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Case Report

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T-cell non-Hodgkin lymphoma of lymphoblastic type revealed by a chronic swollen testicle managed in the urology department of Laquintinie Hospital in Douala, Cameroon

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Abstract

Background: Non-Hodgkin T-cell lymphomas typically develop in lymph node territories, and primary extra nodal locations are rare. The clinical presentation is nonspecific, dominated by signs of compression. Imaging aids in suspicion, and histology confirms the diagnosis. Clinical Observation: A 61-year-old patient initially hospitalized for the management of upper gastrointestinal bleeding six months ago was referred to the urology outpatient clinic due to a chronic swollen testicle persisting for a year. A non-contributory testicular ultrasound showed peri scrotal lymphedema with inguinal lymphadenopathy, right orchid epididymitis, and left epididymitis. Blood tests were normal. Despite antibiotic therapy, there was no improvement in the clinical condition. Physical examination revealed painless and mobile cervical, axillary, and inguinal lymph nodes. Pelvic MRI suspected a probable lymphoma. A lymph node biopsy in the left groin confirmed a non-Hodgkin T-cell lymphoma of lymphoblastic type infiltrating the capsule. The patient was transferred to haematology for further management. Conclusion: T-cell lymphoblastic lymphoma is primarily characterized by nodal involvement. There is a diagnostic delay that is anatomopathological in nature. Management involves polychemotherapy.

Keywords: Non-Hodgkin T-cell lymphoma, Lymphoblastic, Chronic swollen testicle.

INTRODUCTION

Lymphoblastic lymphoma and acute lymphoblastic leukaemia are considered the same disease with different clinical presentations. A case is defined as lymphoma if there is a mass-like lesion in the mediastinum or elsewhere, and the bone marrow contains less than 20% tumour cells. It is classified as leukaemia if there are more than 20% medullary tumour cells or no mass lesion [1]. Non-Hodgkin lymphomas are malignant monoclonal proliferations of B, T, or NK (natural killer) lymphoid cells at different stages of maturation. They usually develop in lymph node territories. Primary extra nodal locations account for less than a third of cases. Precursor lymphoblastic lymphoma occurs when immature lymphocytes (lymphoblasts) become abnormal in the earliest stages of their development. T and B cells are the types of lymphocytes [2]. The clinical presentation of T-cell lymphoblastic lymphoma is nonspecific and dominated by signs of compression, leading to diagnostic challenges. Imaging aids in suspicion, and histology confirms the diagnosis. The aim of this study was to report a case of chronic swollen testicle revealing T-cell lymphoblastic lymphoma and to explore the diagnostic, therapeutic, and prognostic features of this cancer.

CASE REPORT

The patient, a 61-year-old male, was initially admitted to the gastroenterology department of Laquintinie Hospital in Douala on 11/05/2021 for upper gastrointestinal bleeding. Subsequently, he was referred to the urology outpatient clinic due to a chronic swollen testicle that had been evolving for approximately one year. According to the medical history, the patient reported consulting a general practitioner in a healthcare facility who prescribed a testicular ultrasound on 05/03/2021. The ultrasound revealed peri scrotal lymphedema with inguinal polyadenitis, suggestive of elephantiasis, right orchid epididymitis with a reactively abundant hydrocele, and left epididymitis. The laboratory tests included a total PSA of 1.45 mg/ml, a normal blood count, a negative urine culture, and negative serologies (Chlamydia, Mycoplasma,

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Syphilis, HIV, Hepatitis B and C). The patient was prescribed an undocumented antibiotic therapy and ivermectin. Despite this treatment, the symptoms persisted, prompting the patient to seek care at other healthcare facilities, where he received additional antibiotic prescriptions without clinical improvement.

Physical examination revealed the patient to be in good general condition, afebrile, with stable vital signs. Examination of the lymph node areas identified painless and mobile cervical, axillary, and inguinal lymph nodes with diameters ranging from approximately 1 to 3 cm. Examination of the external genitalia revealed peno-scrotal oedema with opaque transillumination (Figure 1). The testicles were of normal volume and non-painful, and the prostate was normal on rectal examination. A pelvic MRI performed on 30/10/2021 showed bilateral ilioinguinal lymphomatous tumour bulk: probable lymphoma, and significant scrotal thickening with bilateral hydrocele while maintaining the integrity of the testicles and epididymites. The histopathological report from the left inguinal lymph node biopsy on 17/11/2021 concluded that it was a non-Hodgkin "T" type lymphoblastic lymphoma infiltrating the capsule.

The patient has been transferred to haematology for management, which is not yet effective due to financial constraints.

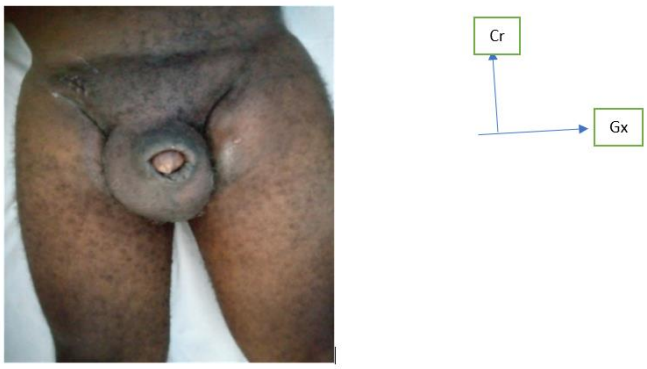

Figure 1: Peno-scrotal lymphedema and bilateral inguinal lymphadenopathies on the twenty-fifth postoperative day after the biopsy of the left inguinal region

DISCUSSION

T-cell lymphoblastic lymphomas predominantly occur in adolescents and young adults, although they can also affect older individuals. The incidence in the United States is approximately 3 cases per million people per year, and it does not vary by ethnicity [3, 4]. In our study, the patient was a 61-year-old male, which may be explained by the fact that most people receive their diagnosis either under 20 or over 50 years old, although it can occur at any age. Debbagh et al. found similar results in their study on renal lymphoma, reporting cases in a 40-year-old woman and a 66-year-old man [5]. Factors predisposing to lymphoma development include a history of neoplasms, immunosuppressive treatments, and viral infections, notably EBV, HIV, and hepatitis virus.

Clinically, patients typically present with cervical, supraclavicular, and axillary lymphadenopathy (50%) or mediastinal masses (50 to 75%) [6]. The mediastinal mass is anterior, voluminous, and associated with pleural and pericardial effusion. These masses can lead to complications such as superior vena cava compression syndrome and tracheal obstruction. The disease's course varies, with some patients experiencing slowly progressing symptoms over weeks or months, while others have more acute symptoms. Extra lymphatic locations (skin, testicles, bone involvement, liver, spleen, kidney) are most commonly found in precursor B-cell lymphoblastic lymphomas [7]. In our case, the patient was hospitalized for upper gastrointestinal bleeding before being referred to the urology department for peno-scrotal lymphedema associated with bilateral inguinal lymphadenopathies. The clinical presentation can be explained by the fact that in T-cell lymphoblastic lymphoma, the main clinical manifestation is lymphadenopathy, and peno-scrotal lymphedema may be related to compression of venous or lymphatic drainage by inguinal lymphadenopathies. Debbagh et al. also found hematemesis in observation No. 1 and lymphadenopathies (left supraclavicular, 1 cm hard and mobile, and bilateral mobile and hard jugulo-carotide) in observation No. 2. Unlike our clinical case, they found secondary locations (renal for observation No. 1 and No. 2, and testicular for observation No. 2) [5].

The diagnosis is suspected based on clinical and radiological findings but is confirmed only by histopathological examination [8]. In most cases, patients present with elevated lactate dehydrogenase (LDH) levels. About 60% of patients develop bone marrow infiltration [9]. Peripheral blood smears show lymphoblasts ranging from small cells with little cytoplasm, condensed nuclear chromatin, and indistinct nucleoli to larger cells with moderate cytoplasm, dispersed chromatin, and multiple nucleoli [10]. The diagnosis of T-cell lymphoblastic lymphoma is established based on the result of a bone marrow biopsy or other involved tissue, such as the mediastinum [11]. LDH and bone marrow biopsy were not performed in our patient. The MRI suggested lymphoma, and the lymph node biopsy confirmed the diagnosis.

The analysis of the results from the staging and overall assessment classifies the lymphoma according to the Ann Arbor classification, which guides the treatment and predicts the prognosis of the disease. Treatment depends on the tumour's degree of malignancy, aggressiveness, and the presence or absence of systemic lymphoma [2]. Lymphoblastic lymphomas are treated with protocols derived from acute lymphoblastic leukaemia (ALL) protocols, involving semi-intensive, continuous, and prolonged chemotherapy (18 to 24 months). The best-published results so far are from the BFM90 protocol (5-year event-free survival of 90%), which includes several phases: induction with corticosteroids, vincristine, doxorubicin, L-asparaginase, cyclophosphamide, cytarabine, and 6-thioguanine; consolidation with four courses of high-dose methotrexate (5 g/m2); re-intensification; and maintenance with 6-mercaptopurine and methotrexate [12]. The outcomes with this type of protocol for patients over 15 years old are very similar to those obtained in younger patients, with 5-year event-free survival rates of 83% ± 7 for T-cell lymphoblastic lymphomas [12]. The patient in our study has not yet received polychemotherapy.

The prognosis depends on the tumour's histopathological characteristics (T-type with a poor prognosis), the extent of the tumour mass (staging+++), and the patient's overall health. However, this prognosis can be improved by early intervention [2].

CONCLUSION

A lymph node biopsy is recommended for any chronic swollen testicle. T-cell lymphoblastic lymphoma is primarily characterized by nodal involvement. The clinical presentation is related to signs of complications, leading to a diagnostic delay that is anatomopathological in nature. The management, which involves polychemotherapy similar to that of acute lymphoid leukaemia, is delayed.

Conflict of Interest

The authors declare no conflicts of interest.

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