Primary Prostatic Lymphoma in a Young Male with Hiv Infection

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Abstract Primary lymphoma involving the prostate gland is rare. It accounts for 0.09 % of prostatic malignancies [1]. It commonly presents in the seventh decade with Lower Urinary Tract Symptoms (LUTS). Diffuse large B cell lymphoma is the common pathological variant [2]. Chemotherapy and radiotherapy are the common modalities of treatment and the overall prognosis is poor [2]. We present a 26 year old HIV infected patient - on anti-retroviral therapy who presented with acute renal failure and grossly enlarged prostate. Prostate biopsy with immuno-histochemistry confirmed the diagnosis of Peripheral T—cell lymphoma. He was treated with Adriamycin based chemotherapy and radiotherapy. We report this case in view of the rarity the tumor, younger age at presentation than that is available in literature and the pathological variant not reported in primary prostatic lymphoma.

Keywords Prostate lymphoma · Non-Hodgkin's lymphoma · Prostate malignancy

Introduction

Malignant lymphoma involving the prostate gland is rare, whether it is primary extra-nodal disease or secondary involvement from other sites. Primary disease is rarer than secondary involvement and mean age of presentation is seventh decade. Primary prostatic lymphoma do not have any specific presentation and it mimics other common prostatic diseases [2]. It accounts for 0.09 % of all prostatic malignancies and 0.1 % of all Non—Hodgkin's lymphoma [1]. In this article we present a rare case of Peripheral T—cell variant of

Primary prostatic lymphoma in a young adult with HIV infection.

Case Report

Twenty seven year old male presented with oliguria and acute renal failure. He was diagnosed with HIV infection 2 years back and was on anti-retroviral therapy. He did not have lower urinary tract symptoms or hematuria or dysuria. He had taken analgesic for longer duration in past. On examination, he had grossly enlarged prostate. His serum creatinine was 9.2 mg% and serum prostate specific antigen (PSA) was 0.9 ng/ml and peripheral smear was normocytic, normochromic picture. Ultrasonogram (USG) revealed bilateral normal sized kidney with grade 1 parenchymal changes, urinary bladder with wall thickness of 5 mm and post void residue of 20 ml and gross prostatomegaly (110 g). Trans-rectal USG and computerized tomogram showed a homogenously enlarged prostate with no focal lesions and biopsies were taken from all quadrants (Fig. 1). His renal failure was diagnosed to be due to analgesic nephropathy and it improved with dialysis followed by conservative measures. Histopathology with immuno-histochemistry revealed tumor cells with high nuclear: cytoplasm ratio and reactivity with Leukocyte Common Antigen (LCA), CD 56 and CD 30 and negative for cytokeratin and prostate specific antigen (PSA) (Fig. 1). He was treated with eight cycles of Adriamycin based chemotherapy and radiotherapy to the prostate. He attained complete remission and is on follow-up.

Discussion

Primary prostatic lymphoma (PPL) is a rare prostatic malignancy. It is common in seventh decade with age ranging from

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Fig. 1 CT scan (right) showing the grossly enlarged prostate and IHC (left) showing LCA positivity

32 to 89 years. Lower Urinary Tract Symptoms (LUTS) is the common mode of presentation [2]. Clinically the prostate is usually grossly enlarged with firm to rubbery consistency and loss of median sulcus. PPL is characterized by normal serum PSA value and if it presents with raised PSA, associated cancer prostate should be suspected [4]. Cystoscopically the prostate is undisguisable from Benign Prostate Enlargement (BPE) and hence TUPR is the most common means the diagnosis of PPL has been established. Immunohistochemistry plays an important role in the diagnosis of prostatic lymphoma. Reactivity to LCA, CD 56 and CD 30 (ALK 1 in children) and lack of reactivity to cytokeratin and PSA helps to differentiate lymphoma from other common conditions [4]. Three criteria for the diagnosis of primary prostatic lymphoma include: 1) tumor limited to the prostate and adjacent soft tissues; 2) the absence of lymph node involvement [3]; and 3) a lymphoma free interval of at least 1 month [4]. Hodgkin's and Non—Hodgkin's lymphoma are known to cause prostatic lymphoma and among NHL patients, both B cell and T cell lineage can cause prostatic lymphoma with diffuse large cell variant being the most common form of PPL. Primary T cell lymphoma has never been reported in literature though several cases of secondary T cell lymphoma exists. Chemotherapy and Radiotherapy are the common treatment modalities used in the past [2]. But the overall prognosis of PPL is poor and it is irrespective of the patient age, histologic type, treatment or clinical stage of disease at presentation [2].

The present case is unique in several factors of presentation - Younger age, peripheral T cell variant

and association to HIV infection. Though prior history of lymphoma can predispose to prostatic lymphoma and immunocompromised state predisposes to lymphoma elsewhere in the body, the association of HIV infection with primary prostatic lymphoma in young age group should be further investigated and identified as a risk factor.

Conclusion

Primary prostatic lymphoma is a rare malignancy of prostate. It should be considered in the differential diagnosis of young patients presenting with gross prostatomegaly and normal PSA levels.

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