Prostatic Lymphoma – an Atypical and Challenging Neoplasm of the Prostate

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Abstract

The prostatic lymphoma represents 0.2% of all prostatic neoplasms. The diagnostic of this pathology occurs accidentally in most cases. The present article intends to report a challenging clinical case of Prostatic Lymphoma and discuss the relevant aspects of the clinical and pathologic propaedeutic. The diagnostic was established accidentally, corroborating the literature. The patient was a young and had been initially diagnosed as a complicated prostatitis with suspicious of prostatic abscess. After the surgical approach, the definitive pathology confirmed as “double-hit prostate lymphoma”.

CASE REPORT

J.R.L, male, 33 years old, was attended to hospital admission in our service on January 9th 2014. Initially, the patient presented as an acute prostatitis syndrome, with a suspicious of prostate abscess.

He presented with a low intensity pelvic pain with 30 days of evolution, accompanied with low urinary tract symptoms (LUTS). In clinical examination, he had no fever, but a pallor mucosa (+2/+4) called our attention. Digital rectal examination revealed an increase in prostate volume (approximately 30-35cc) with no signs of fluctuation, and a discreet prostate pain.

Laboratory serum tests did not show important findings, except a mild anemia (hemoglobin 8,8 g/dL). Renal function, urine and liver tests were normal, and PSA value was 1,83 ng/dL. The HIV-Test was positive, confirming the immune compromised condition. CT scan revealed diffuse thickening in bladder wall, increase in prostate volume, densification of the bladder-prostatic fat interface, and a deficit in contrast drainage on distal right ureter. Also, a right perinephric collection and homogeneous splenomegaly was identified (Figure 1). Flexible 6 uretrocystoscopy revealed a low-capacitance bladder and a discreet elevation of posterior bladder wall (apparently extrinsic).

After this propaedeutic, the main diagnostic hypothesis was an infectious disease (abscess, tuberculosis?) in an immune compromised patient. A surgical intervention was indicated to drain the suspicious abscess. We started with a right Gibson incision, to access the retroperitoneal space and reach the posterior bladder wall and prostate. In dissection, some large and enlarged lymph nodes were found and excised to pathology exam. The access of prostate space revealed a very consistent tissue, limiting the mobilization of the bladder, without abscess. This tissue was in contiguity with the rectus abdominal fascia, and both were biopsied and sent to pathology exam. Patient had a good recovery in the immediate post-operative period, and a trans-rectal prostate biopsy was performed.

Figure 1 (A-B): CT Scan - A) Bladder thickening, prostate enlargement B) right perinephric “collection”.

The final pathology report of the lymph nodes, rectum-abdominal muscle and prostate biopsy revealed “Atypical lymph proliferative process”. The immune histochemical analysis reported: “Lymph proliferative process, with starry-sky pattern, positive expression of CD20, CD10 e BLC2, elevated mitotic index (Ki-67), suggesting unclassified Lymphoma B, or even Burkkit Lymphoma. Furthermore, these characteristics description allied to the expression of MYC (in over 70% of the cells), suggests the double-hit lymphoma that has translocations in BLC2 and MYC gens, and encloses a worse prognosis”.

On February 17th, the patient was able to initiate the oncology treatment, however, he had a massive pulmonary embolism, and even with the intensive care, the patient died.

DISCUSSION AND FUTURE PERSPECTIVES

The PL is rare, representing until 0.2% of all primary prostate cancer, and 10% of lymphoma or leukemia metastasis [1]. The definition of a primary PL must be consistent with three criteria, recommended by Bostwick and Mann [2]: 1) presenting symptoms attributable to prostatic enlargement; 2) involvement of the prostate predominantly, with or without involvement of adjacent tissue; and 3) absence of involvement of the liver, spleen or lymph nodes within one month of diagnosis of the prostatic involvement. The clinical presentation resembles LUTS symptoms (in patients over 60 years old) with normal PSA, and the diagnostic is usually accidental occurring in prostate biopsy or after a TURP [1-4]. The trans-rectal ultrasound evaluation shows a hypoechoic lesion, as the prostate adenocarcinoma (PCa) [5].

Regarding to the pathology analysis, the majority of primary PL have been B-cell lymphomas of the small lymphocytic (SLL), marginal zone, large cell (diffuse large B-cell lymphoma) and follicular lymphoma. Rarely, the prostate can be evolved secondarily as part of systemic disease dissemination. When this occurs, SLL is the most common subtype. Microscopic findings reveals lymphoid infiltrate typically shows patchy or diffuse interstitial involvement of the prostatic stroma, preserving prostatic acini. Extension into extra-prostatic tissue can be observed. Other lymphomas seen in other sites may become manifest in the prostate. These include undifferentiated (Burkitt-like) lymphoma, mantle cell lymphoma, angiotropic lymphoma, Hodgkin disease and T-cell lymphomas [2].

Florid chronic inflammation should be differentiated from low-grade lymphoma. In chronic inflammation, the infiltrate is typically peri-glandular, mixed with plasma cells, whereas low-grade lymphomas reveal a more diffuse infiltrate. In these cases, we can perform immune histo-chemistry tests [6].

PL is a poor prognosis disease with overall survival ranging of 2 to 44 months, and no important difference is found between primary or secondary involvement [2,7]. This differential diagnostic has to be included in some situations. A diagnostic of PCa in a patient with generalized lymphadenopathy must be alerted, knowing that rare cases of PCa have this pattern of presentation [8]. Young middle-aged man, with refractory prostatitis, which does not respond to antibiotic therapy, should be investigated [8-9]. The PL can also co-exist with PCa Ballario et al [9] reported a patient who had urinary obstructive symptoms with an enlarged prostate. After TURP, the pathological examination showed PCa in 5% of the tissue, and lymphocytic cells infiltrated in the remaining prostate specimen. The well-known risk factors for lymphoma should be remembered: immune compromised and previous lymphoma in other sites.

The treatment of PL is the same for other lympho proliferative diseases, in charge of oncology protocols, usually chemotherapy. Antunes et al described a rare case of urinary obstruction by a primary PL, emphasizing that systemic chemotherapy represents the initial and preferential therapeutic method [10]. Considering the same method, Fukutani et al reported a patient with primary PL who had complete response with combination of chemotherapy [11], contradicting the prognosis of the disease. Sarris
et al, reached a good outcome in a patient treated with doxorubicin combined chemotherapy [12]. The traditional chemotherapy drugs for non-Hodgkin Lymphomas are the CVP combination, which includes Cyclophosphamide, Vincristine and Prednisone. A combination with doxorubicin has been used too, the CHOP (Cyclophosphamide, Vincristine, doxorubicin and Prednisone), and eventually plus rituximab. Many combinations can be used in the same patient, according to drugs cycles, response and side effects [12-14].

PL is rare condition and a high suspicious is essential for the diagnosis. Early and appropriate treatment can extend the specific-free survival and improve the quality of life.

REFERENCES