



(CASE REPORT)



Kaposi's sarcoma revealing an immune restoration syndrome

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Abstract

Introduction: Highly active antiretroviral therapy (HAART) leads to reconstitution of immune responses in HIV-infected patients. This immune reconstitution may reveal an immune reconstitution syndrome (IRS). While tuberculosis is the most common manifestation of IRS in southern countries, other more serious conditions such as Kaposi's disease may reveal it.

Observation: We report a case of Kaposi's disease revealing an immune restoration syndrome with the aim of contributing to a better management. The patient was 38 years old and HIV1 positive, severely immunocompromised with a TCD4 lymphocyte count of 138 cells/mm³. He was admitted to the YO University Hospital for fever associated with a progressive deterioration of the general condition. On admission, he showed signs of anemic cardiomyopathy (functional systolic murmur + edema of the lower limbs + severe anemia at 4.7g/dl) and signs of functional renal failure (creatinine=182 micromol/l). Under treatment, the evolution was favorable and he was discharged from the hospital on antiretroviral treatment (ARV). Three months after the start of ARV treatment, the follow-up assessment noted an increase in TCD4 lymphocytes to 300 cells/mm³ and the skin examination revealed Kaposi's lesions on the thigh. With specific treatment, the evolution was favorable.

Conclusion: Early detection and management of HIV infection can prevent some serious manifestations of immune restoration syndrome, such as Kaposi's disease.

Keywords: Immune restoration syndrome; Kaposi's; HIV; Antiretroviral therapy

1. Introduction

The introduction of Highly Active Anti-Retroviral Therapy (HAART) in the management of HIV infection has significantly reduced the incidence of opportunistic diseases through immune restoration. However, these antiretroviral drugs (ARVs) can lead to paradoxical inflammatory or autoimmune phenomena in the form of infectious or tumor pathologies such as lymphoma or Kaposi's sarcoma [2]. We report a case of Kaposi's sarcoma revealing an immune restoration syndrome in the Department of Infectious and Tropical Diseases of Ouagadougou.

2. Observation

A 34-year-old patient, a former smoker, was referred to CHU YO for nocturnal hyperthermia and asthenia. The onset of symptoms was about 4 months ago, marked by the progressive onset of asthenia and hyperthermia, which evolved in a context of progressive alteration of his general condition (with weight loss and severe clinical anemia). On admission to the Infectious Diseases Department, the patient was clinically anaemic, had a clear conscience, discrete oedemas of

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the lower limbs, a systolic murmur of intensity 2/6 at the pulmonary focus, a temperature of 37°5, a pulse of 80 beats/mn, a blood pressure of 100/50mmHg, Hackett's type I splenomegaly, and suppurated axillary adenitis.

The blood count showed severe anemia at 4.7 g/dl, creatinine level at 182 micromol/l, TCD4 lymphocyte count at 138/mm³ and the retroviral serology came back positive for HIV1. Abdominal ultrasound showed homogeneous splenomegaly with bilateral renal pain. Chest radiography showed right hilar bronchial opacities.

He received a transfusion of packed red blood cells associated with ceftriaxone, an antimalarial treatment and an antiretroviral treatment (abacavir+lamivudine+efavirenz). The evolution under treatment was favorable and he was discharged after 14 days of hospitalization. At the third month of antiretroviral treatment, the TCD4 lymphocyte count returned to 300/mm³ and the skin examination noted papulo-nodular lesions suggestive of Kaposi's sarcoma evoking an immune restoration syndrome. A biopsy of the skin lesions confirmed the diagnosis of Kaposi's sarcoma. Under treatment with anticancer drugs and antiretrovirals, the evolution was favorable.

3. Discussion

Described for the first time in Vienna by Moritz Kohn Kaposi, Kaposi's sarcoma is a vascular and fibroblastic disease caused by the human herpes virus type 8 discovered in 1994 by Chang in the United States [4]. This disease may reveal an immune reconstitution syndrome [1]. Pathophysiologically, the inflammatory syndrome of immune reconstitution is associated with the restoration of a highly inflammatory immune response described as a "cytokine storm", directed against the human herpes virus type 8, with a consequent surge in endothelial angiogenesis. This immune response involves both CD4 T cells and an innate immune response involving NK cells, the complement system and macrophages [1]. While the most cited risk factor is HIV immunosuppression, and a CD4 T cell count below 50/mm³ [1,2,3,8], our patient had a higher CD4 T cell count (138 cells/mm³). The skin lesion was papulo-nodular with lymphoedematous infiltration in our patient as described by Ndiaye [5] in Dakar and by Soudré in Burkina [5,7]. The predominance of males has already been reported by several authors and is thought to be related to the excess of androgens that stimulate the proliferation of lymphocytes and the production of interleukins [6,7]. In general, the treatment of the inflammatory syndrome of immune reconstitution associated with Kaposi's sarcoma is based on the combination of antiretroviral and anticancer treatment [10], even if in the literature, some authors maintain that antiretroviral drugs alone can lead to the regression of lesions [9,10].

4. Conclusion

Within three months of starting antiretroviral therapy, the search for lesions suggestive of Kaposi's sarcoma in the context of the manifestations of the immune restoration syndrome is essential in view of the severity. Early management of Kaposi's sarcoma with antiretroviral therapy improves prognosis. Early detection and management of HIV infection can prevent some of the severe manifestations of immune restoration syndrome, such as Kaposi's disease.

Compliance with ethical standards

Disclosure of conflict of interest

All authors declare that they have no conflict of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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