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A Case of Primary Testicular Lymphoma

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Abstract **Case Report**

Primary Testicular lymphoma (PTL) is a potentially fatal disease following primary cerebral lymphoma. Its treatment isn't well codified yet, but the orchiectomy is the pillar, chemotherapy and radiotherapy can be proposed in particular cases. Here in we report a case of primary testicular NK/T-cell lymphoma in a 58-year-old man and present our findings from a review of the literature to summarize the key points.

Keywords: Testicular; Lymphoma; T-cell lymphoma.

INTRODUCTION

The first case of primary testicular Lymphoma was described by Curling in 1866 [1]. Primary Testicular lymphoma (PTL) is a potentially fatal disease following primary cerebral lymphoma with a median survival between 12 to 24 months [2-5].

It accounts for 3% to 9% of testicular cancers and 1% to 2% of all non-HODGKINIAN lymphomas (NHL). Its annual incidence is about 0.09 to 0.26 cases per 100,000. However, it is the most common malignant form in men over 60 years of age and the incidence is increasing with an average age of diagnosis between 66 and 68 years of age [4, 6].

There is no codified treatment due to its low occurrence, however we can propose radiotherapy and chemotherapy after the orchiectomy, The 5-year survival rate is 12% for tumors with relapses in all stages [7].

Herein we report a case of primary testicular NK/T-cell lymphoma in a 58-year-old man and present our findings from a review of the literature to summarize the key points

II. CASE REPORT

A 58 years old was seen in our emergency department for a left testicular discomfort and swelling evolving for 1 year without urinary burns nor lower urinary tract disorders , treated with antibiotics since an infectious cause was suspected as a reason for his swelling, however, his symptoms did not resolve. All evolving in a context of general state alteration and apyrexia. The questioning excluded any history of urinary infection, STIs or trauma.

The physical examination reveals a conscious patient , hemodynamically and respiratory stable, the examination of the external genitalia found a non painful, swollen and warm left testis, the controlateral testicular was normal on palpation as well as the penis. The rectal examination without abnormalities and the lymph node areas were free. The rest of the clinical examination was normal.

At first, the scrotal ultrasound with Doppler was requested objectivizing a poorly limited heterogeneous testicular and epididymal formation of 29*24 mm (Figure 1).

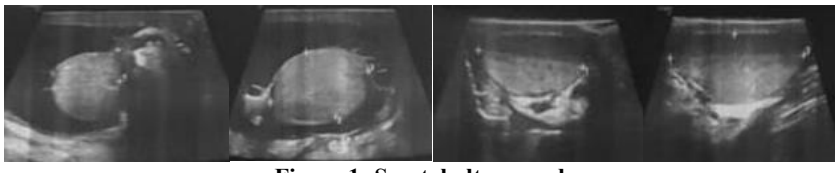

Figure 1: Scrotal ultrasound

We completed with a body CT that showed no abnormalities. To detail the diagnosis, the blood tumor markers included HCG: 2 UI/ml, alpha foeto: 20mg/ml and LDH: 1.5 were all normal.

We proceeded with a high inguinal left orchidectomy (Figure 2) with simple postoperative follow-up.

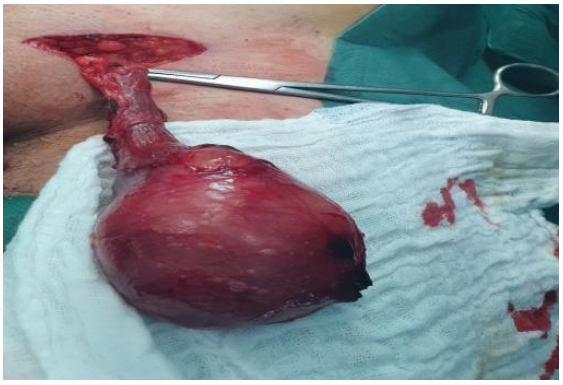

Figure 2: Intraoperative overview of the testis

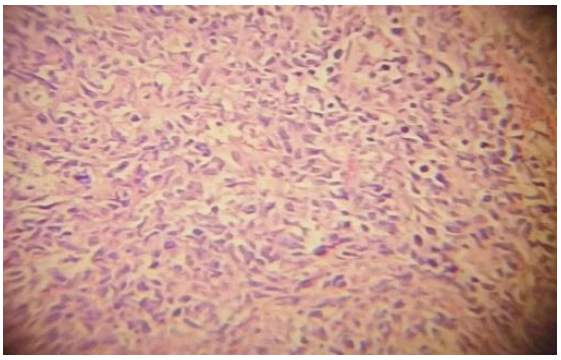

Figure 3: Anatomopathology

However, histopathological examination of the surgical specimen revealed a T-cell lymphoma (Figure 3). Then the patient was referred to hematology department where he received his chemotherapy cure. After 3 cures, the patient died due to a severe respiratory infection.

III. DISCUSSION

The lymphoid system is the mainstay of the immune response, it is both innate and acquired and relies on NK, B and T cells. Non hodgkinien lymphoma is due to a disorder in these cells [8]. Peripheral T cell lymphoma (PTCL) is a heterogeneous entity of lymphomas accounting for 5% to 15% of non-Hodgkin lymphomas (NHL), these forms, including the testicular localization are characterized by their aggressiveness [9].

Young immunodeficient patients such as medullar insufficiency and advanced stage VIH (SIDA) may be affected [10].

The risk of bilaterality and extra-nodal extension (skin, subcutaneous tissue, central nervous system, lung and Waldeyer's ring) is rather high. Diffuse large B-cell lymphoma (DLBCL) is the most common histological type in the primary forms (80 to 90%), while in the secondary ones, other more aggressive histological types are found, dominated by Burkitt lymphoma [6, 11]. Primary testicular NK/T-cell lymphoma, quite rare, is a very aggressive malignant form [12]. Sixty percent of patients are in stage I while 30% are in stage II [13].

Its clinical presentation is a unilateral, rarely bilateral, painless scrotal swelling. Symptoms as fever, night sweats, weight loss are mostly present in advanced stages in diffuse large B-cell lymphoma [14-16]. Other symptoms can be seen such as abdominal pain, ascites or hydrocele [15, 16] which weren't observed in our patient.

Granulomatous orchitis, pseudo lymphoma, plasmacytoma, and rhabdomyosarcoma are the differential diagnostics; Intratubular germ-cell neoplasia, the precursor lesion of testis tumors was not found in primary testicular lymphoma [17].

Orchiectomy provides superior results to fine needle ultrasound guided biopsy and allow the removes of the main tumor mass [16].

It may be due to a trauma , chronic orchitis, undescended testicles, and filariasis of the spermatic cord [18], what has been discarded in our case. Clinical stage and histological grade are the main prognosis factors [19], however, young age, presence of sclerosis, small size of the tumor, and no epididymis or spermatic cord involvement are a good indicators [20].

There is no well-codified therapeutic protocol, ochidectomy is the main part of the treatment, associated with chemotherapy and radiotherapy as an adjuvant treatment in stage I and II. chemotherapy, radiotherapy and intrathecal chemotherapy which can lower the risk of central nervous system relapse are used in stage III and IV. The risk of relapse in controlateral testis is reduced by prophylactic radiotherapy [21]. Our patient received his chemotherapy after the orchiectomy and died after 3 cures due to a respiratory infection.

IV. CONCLUSION

Primary testicular lymphoma is a fatal disease, with a poor prognosis du to its rare incidence and fast development. A diagnosis that should kept in mind for patients who present with a mass of the testis, especially elderly ones. It's treatment isn't well codified yet, but the orchiectomy is the pillar, chemotherapy and radiotherapy can be proposed in particular cases.

Declaration of Competing Interest: The authors state that they do not have competing interests.

Availability of Data and Material

The datasets in this article are available in the repository of the urology database, CHU Ibn-Rochd Casablanca, upon request, from the corresponding author.

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Author's Contribution

Dr. Ghannam Youssef and Dr. Chadli Mohammed Achraf analysed and performed the literature research; Pr. Moataz Amine, Pr. Dakir Mohammed, Pr. Debbagh Adil and Pr. Aboutaieb Rachid performed the examination and performed the scientific validation of the manuscript. Ghannam Youssef was the major contributors to the writing of the manuscript. All authors read and approved the manuscript.

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