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# Iatrogenic Kaposi's Sarcoma

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## ABSTRACT

The development of Kaposi's sarcoma (KS) has been associated with either iatrogenic or underlying disease related immunodeficiency. We report a case with iatrogenic Kaposi's sarcoma developed after treatment of non-Hodgkin's lymphoma (NHL) who was achieved partial clinical remission with systemic chemotherapy.

Key Words: Iatrogenic Kaposi's sarcoma, Systemic chemotherapy, Non-Hodgkin's lymphoma.

## ÖZET

### İatrojenik Kaposi Sarkomu

Kaposi sarkomun ortaya çıkması iatrojenik veya altta yatan hastalığa bağlı immünyetmezlik sonucu olur. Bu yazıda, sistemik kemoterapi ile kısmi klinik remisyon elde edilen non-Hodgkin lenfomalı bir olguda tedavi sonrası gelişen iatrojenik Kaposi sarkoma sunulmaktadır.

Anahtar Kelimeler: İatrojenik Kaposi sarkoma, Sistemik kemoterapi, Non-Hodgkin lenfoma.

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## INTRODUCTION

Kaposi's sarcoma is an angioproliferative disease. It is classified into four groups: Endemic, epidemic, classic, and iatrogenic<sup>[1,2]</sup>. The iatrogenic type is associated with immunosuppressive therapy<sup>[3]</sup>. KS that follows a short (1 to 4 month) course of low-dose prednisone has been reported but this is extremely rare<sup>[4]</sup>. The case described in the present report is characterized by a history of slowly evolving disease affecting the lower

extremities, after a two years history of non-Hodgkin's lymphoma (NHL) eight cycles of COP (Cyclophosphamide, Oncovine, Prednisolone) chemotherapy.

## A CASE REPORT

A 43-year-old man presented with brown-blue-red plaques and nodules with intense local skin pain on lower extremities, the dorsum and toes of the feet, and was admitted to our medical oncology department in



Figure 1. Lesions on left leg of patient.

January 2001. The patient had a diagnosis of NHL two years so he had received eight cycles of COP chemotherapy. The plaques and nodules appeared eight months after he started taking COP chemotherapy. He had high fever (39°C), intense local pain, and edema in each leg and feet.

Physical examination revealed large scale well-demarcated plaques and nodules on each lower extremities, and the dorsa and toes of feet. The lesions measured 1 to 2 cm across, and were brown-blue-red. Some of the plaques measured 1 to 2 mm (Figure 1). There were no lesions in the oral mucosa. He had multiple lymphadenomegaly ranging 1 to 2 cm, in the axillary region. The patient's conjunctivas was pale. The fever was 39°C. Laboratory findings were: Lactic dehydrogenase (LDH) 850 IU/L, hemoglobine (Hb) 8 g/dL, while blood cell (WBC)  $5.6 \times 10^9/L$ , platelet (Plt)  $100 \times 10^9/L$ , and a sedimentation rate of 100 mm/h, respectively. Human immunodeficiency virus (HIV) was negative. In X-ray and CT scan of the thorax there was pneumonic infiltration. Biopsy was obtained from the lesions on the legs.

Histopathologic examination of the lesions using a hematoxylin-eosine preparation revealed fusiform and nodule shaped proliferation of the cells in dermis. It revealed vascular slits including erythrocytes in their lu-

mens, lymphocytes, and small vascular structures in the cellular area (Figure 2). These findings are diagnostic of KS.

After treatment of pneumonia, the patient was given CHOP (Cyclophosphamide, Adriablastine, Oncovine, Prednisolone) chemotherapy protocol because no remission was achieved. This protocol was repeated every 21 day. The lesions improved markedly after three courses of CHOP chemotherapy. Local skin pain and edema disappeared. The patient's fever returned to normal.

### DISCUSSION

Kaposi's sarcoma was described the first time by Moritz Kaposi in 1872 as idiopathic multiple pigmented sarcomas of the skin. This tumour is graded into four groups: Endemic, epidemic, classic, and iatrogenic<sup>[2,5]</sup>. The endemic type is seen in certain regions of Africa. The epidemic type is more common in homosexual men or in drug abusers with AIDS. The classic type is a slowly growing tumour that is seen more often among elderly men of Mediterranean or Jewish ancestry<sup>[1]</sup>.

The iatrogenic type is seen in patients who are receiving immunosuppressive therapy for autoimmune disease and cytotoxic chemotherapy for cancer. Especially, this is seen in ethnic groups that have an increased risk for classic KS. This type of KS tends to be aggressive because it may involve lymph nodes, mucosa, and visceral organs. This state may be established in about half of the patients. The histologic features of all types of KS are identical. Histologic features of KS include spindle cell proliferation, vascular slits, extravasated erythrocytes, hemosiderin, siderophages, and

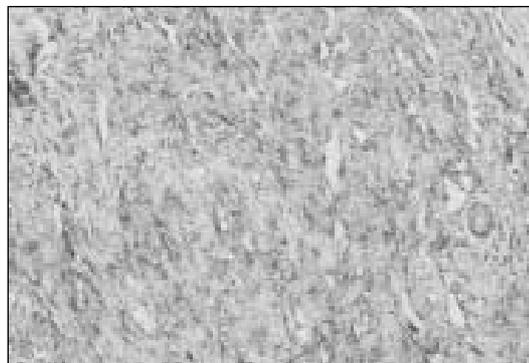


Figure 2. Histologic appearance of Kaposi's sarcoma.

fibrosis. Rates of progression of variants of KS are also different<sup>[1,3]</sup>.

Our patient had iatrogenic disease due to NHL therapy because the lesions developed 8 months after the initiation of COP therapy. It is well known that corticosteroid therapy might cause KS<sup>[6,7]</sup>. The classic KS tend to occur in elderly men of Mediterranean. Our case was 43 years. Only the age of our patient was discordant with classic KS.

In cases of corticosteroid-induced KS, the lesions occurred 27.5 months after the therapy started. This period was 13.7 months in the study of Trattner and colleagues<sup>[4]</sup>. In our patient this period was 8 months. The cause of this short period may be due to the patient's ancestry from Mediterranean region, known to be susceptible to development of KS.

The treatment of iatrogenic KS is either discontinuation of the medication or use of radiation therapy<sup>[3]</sup>. Chemotherapy may be a choice in patients with widespread cutaneous, visceral progressive disease and lymphedema. In connection with the NHL relapsed, we gave CHOP therapy to patient. The lesions improved markedly after 3 cycles CHOP therapy. The edema and local pain disappeared. Because of the improvement in the lesions radiotherapy was not administered to the patient.

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