is among the most prevalent neoplasms associated with AIDS. Presently, four clinical-epidemiological forms of the disease are recognized: classic, endemic (African), epidemic (AIDS-related), and iatrogenic (post-transplantation). Various forms of KS are characterized by distinct clinical progressions and prognoses, with significant variation in symptoms even within the HIV-infected population. This article presents the case of a young man who reported to a primary healthcare clinic with an uncharacteristic vascular skin lesion on the second toe of his right foot. The atypical clinical picture posed numerous diagnostic challenges, thereby prolonging the time to reach a definitive diagnosis of Kaposi's sarcoma and to initiate appropriate therapeutic measures.

Key words: Kaposi's sarcoma, HIV, AIDS, Diagnosis

INTRODUCTION

Kaposi's sarcoma is a multifocal neoplasm of vascular origin that develops from blood vessels and lymphatic cells [1]. Currently, four forms of this tumor are distinguished based on clinical and epidemiological data: 1) classic, initially described by Hungarian physician Moritz Kaposi, 2) endemic, also referred to as African, 3) epidemic, associated with HIV infection, and 4) iatrogenic, observed in patients undergoing immunosuppressive treatment, especially after organ transplants [2,3]. These types share numerous clinical and histological similarities. Accurate diagnostic and therapeutic processes require the recognition of significant differences between initial symptoms and knowledge of the distinct clinical presentations of each form [4]. Even among HIV-infected patients, there is considerable variation in the symptomatology of Kaposi's sarcoma [5]. This article provides a case description of Kaposi's sarcoma with an atypical clinical picture that posed a significant challenge in making a correct final diagnosis.

CASE REPORT

A 36-year-old male reported to a primary care unit due to a persistent and increasingly painful vascular lesion on the second toe of his right foot observed several weeks earlier. According to the patient, the lesion appeared spontaneously without correlation with mechanical trauma or other predisposing factors identified in his history. A physical examination revealed a tender skin lesion in the form of a well-demarcated irregular cyanotic discoloration on the dorsal-lateral surface of the skin of the right foot's second toe without other deviations from the norm (Fig. 1). The patient was referred for radiographic imaging, blood laboratory tests, and consultations at vascular surgery and dermatology clinics. Radiographic examination of the right foot did not describe any pathological

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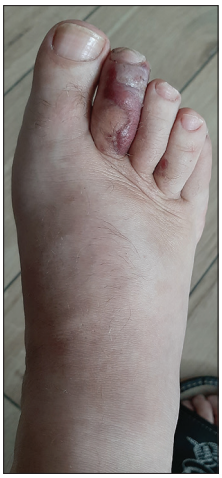

Figure 1: Skin lesions in the initial stage of Kaposi's sarcoma reported at the primary care unit.

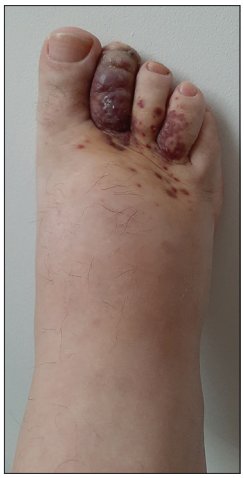

Figure 2: Exacerbated and heterogeneous symptoms of Kaposi's sarcoma documented during hospitalization.

changes, yet blood tests showed slightly elevated inflammation markers, mild normocytic anemia, and a positive result for HIV serology screening test. Due to a significant increase in pain intensity in the affected toe while awaiting specialist consultations, the patient visited the emergency department. Emergency ultrasound Doppler examination revealed no abnormalities; a surgical consultation was also performed. There was no indication for surgical intervention, and dermatological consultation was recommended. At the dermatology clinic, the initial diagnosis of a vascular lesion of the right foot's second toe was maintained. Treatment with azithromycin, fluconazole, pentoxifylline, and a topical cream containing a corticosteroid was initiated, along with analgesic medication as needed. However, this treatment did not yield the expected results, and new small lesions similar to the primary one appeared on the skin of the right foot. Another dermatological consultation led to the suspicion of Kaposi's sarcoma, and the patient was referred to an infectious disease's hospital. Upon admission, a physical examination revealed single skin lesions on the toes of the right foot likely corresponding to KS, with the second toe of the right foot almost entirely swollen and covered by a bluish-red skin lesion (Fig. 2). Additionally, an irregular cyanotic lesion in the hard palate and splenomegaly were observed, and a positive Western blot test for HIV infection was obtained. During hospitalization, a skin biopsy from the primary lesion was taken for histopathological examination, confirming the final diagnosis: Kaposi's sarcoma associated with AIDS. Following diagnosis, the patient received highly active antiretroviral therapy (HAART) and antineoplastic chemotherapy.

DISCUSSION

Skin changes in the course of Kaposi's sarcoma exhibit significant diversity, ranging from bluish-violet spots or nodules to rapidly progressing, well-demarcated, ulcerated plaques or tumors [6]. Despite certain common features in terms of clinical and histological presentation, different forms of Kaposi's sarcoma are characterized by distinct prognoses and symptom heterogeneity [7]. The vascular skin lesion in the form of a cyanotic discoloration on the foot observed in this case report is typically seen in the classic form of KS, characterized by the presence of blue spots, confluent infiltrates, or nodules most commonly located on the feet or lower legs [8]. Additionally, in the classic form of KS, the male-to-female ratio is 17:1; however, it primarily occurs in patients over fifty years of age of Eastern European and Mediterranean descent [8-10]. In contrast, the epidemic form, that is, AIDS-associated KS, is the second most common cancer in HIV-infected patients, where the CD4 cell count is less than 200 cells/mm^3 and is considered the most characteristic cutaneous marker of AIDS [10,11]. The disease almost exclusively affects individuals who have contracted HIV through sexual contact, whereas in individuals infected via intravenous drug use, KS occurs much less frequently [5,12]. Among homosexual men infected with HIV, the risk of developing KS is five to ten times higher [13]. The physical examination conducted during the hospitalization of the reported patient also revealed the presence of an irregular cyanotic lesion on the hard palate and splenomegaly. Notably, in the epidemic form of KS, unlike other forms, the involvement of mucous membranes and facial lesions, especially in the oral cavity, deserve

special attention [14]. Abnormalities concerning internal organs are rarely observed in the course of KS; however, they are most commonly found in patients with the epidemic form, that is, related to HIV infection [14-16].

CONCLUSION

The diagnosis of Kaposi's sarcoma poses a challenge even for experienced specialists due to the variety in clinical presentations not only between the different forms of this tumor yet also often within the same clinical form. Although Kaposi's sarcoma is not a common cancer worldwide, in individuals infected with HIV, it is the second most prevalent oncological disease. Therefore, especially in the case of observing unusual vascular skin lesions of varied morphology in patients with AIDS, such a diagnosis should always be considered in the differential diagnosis.

Consent

The examination of the patient was conducted according to the principles of the Declaration of Helsinki.

The authors certify that they have obtained all appropriate patient consent forms, in which the patients gave their consent for images and other clinical information to be included in the journal. The patients understand that their names and initials will not be published and due effort will be made to conceal their identity, but that anonymity cannot be guaranteed.

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