*Case Report*

# Kaposi Sarcoma in a Non HIV Patient

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## Abstract

We report a case of a 45 year old non HIV infected female,who presented with multiple painful,livid reddish brown plaques, papules and nodules on both lower limbs and left index finger. The cutaneous nodular lesions on biopsy showed characteristic features of Kaposi's sarcoma. This case is reported due to paucity of Kapsi's sarcoma in non HIV Persons. It is typically a disease of older men from European and Mediterranean region. Here we present a case report of classic Kaposi's Sarcoma in a young Indian female.

## Introduction

Kaposi's sarcoma (KS) is the most common multicentric malignancy affecting skin and various internal organs inpatients with AIDS from developed countries.Classic KS is not common affecting non HIV patients.On basis of clinical and epidemiological features, four types ofKS have been recognized: classic,endemic,iatrogenic and epidemic(AIDS related). The course of KS ranges from indolent, with only skin involevement to fulminant with extensive visceral involvement.Humen herpes virus 8(HHV-8)DNA sequences in tumor cells and peripheral blood mononuclear cells of patients with all form of KS shed light on the possible etiopathogenic mechanism of the disease.

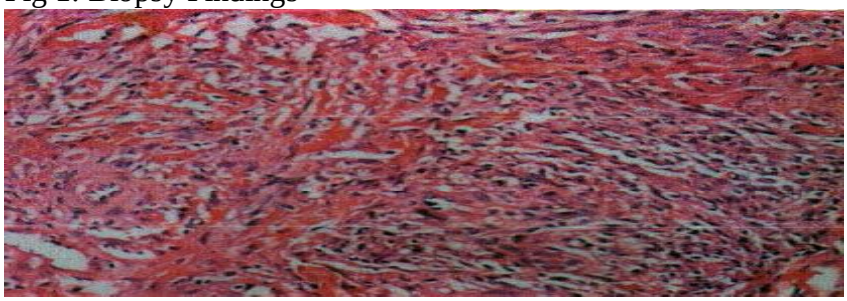
## Case Scenario

Our patient was a 45y female from suburban area of Kashmir, India, who presented to our OPD with 1 year history of erythematous voilaceous macules over feet which had progressed to plaque like lesions over both feet and fingers. She also had arthralgias both knees. On examination, she was hemodynamically stable with normal systemic examination. There are Purplish plaques over both feet involving great toe medial aspect and the heel, left thigh and left index finger. Investigations revealed normal hemogram, KFT, LFT, ECG and USG abdomen. Skin biopsy showed features of Vasculitis. Other investigations revealed ANA/Antids DNA negative, HBs Ag/Anti HCV Ab negative, U1 RNP, c & p ANCA negative, cryoglobulins negative. HIV serology negative. She was started on oral prednisolone 30mg BD which she took for 2 months but lesions progressed.She was then treated with cyclophosphamide and i/v methylpednisolone but lesions showed no response.Repeat skin Biopsy was done and sent to two different labs. Both of them showed features suggestive of Kaposis sarcoma. (Plaque stage).Unfortunately patient developed hospital acquired pneumonia and died even before the final diagnosis was made.Skin biopsy is shown in figure 1.

The entire reticular dermis is filled with a vascular neoplasm, that is made up of nodules of spindled cells that enclose small capillary sized and slit-like vascular spaces containing RBCs, several atypical mitotic figures seen in proliferating splindled cells.

At places irregular vascular spaces are seen developing around pre-existing vascular structures.

Fig 1: Biopsy Findings



**Discussion**

In 1872, Moritz Kaposi, a Hungarian dermatologist, first described Classic Kaposi sarcoma (CKS) as an aggressive "idiopathic multiple pigmented sarcoma of the skin". [(1)] Three additional variants of Kaposi sarcoma (KS) have been identified since Kaposi's first description.The endemic African variant often affects human immunodeficiency virus (HIV)-negative individuals, including children, and can take an aggressive form involving the lymph nodes. The iatrogenic form of KS occurs after solid-organ transplantations in patients on immunosuppressive medications. In 1981, an aggressive type, the AIDS-associated KS, was first identified, and epidemiologic evidence suggested an an infectious cause as well as a possible sexual transmission.

The majority of reports regarding classic KS originate from the USA (Jews and Mediterranean descendents), Sweden, Norway and, more recently, the Mediterranean and Peloponesian islands[3].Classic KS usually presents with erythematous violaceous maculae in the lower members, which progresses slowly into confluent plaque, nodules and/or tumors. The lesions can acquire an eczematous verrucose aspect, or develop to ulceration. Non-depressable edema of the involved member can precede or follow the onset of the lesions. The clinical course of classic KS is prolonged, though in the majority of cases it is benign.Visceral and/or mucosal involvement occurs in about 10% of these patients.Most of the cases occurs in there fifth and sixth decades of life. In the USA and Europe, only 4-8% of the classic KS were observed in age < 50years. In Israel, the median age of onset of classic KS is 67yrs (11-91yrs) and Only 13% are <55yrs [(2)].Initially , men to women ratios of KS rates of incidence were 10-15:1. but recent studies have shown lower gender ratios [(4)]; 4:1 in the USA, 2.6 in Israel and 4.3 in central Europe. [(.2,5)]

CKS is an inflammatory mediated neoplasm that develops in the presence of KSHV and immune perturbation, though exact pathogenesis is not known [(7,8,9)]. Peripheral blood mononuclear cells (PBMC) KSHV DNA detection and high KSHV lytic (> 1:1745) and latent (>1:102400) antibody titers have been found to be positively associated with CKS risk. [(6)] Antibody titer are higher in patients with lesions. CKS risk has been found to be positively associated with reduced hematocrit (<37.4%), hemoglobin (12g/dl), CD lymphocytes (<1000

cells/ul), including CD4 +ve cells (<457 cells/ul) and CD8 +ve(<213) and with increased monocytes (>638cells/ul).[6,10] KS progression and KS staging are significantly and independently associated with positive KSHV viremti and gradual decrease in B-lymphocytes. [11] Seropositivity KSHV was detected in 96.9% of CKS, in (392%) of their 1st degree relatives; which suggests predominantly non- horizontal route of the transmission. [12]

Many treatments have been used to treat classic KS, although no definitive cure is known at present.Surgery, formerly recommended, is no longer indicated apart from tissue analysis. The tendency toward multifocality makes radiation therapy or chemotherapy, or both, the preferred mode of treatment. Radiation therapy is an important treatment, used for many years in classic KS. Lesions of KS are highly radiosensitive,and the treatment is well tolerated and temporarily controls large localized lesions.[13,14] Adverse effects include residual hypopigmentation, radiodermatitis, and ulceration of the skin. In classic KS with limited cutaneous disease, as in the present case, intralesional cytotoxic chemotherapy seems more desirable than systemic chemotherapy.Intralesional injection of vinblastine sulfate is the most commonly used treatment regimen because it is fast, inexpensive, and shows high response rates in the treatment of skin lesions. Adverse effects include pain, skin irritation, and ulceration at the site of injection. However, both radiation therapy and chemotherapy are toxic and/or only temporarily effective.Recently there have been reports of successful hormonal and immunomodulating therapy, such as the use of interleukin-2, chorionic gonadotrophin and interferon. [15,16,17,18,19,20]

**References:**


1. Kaposi M. Idiopathisches multiples Pigmentsarkom der Haut. Arch f Dermatol u Syph 1872;3:265–73.
2. Classic Kaposi Sarcoma Epidemiology and Risk Factors. Review/Iscovich et al. Cancer.2000;88:500–17.
3. Rasppersberger K, Tschachler E, Zonzits E et al. Endemic Kaposi's sarcoma in human immunodeficiency virus type 1 - seronegative persons: demonstration of retrovirus - like particles in cutaneous lesions. J Invest Dermatol 1990;95(4):371-81.
4. Friedmann B. Kaposi's sarcoma: retrospective study of 67 cases with the classic form. Dermatologica 1990;180:13-7.
5. Classic Kaposi Sarcoma: Review/Iscovich et al. CANCER February 1, 2000 / Volume 88 / Number 3
6. Molecular Markers of Classic Kaposi Sarcoma/Brown et al. Cancer 2006;107:2282–90.
7. Ulrich R Hengge, Thomas Ruzicka, Stephen K Tyring, Martin Stuschke, Michael Roggendorf.Update on Kaposi's sarcoma and other HHV8 associated disease Lancet Infect Dis 2002; 2: 281–92

8. Maiorana A, Luppi M, Barozzi P, Collina G, Fano RA, Torelli G. Detection of human herpes virus type 8 DNA sequences as a valuable aid in the differential diagnosis of Kaposi's sarcoma. Mod Pathol. 1997;10:182-187.

9. Luppi M, Barozzi P, Maiorana A, et al. Frequency and distribution of herpesvirus-like DNA sequences (KSHV) in different stages of classic Kaposi's sarcoma and in normal tissues from Italian population. Int J Cancer. 1996;66:427-431.

10. Kaposi's Sarcoma-Associated Herpesvirus Viremia is Associated with the Progression of Classic and Endemic Kaposi's Sarcoma.Claire Pellet, Delphine Kerob, Alain Dupuy, Mary V. Carmagnat, Samia Mourah, Marie-Pierre Podgorniak, Cecile Toledano, Patrice Morel, Journal of Investigative Dermatology (2006) 126, 621–627.

11. Association of Clinical Progression in Classic Kaposi's Sarcoma With Reduction of Peripheral B Lymphocytes and Partial Increase in Serum Immune Activation Markers. Alexander J. Stratigos, et al. Arch Dermatol. 2005;141:1421-1426

12. Emma Guttman-Yassky; Zippi Kra-Oz,et al.Infection With Kaposi's Sarcoma–Associated Herpesvirus Among Families of Patients With Classic Kaposi's Sarcoma.Arch Dermatol. 2005;141:1429-1434 6.

13. Tur E, Brenner S. Treatment of Kaposi's sarcoma. Arch Dermatol. 1996;132:327-331.

14. Marchell N, Alster TS. Successful treatment of cutaneous Kaposi's sarcoma by the 585-nm pulsed dye Laser. Dermatol Surg 1997;28(10):973-5.

15. Gottlieb JJ, Washenik K, Chachua A, Kien AF. Treatment of classic Kaposi' sarcoma with liposomal encapsulated doxorubicin. Lancet 1997;350(8):1363-4.

16. Albini A. The B-core fragment of human chorionic gonadotrophin inhibits growth of Kaposi's sarcoma derived cells and a new immortalized Kaposi's sarcoma cell line. Aids 1997;11(6):713-21.

17. Shibagaki R, Kishimoto S, Takenaka H, Yasuno H. Recomninant interleukin 2 monotherapy for classic Kaposi sarcoma. Arch Dermatol 1998;134(10):1193-6.

18. Hauschild A, Dunsche PC. Intralesional treatment of classical Kaposi sarcoma with interferon-alpha. Hautarzt 1992;43(12):789-91.

19. Pichler E, Kofler H, Fritsch P. Cystic Kaposi's sarcoma 1989;40(10):644-6.

20. Harris PJ. Intralesional human chorionic gonadotropin for Kaposi's sarcoma. NEJM 1997;336(36):187-8.