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# Discovery of HIV+ Infection at the Time of Diagnosis of Hodgkin's Lymphoma: A Case Report

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**Abstract**

Hodgkin lymphoma, although not considered an AIDS-associated neoplasia, is strongly linked to HIV. Individuals with HIV have a higher risk of contracting this disease. This article describes the case of a 12-year-old girl admitted with multiple cervical adenopathies, whose tests showed stage IV Hodgkin's lymphoma with respiratory problems. She tested positive for HIV and died before treatment could begin. This case highlights that HIV weakens the immune system, making people more susceptible to cancers, particularly Hodgkin's lymphoma, the risk of which is multiplied by 10 in infected people.

**Keywords :** Hodgkin's lymphoma, AIDS,Immune system

**Résumé**

Le lymphome de Hodgkin, même s'il n'est pas considéré comme un néoplasie associé au SIDA, a un lien important avec le VIH. Les individus porteurs du VIH ont un risque plus élevé de contracter cette maladie. Cet article décrit le cas d'une jeune fille de 12 ans admise en raison de multiples adénopathies cervicales, dont les tests ont montré un lymphome de Hodgkin au stade IV avec des problèmes respiratoires. Un test de dépistage du VIH a montré qu'elle était positive, et elle est décédée avant le début du traitement. Ce cas met en évidence que le VIH affaiblit le système immunitaire, rendant les gens plus susceptibles aux cancers, en particulier au lymphome de Hodgkin, dont le risque est multiplié par 10 chez les personnes infectées.

**Mots clés :** Lymphome de Hodgkin, SIDA, Système immunitaire

## Introduction :

Hodgkin's lymphoma (HL) is a cancer that impacts the lymphatic system and is characterized by a rise in B lymphocytes. While it is not classified as an AIDS-related cancer, recent studies indicate a significant connection between HL and the human immunodeficiency virus (HIV). People infected with HIV face a greater likelihood of developing HL, with research indicating that their risk is ten times greater compared to the overall population. This association raises concern, especially in areas wh ere HIV prevalence is high, emphasizing the importance of prompt diagnosis and effective treatment.

The aim of this article is to describe a rare clinical situation seen in the pediatric onco-hematology department at Fez University Hospital. It will discuss the clinical,

paraclinical, and treatment details regarding the link between Hodgkin lymphoma and HIV infection in a child. This case is the first of its kind reported in our institution, and we anticipate it will help increase awareness and enhance clinical methods.

**Observation :**

We followed a 12-year-old female patient whose family history was marked by the mysterious death of her parents, which may have contributed to psychosocial factors affecting her general condition. She was admitted with cervical poly-adenopathy that had been evolving for two months. On clinical examination, we noted a cluster of bilateral cervical adenopathies measuring up to 9 cm in long axis, firm in consistency, painful, fixed and without inflammatory signs.

A CCTAP scan revealed supra- and subdiaphragmatic lymph node masses, as well as a pulmonary tumor mass, classifying the lymphomatous pathology as stage IV according to the Lugano classification. These masses were responsible for compression of the oropharynx and bronchial compression at the thoracic level, leaving the patient vulnerable to respiratory complications.

Pathological analysis of a lymph node biopsy confirmed the presence of malignant tumour proliferation compatible with Hodgkin lymphoma. As part of the pre-therapeutic work-up, HIV serology was carried out, which came back positive. Unfortunately, the patient's respiratory status deteriorated rapidly, and she died before specific treatment could be started.

**Discussion :**

The link between HIV and Hodgkin's lymphoma (HL) is well documented in medical research. Because of its weakening action on the immune system, HIV significantly increases the chances of developing several forms of cancer, including HL. **[1]** This increased susceptibility is mainly due to the decline in CD4+ cells, which are essential for controlling the immune response. Recent research has deepened our understanding of this relationship.**[4]**

For example, a publication in the Journal of Clinical Oncology revealed that people living with HIV have a higher incidence of LH, particularly of the types with Reed-Sternberg cells. **[2]** These studies also highlighted the importance of chronic activation of the immune system and excess pro-inflammatory cytokines in the genesis of HL in these individuals. Further research published in The Lancet Haematology examined the molecular mechanisms involved, indicating that HIV promotes B-cell multiplication and increases the likelihood of genetic mutations linked to the development of HL. **[3]**

These results underline the importance of enhanced surveillance in HIV-positive patients. In our situation, late diagnosis of HIV infection resulted in a less favorable prognosis. This case highlights the vital importance of regular HIV screening, especially in young patients with lymphoma symptoms. In areas heavily affected by HIV, such as parts of sub-Saharan Africa, this strategy could significantly reduce the number of cases diagnosed too late. **[5]**

To improve clinical outcomes in patients with HIV-associated Hodgkin's lymphoma (HL), a number of strategies can help. These are designed to promote early detection, optimize management and ensure effective patient follow-up, while increasing knowledge and collaboration in this sector. **[6]**

Raising awareness among healthcare professionals of the link between HIV and lymphoma is essential to promote early detection. Special training should be offered on symptoms to watch out for, screening procedures and appropriate treatment strategies.

**Conclusion :**

This case illustrates the need for a proactive approach to the detection and management of HIV infection in children presenting with symptoms of Hodgkin lymphoma. HIV represents a significant risk factor for the development of this type of cancer, and early management could improve clinical outcomes and quality of life for patients. By incorporating these recommendations into clinical practice, we can hope to reduce the incidence of late diagnosis and improve the prognosis of affected children.

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