

KAPOSIS' SARCOMA FOLLOWING LONG TERM STEROID THERAPY

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Summary

An 18-year-old Malay lady was treated with high dose steroids for three and a half years for idiopathic thrombocytopenic purpura. At 21 years, after a series of relapses, a splenectomy was carried out. In addition, two nodules at the hilum of the spleen were also removed. Histological examination of these nodules revealed features of Kaposi's sarcoma. Kaposi's sarcoma resulting from immunosuppression by corticosteroids is rare. Our patient is the first such case reported in Malaysia.

Keywords: Kaposi's sarcoma, immunosuppressive therapy, corticosteroids, idiopathic thrombocytopenic purpura.

INTRODUCTION

Kaposi's sarcoma has been reported with increasing frequency in patients undergoing immunosuppressive therapy,^{1,2} particularly renal transplant recipients.¹ A few cases have occurred in patients with autoimmune diseases.³ It has been observed in patients with the Acquired Immunodeficiency Syndrome (AIDS)⁴ - a disease characterised by profound immunodeficiency. Less commonly, the tumour has been described in association with corticosteroid therapy for other disorders like multiple myeloma, pemphigus, pemphigoid, aplastic anaemia and idiopathic thrombocytopenic purpura.⁵ In this report, we present a patient who developed visceral Kaposi's sarcoma during the course of treatment with corticosteroids for idiopathic thrombocytopenic purpura (ITP).

CASE REPORT

In February 1983, an 18-year-old Malay lady presented with petechial haemorrhages and bruises of both her lower limbs. Blood counts showed thrombocytopenia. A diagnosis of idiopathic thrombocytopenic purpura was made on bone marrow biopsy and negative LE cells, rheumatoid factor and anti-DNA antibodies. She was started on prednisolone therapy (20 mg tds). There was initial good response and the dosage was varied according to the platelet count. She was well for about 2 years but was subsequently found to have hypersplenism. A splenectomy was suggested but she refused surgery. In October 1985 (2 years 8 months after initial diagnosis), she was admitted to the hospital for an acute exacerbation of her

condition. She responded well to transfusions of packed cells and was discharged on high dose prednisolone (20 mg tds). Six months later, she was readmitted with another acute exacerbation of her illness. This time the patient consented to a splenectomy. At surgery, a normal sized spleen was removed. Two purplish nodules measuring about 3 cm in diameter each were found at the hilum of the spleen. The surgeon removed them thinking that they were spleniculi. The rest of the abdominal viscera were noted to be normal. She was initially well, but developed dyspnoea and haemoptysis on the 10th post-operative day. A chest x-ray revealed a left sided pleural effusion. She did not improve despite antibiotics and chest physiotherapy. She requested for discharge from hospital 3 weeks after surgery and subsequently died at home two weeks later.

Pathology

Histological sections from the spleen showed some megakaryocytes, erythroid proliferation and haemosiderin pigments suggestive of hypersplenism. The splenic hilar nodules were lymph nodes which were almost completely replaced by a vascular tumour (Fig. 1). This tumour was composed of large spindle-shaped cells arranged in interlacing bundles. The intervening tissue was highly vascular and showed variable sized channels and crevices filled with extravassated red blood cells (Fig. 2). Mitotic figures were quite prominent in the cellular areas averaging about 6 per 10 high power fields. The histological features were diagnostic, of Kaposi's sarcoma. An

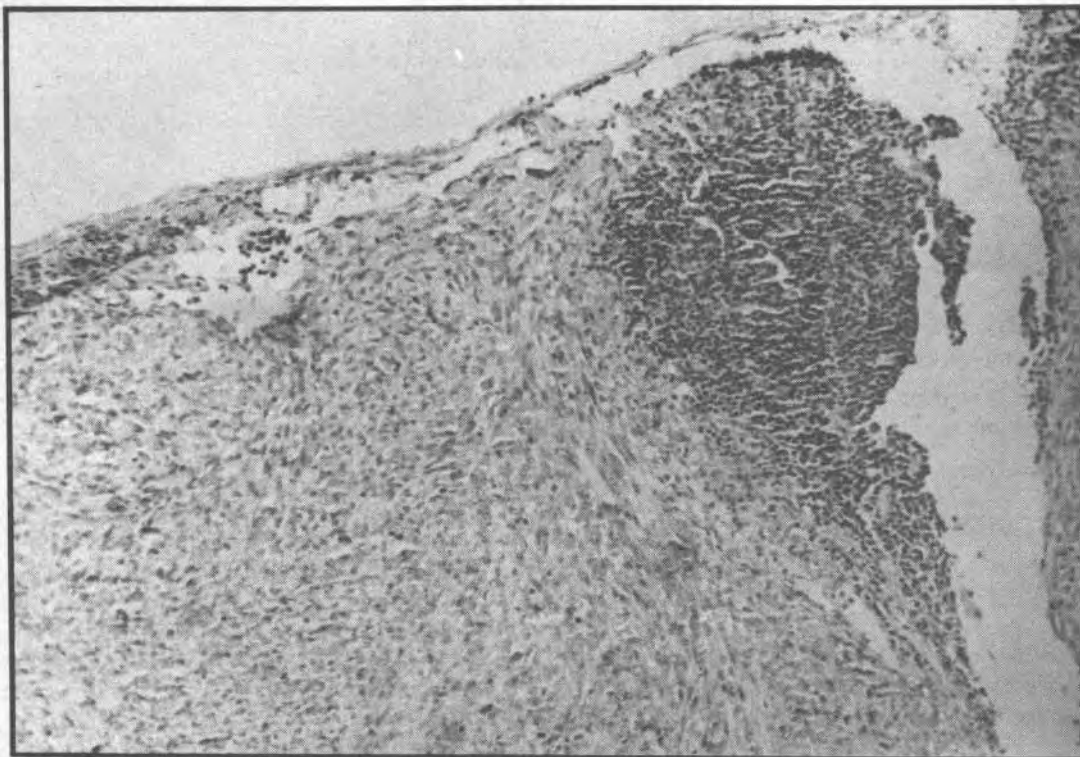


FIG. 1. Tumour almost completely replacing the lymph node. H & E x 100.

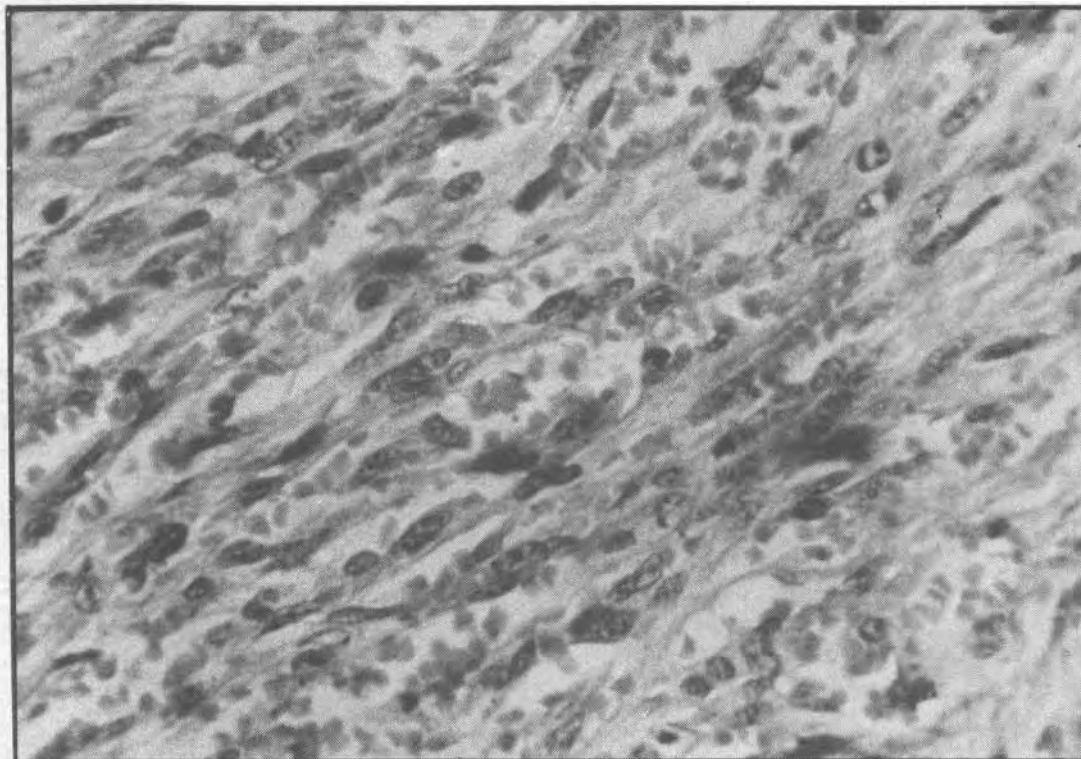


FIG. 2: Crevices filled with extravassated blood and lined by spindle shaped tumour cells. H & E x 400.

anti-HTLV 3 test done subsequently was non-reactive.

DISCUSSION

Kaposi's sarcoma, first described in 1872, was initially regarded as a primary disease of the skin and subcutaneous tissue in which visceral metastatic lesions later appeared.¹ It is now known that the disorder may also begin in any internal organ of the body.⁶

Three forms (i.e. sporadic, endemic and epidemic forms) have been described in relation to its incidence and features in different geographical areas.^{7,8} The sporadic form which is the classical or European form has an insidious course and commonly manifests as blue dermal plaques or nodules in the lower extremities with little tendency to spread to the lymph nodes. This form of Kaposi's sarcoma has an excellent survival rate. It tends to occur more in countries in the Mediterranean area. The endemic form, which is the African form, may display some atypical variants (i.e. predominant gastrointestinal involvement with strong visceral or lymph nodal metastatic capacity and primary generalised lymph nodal involvement). Kaposi's sarcoma in this form can affect children.⁹ It has an aggressive course and, with visceral involvement, is invariably fatal. The third form, which is the AIDS - related form, affects a wide range of immunocompromised patients i.e. homosexual men, drug addicts, blood transfusion recipients who have contracted AIDS,⁴ individuals with other primary malignancies especially haematological malignancies^{9,11} and patients treated with immunosuppressive agents.^{1,2} It progresses rapidly and kills 20% to 40% of its victims.

Kaposi's sarcoma in association with steroid therapy is well documented.^{1,2,3} The majority follows the classical form of skin manifestations in the elderly.¹ These tumours may regress partially or completely on withdrawal of the immunosuppressive treatment.² However, if visceral involvement occurs, the mortality rate is very high as seen in our patient. In the reported cases, Kaposi's sarcoma developed from one month to ten years after initiation of immunosuppressive treatment.^{1,2} Most have been given fairly high doses of steroid during treatment,¹ as was the case in our patient. Thus the degree of immunosuppression may be contributory to the development of the disease. The actual mechanism is still unknown. It has been put forward that immunosuppressive drugs may have an indirect carcinogenic effect by altering immunological

surveillance.³ The frequency of spontaneous regression in Kaposi's sarcoma may also indicate the existence of a host defence mechanism which may be weakened by immunosuppression.² Other workers have suggested that a virus (cytomegalovirus) may play a role in the development of Kaposi's sarcoma.² The oncogenic effect of this virus may be enhanced by immunosuppression.²

It is very likely that the mechanism is multifactorial. Genetic factors are likely to be important in view of the higher incidence in elderly men of Jewish and Italian origins. An increased incidence of the HLA-DR5 phenotype and decreased frequency of HLA-DR3 have been reported in both "classic" and epidemic forms.⁴

The histogenesis of Kaposi's sarcoma is also unclear. It has been proposed that the tumour arises from totipotent mesenchymal cells,¹ from undifferentiated vasoformative cells of the adventitia of blood vessels,⁵ or from the reticulo-endothelial system.⁶

The importance of recognising the association of Kaposi's sarcoma with steroid therapy cannot be overly emphasized considering the great numbers of patients receiving steroid therapy for various diseases. The possibility of tumour regression on withdrawal or decreasing the dosage of immunosuppression makes it all the more important that the tumour be recognised early. Additional antitumour treatment with radioltherapy, chemotherapy and/or surgical excision may improve prognosis.

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