

## Testicular Burkitt's Lymphoma in a Young Subject at the Regional University Hospital Center of Ouahigouya (Burkina Faso)

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### 1. Abstract

Testicular lymphomas are rare with a sometimes-reserved prognosis in young subjects. We report a rare case of Burkitt's lymphoma-type testicular tumor diagnosed at the Regional University Hospital of Ouahigouya in a 34-year-old subject. The histological diagnosis was made on an orchiectomy specimen performed in front of a large suspect left testicular mass. The clinical course was unfavourable, with death occurring 3 weeks after surgery.

### 2. Introduction

Testicular tumors are rare and their histopathological classification is complex. Burkitt's lymphoma is a hematolymphoid tumor corresponding to a malignant non-Hodgkin's lymphoma (MNHL) described in 1957 by Denis Burkitt in Africa, in Kampala (Uganda) with a possible testicular location. Its testicular presentation accounts for 0.5 to 2% of lymphomas [1]. Its incidence ranges from 0.09 to 0.26 [13]. Testicular Burkitt lymphoma is considered in the presence of suspicious testicular swelling with histological and immunological diagnostic confirmation. It is an aggressive disease with a poor prognosis. Overall survival is estimated at 48% at 5 years [1].

### 3. Observation

Mr. X Y, 34 years old, a teacher living in Ouahigouya, who has been receiving a large acute dung that has been gradually developing for seven months. The patient would have first consulted a health center where he had an ultrasound of the bursae and would have benefited from medical treatment based on antibiotics and anti-inflammatories without success. The persistence of the symp-

tomatology and the progressive increase in the volume of the bursa, the patient consults our department for better care. The patient also reports recurrent abdominal pain with persistent hypersalorrhea, headaches and unquantified weight loss. The clinical examination reveals a general condition stage 2 of the WHO, a left bursa enlarged in volume, bilobed, with an orange peel skin. Palpation reveals a hard, painful left testicular mass with painful induration of the left spermatic cord. The right purse was normal as well as its contents. There is also a left iliac ganglion, mobile about 1 cm long axis. The examination of the digestive and nervous system was unremarkable. Doppler ultrasound of the dung reveals a voluminous mass developed at the expense of the left testicle, heterogeneous, necrotic, hypervascularized in continuity with the epididymis increased in volume and vascularized in places. The right purse is normal.

Abdominopelvic ultrasound was normal apart from some mesenteric lymphadenopathy.

The hormone profile was normal:

Lacticodehydrogenase (LDH): 344 IU/L.

Total chorionic gonadotropic hormone (hCG): 14.4 IU/L

Alphafetoprotein less than 5.

Treatment consisted of a left inguinal orchiectomy with first ligation of the left spermatic cord associated with excision of the left hemiscrotal due to a surgical difficulty with a part of the testicle very adherent to the scrotal skin. The left inguinal lymph node was removed.

The histopathological study reveals:

**3.1. On Macroscopy:** piece of orchiectomy measuring 474 grams, hypervascularized, with an epididymal portion of 3x1 cm with a rearranged parenchyma of fibrous appearance, whitish with multiple areas of necrosis estimated at 30% of the tumor surface.

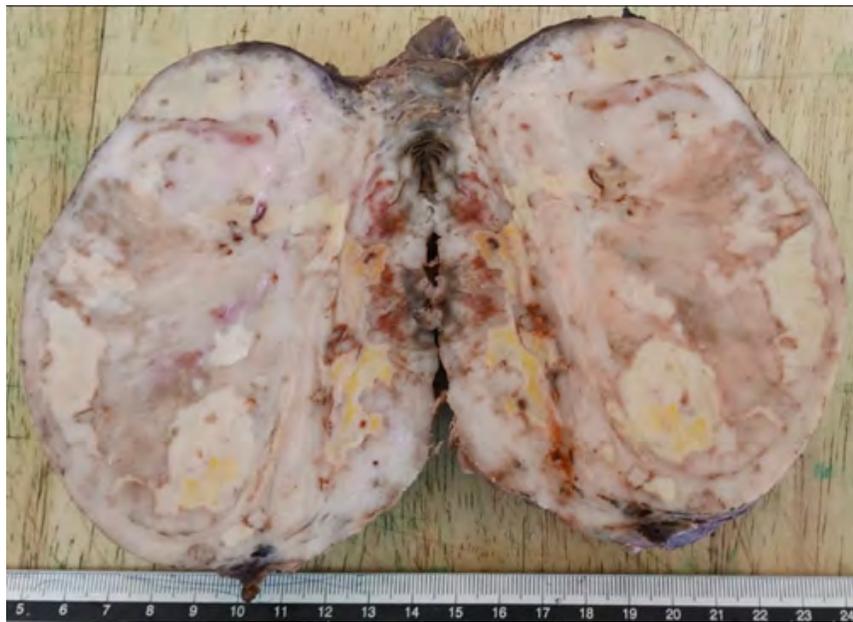
**3.2. Histology:** Shows diffuse lymphomatous proliferation with star-like areas. Tumor cells are medium-sized, with sparse cytoplasm, and very basophilic. The nuclei are large, ovoid or vesicular, irregular, with one or more nucleoli. The mitotic index is high

and foci of necrosis are observed. The left lymph node is reactive without tumor infiltration.

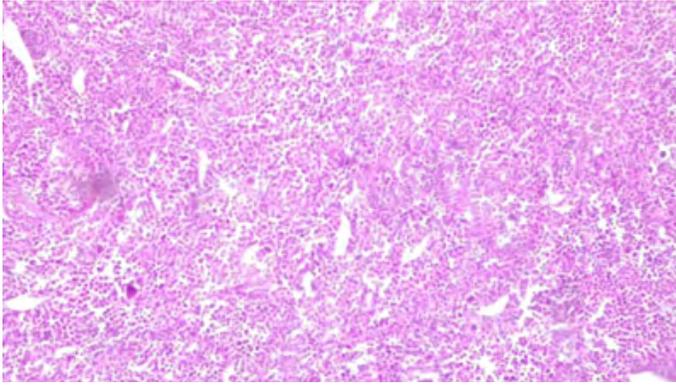
The tumor cell population is medium-sized, with sparse, basophilic cytoplasm. The nuclei are voluminous, ovoid, often binucleate (arrow), irregular, with one or more nucleoli. Immunohistochemistry could not be performed. The evolution was marked at 2 weeks postoperatively by the appearance of uncontrollable vomiting, abdominal pain, then an alteration in the state of consciousness and death occurred 3 weeks after the orchiectomy (Figures 1-4).



**Figure 1:** Macroscopic appearance of the tumor without section. Testicle and epididymis plus scrotum  
**Source:** pathology department of the Ouahigouya Regional University Hospital Center

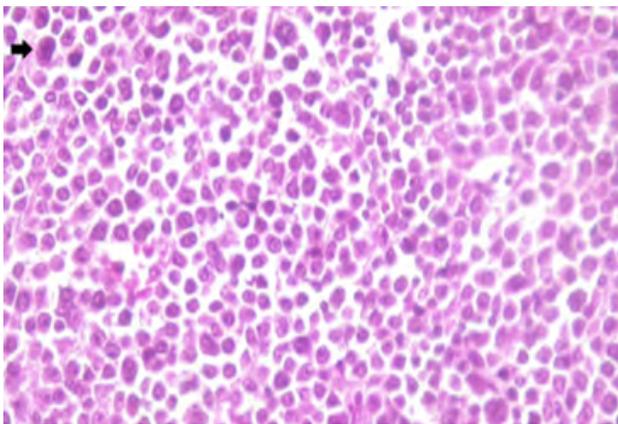


**Figure 2:** macroscopic appearance of the tumor after section.  
**Source:** pathology department of the Ouahigouya Regional University Hospital Center.



**Figure 3:** Histological image of the testicular tumor parenchyma, HE, G40 Diffuse lymphomatous proliferation with a starry sky appearance.

**Source:** pathology department of the Ouahigouya Regional University Hospital Center.



**Figure 4:** Histological image of the testicular tumor parenchyma, HE, G40

**Source:** Pathology department of the Ouahigouya Regional University Hospital Center.

#### 4. Discussion

Urogenital tree lymphomas are rare tumors of about 5% of cancers [1]. The most common locations are the kidney, testicle and other locations are exceptional. A distinction is made between B and T lymphomas, which are non-Hodgkin lymphomas. Burkitt's lymphomas account for 2% of B lymphomas. It is a rare and aggressive entity with few cases found in the literature review. In Burkina Faso, a 2020 study by kirakoya an al on urological cancer in five years found a case of testicular tumor. In Cameroun in 10 years, 20 cases of lymphoma have been diagnosed with a predominance of Burkitt lymphoma. The age at which testicular Burkitt lymphoma is discovered varies from study to study. It is usually found in the elderly. N Abid reported two cases in patients aged 53 years and 73 years [5]. In France, the six cases of malignant non-Hodgkin's lymphoma reported had an average age of 73 years [3]. It can occur in children and young adults. Our patient was 34 years old. Owon'Abesselo found a case in a 15-year-old boy [2]. One case was found in Morocco by Kalid EL Khader [4].

The testicle involved also varies from study to study with no obvious explanations. Out of 6 articles appended to our study, the right

testis was involved in 4 cases and unilateral [2,3, 4,9]. In our case, it was the left testicle that was affected. Cases of bilateral testicular Burkitt lymphoma have been reported [8]. The presumptive diagnosis of a testicular tumor is clinically based. The confirmatory diagnosis is histological and the need for an immunohistochemical study. The patient usually consults for a unilateral or bilateral large bursa, non-painful or not with notions of weight loss, abdominal pain. Physical examination reveals a hard, asymmetrical, sometimes painful intrascrotal mass. We can find a inguinal or third ganglion. The recommended hormone assessment has diagnostic and prognostic value. These are alphafetoproteins, BHCG, and lactate dehydrogenase (LDH). The hormonal assessment was normal in our patient which did not rule the diagnosis. hormone function was normal, but this did not rule out the diagnosis. Left inguinal orchiectomy with histological study confirmed the diagnosis of cancer as Burkitt's lymphoma. Testicular lymphomas are in mostly large cell or intermediate cell B-cell lymphomas or T-cell lymphomas. B-cell lymphomas account for about 85% of lymphomas and Burkitt's lymphoma accounts for 2% of B-cell lymphomas and are almost always accompanied by urogenital localization.

Therapeutically, Burkitt's lymphomas are chemosensitive. Therapeutic strategies are guided by age, clinical stage, tumor mass. In high-malignancy B-cell lymphomas, treatment is based on immunochemotherapy followed by combination chemotherapy [12]. Our patient presented a lymphoma with a poor prognosis given his young age, a performance status of 2, weight loss, a tumor mass which was unfortunately not able to benefit from this chemotherapy. In terms of prognosis, young age appears to be a factor in poor prognosis as it is associated with an aggressive histological form of Burkitt lymphoma. This pathology was fatal for patients in many studies [2,3,4,5,6,7, 8,9] as well as in ours. Partial [3,5] or total [3] clinical regressions have been observed in some studies, sometimes with relapses [8, 3].

#### 5. Conclusion

Testicular Burkitt's lymphoma is a rare histological form with a poor prognosis that can occur in young subjects. Diagnosis is suspected at the clinic and confirmation obtained on histology after orchiectomy. Evolution is usually fatal.

#### 6. Conflicts of Interest

The authors do not declare any conflicts of interest.

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