

CASE REPORT

Primary B-cell lymphoblastic lymphoma of the testis

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Summary We present a rare case of primary lymphoblastic B-cell lymphoma of the testis focusing on ultrasonographic and pathological features and clinical implications. Pathological examination revealed primary testicular lymphoblastic B-cell lymphoma which was treated with adjuvant chemotherapy, including rachiocentesis with administration of chemotherapy and with radiotherapy of contralateral testis. Primary testicular lymphoblastic B cell lymphoma is an aggressive disease and it is necessary a multimodal therapy (surgery, chemotherapy and radiotherapy) to prevent metastasis.

KEY WORDS: B-cell lymphoblastic lymphoma; Primary testicular lymphoma; Testicular ultrasound.

Submitted 3 October 2014; Accepted 31 October 2014

INTRODUCTION

Primary testicular lymphoblastic B-cell lymphoma is a rare tumor, it represents 7% of all testicular cancer (< 2% in men under 50 years of age) and it accounts for 1% of all non-Hodgkin's lymphomas. It is the most common bilateral testicular tumor, with 10-18% cases of synchronous or asynchronous involvement of contralateral testis (1-4). It has no pathognomonic clinical and ultrasonographic features and a diagnosis before surgery is uncommon. It needs specific adjuvant chemotherapy and radiotherapy because of the high risk of metastatic process at skin, central nervous system, contralateral testis and other organs. A multidisciplinary care is the key of treatment.

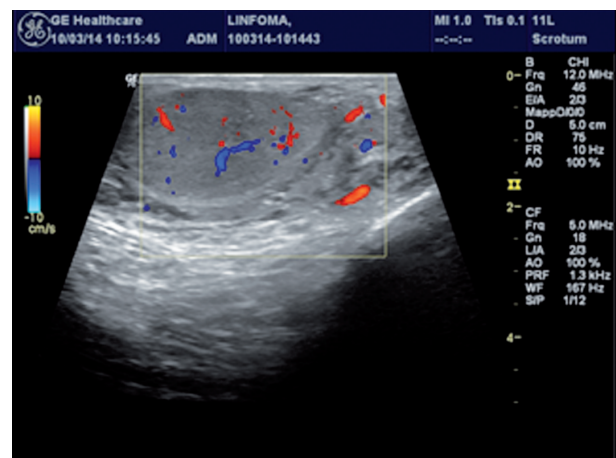
CASE REPORT

A 39 years old man was referred to our clinic with acute pain at the left testis; a swelling hard mass in the inferior part of the left testicle was palpable; the right testis was normal without any associated symptoms of lower urinary tract infection. After a first clinical evaluation an infective orchiepididymitis was suspected and antibiotics were administered for 2 weeks. He had no comorbidities and

no history of traumatic events in the inguinal and scrotal region. He underwent surgical correction of left varicocele 12 years before with a complete resolution of the problem. Scrotal ultrasound showed an hypoechoic area with homogeneous aspects in the inferior part of the left testicle, size 2.7 x 1.3 cm. Scrotal eco-power-Doppler showed high blood perfusion (Figure 1) and increased vascularization of the left epididymis if compared to the right one. Tumoral markers were normal. Patient underwent left orchifuniclectomy and implantation of testicular prosthesis. Intraoperative pathological evaluation described an extended cellular neoplastic population with mitotic aspects, high nucleocytoplasmic ratio and irregular nucleus. Definitive pathological report described a creamy white nodular proliferation of 2,8 x 2,5 cm in lower pole of testis; microscopic examination was positive for lymphoblastic B-cells with intermediate size and irregular nucleus (Figure 2). Immunohistochemical expression pattern was: CD45 positive, CD79a-CD10-CD38 positive, Bcl1, Bcl6, CD57, MUM 1 CD99 and CD117 negative; focal areas were CD20, Bcl 2, TdT and CD3 positive (Figure 3). The proliferation index, as detected by MIB1 anti-

Figure 1.

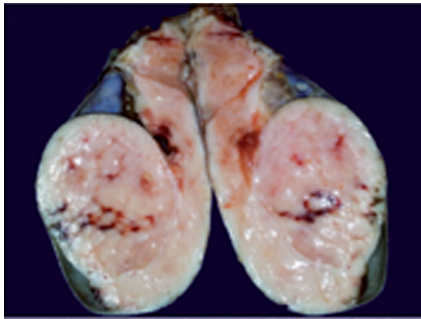
High blood perfusion at colour-Doppler examination in the inferior part of testis.



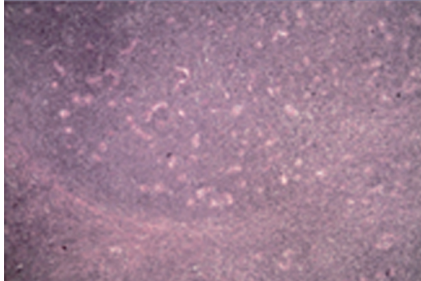
No conflict of interest declared.

Figure 2.

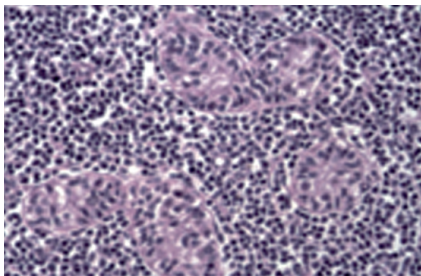
a. Macroscopical aspect of tumor with creamy white nodular proliferation.



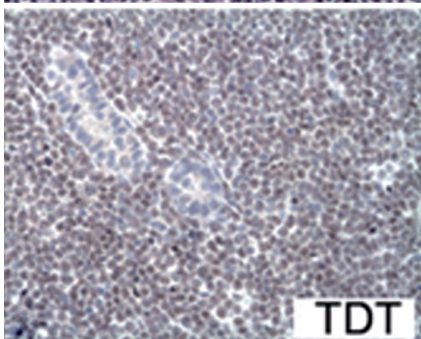
b. Histological findings: tumor cells penetrate diffusely into testicular tissue with loss of intact seminiferous tubules.

**Figure 3.**

c. Histological findings: cells demonstrated enlarged nuclei with little nucleoli and decrement of cytoplasm.



d. Hematoxylin and eosin). Immunohistochemical panel with TdT positive antibodies.



body, was 70%. This lesion was classified as a primary testicular lymphoblastic B-cell lymphoma with focal expression of CD3, confined to the testicle. Patient underwent total-body *computed tomography* (CT), which resulted negative for metastasis. A multidisciplinary discussion with urologists, oncologists, radiation oncologists and hematologists was done. After a negative bone marrow biopsy the patient underwent to 6 cycles of hyper-CVAD chemotherapy (cyclophosphamide, vincristine, doxorubicin, and dexamethasone given as course A, followed by methotrexate and cytarabine given as course B), rachicentesis with administration of methotrexate 12 mg and cytarabine 100 mg (2 for each cycle), and radiotherapy of contralateral testis. We proposed also cryoconservation of sperm before starting adjuvant treatment. After 6 months of follow-up the patient is alive and without disease.

Discussion is posted in Supplementary Materials in www.aiua.it

CONCLUSIONS

Primary testicular lymphoma is not associated to pathognomonic findings at ultrasound and is not different from other testis neoplasms. Primary testicular lymphoblastic B lymphoma is an aggressive disease and it is necessary a multimodality therapy (surgery, chemotherapy and radiotherapy) to prevent metastasis.

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