PRIMARY TESTICULAR LYMPHOMA A RARE EXTRA NODAL INVOLVEMENT OF NHL

ABSTRACT

Primary testicular lymphoma is a collection of neoplasms that constitutes only 1–9% of testicular tumors . Although uncommon in the general population, it is the most common type of malignant testicular tumor in men ≥50 years of age . There are various subtypes, including diffuse large B-cell lymphoma (DLBCL), Burkitt's lymphoma and follicular lymphoma. In the adult testis, primary DLBCL represents the most frequent subtype of lymphoma (80–90%), whereas the majority of testicular lymphomas in children consist of secondary involvement by Burkitt's lymphoma, DLBCL or lymphoblastic lymphoma . The typical clinical sign is a painless testicular mass of variable size that is usually unilateral. Primary testicular lymphoma may be identified during the initial presentation of primary or systemic malignant lymphomas, or during a clinical follow-up of patients with lymphoma . Historically, primary testicular lymphoma has been reported to exhibit a poor prognosis with an overall 5-year survival rate of 17–48%, particularly primary testicular DLBCL, whose clinical behavior has been reported to be aggressive and to demonstrate a high propensity to disseminate to the central nervous system (CNS) and skin at presentation and relapse . The underlying mechanisms responsible for this aggressive behaviour have yet to be elucidated. In the present study, a patient with primary testicular DLBCL was examined from histological examination and immunohistochemical staining in the diagnosis of testicular DLBCL.

Keywords: Primary Testicular Lymphoma, cryptorchidism, vesicular nuclei, Non-Hodgkin's lymphoma

INTRODUCTION - Primary testicular lymphoma (PTL) constitutes 1-2% of Non-Hodgkin's lymphoma (NHL), 4% of extra nodal NHL and about 9% of testicular neoplasms affecting elderly men greater than 60 years of age, with a grave prognosis. This is a case report of patient diagnosed with Testicular primary diffuse large B cell lymphoma(DLBCL).

AIM - presenting a rare extra nodal involvement of non-hodgkin's lymphoma.

CASE REPORT:

A 73 year-old male presented with a slowly growing, painless enlargement in the right scrotum that was discovered by the patient ~6 months beforehand. The patient had a history of smoking in past . There was no history suggestive of cryptorchidism or any endocrine symptoms. The patient had a heavy feeling in the right scrotum and physical examination revealed a right testicular mass measuring approximately the size of an adult's fist, size 10*5 cm . The left testicle was normal. The patient had no lymphadenopathy or hepatosplenomegaly. Examination of the oronasopharynx revealed no abnormal results. Laboratory test results, including hematological, urinary and biochemical values, were within normal range. No abnormal results were observed following an abdominal ultrasonography thickened right epididymis and altered parenchymal echotexture in right testes with minimal vascularity- possibility of partially atrophied?liquefied right testes due to pressure changes. As a testicular neoplasm or orchitis was clinically suspected, a right orchiectomy was performed.

The resected specimen demonstrated the formation of a well-circumscribed tumor measuring 14.5*4.5*3cm.the testis measures 9*4.5cm.the cord measures 5.5*4cm. External surface shows congested blood vessels with grey brown areas . cut surface:both cord and testis are replaced by grey white to grey yellow areas some of which appears nodular , along with grey brown areas.no viable testicular area could be identified.

micro sections of testis and spermatic cord shows tumor composed of diffuse sheets and discrete medium to large atypical cells e pale eosinophilic to clear cytoplasm , vesicular nuclei ,prominent nucleoli,increased mitosis 10/hpf in mitotically active area and apoptotic bodies. There is large area of necrosis.Tumor cells abutting and encroaching blood vessels.in the periphery,thetumor is traversing in between the seminiferous tubules and is also noted within the lumen of seminiferous tubule . The tumor is diffusely infiltrating the adjacent soft tissue ,spermatic cord and there are a few interspread lymphocytes and plasma cells.

IHC, TUMOR CELLS SHOW DIFFUSE MEMBRANE & CYTOPLASMIC POSITIVE FOR LEUKOCYTE COMMON ANTIGEN [CD45], TUMOR CELL SHOW DIFFUSE MEMBRANE & CYTOPLASMIC POSITIVE FOR CLONE-L26 . DIFFUSE LARGE CELL LYMPHOMA ,B CELL TYPE.

METHODS:

A 73 year-old male patient reported with a chief complaint of painless enlargement in the right scrotal region since 6 months. The patient had a previous history of smoking and no history suggestive of cryptorchidism or any endocrine symptoms. The physical examination revealed a right testicular mass measuring approximately the size of an adult's fist measuring 10*5 cm in size. No abnormality was found in the left testicle. The patient had no lymphadenopathy or hepatosplenomegaly. All the laboratory findings, including haematological, urinary and biochemical values, were in acceptable range. scrotal ultrasonography had revealed thickened right epididymis and altered parenchymal echo texture with large area of necrosis in right testes with minimal vascularity was noticed. As the testicular neoplasm was clinically suspected, the right high orchiectomy has been performed and the resected tumour was examined histopathologically..

RESULTS:

Testis and spermatic cord shows tumor composed of diffuse sheets and discrete medium to large atypical cells with pale eosinophilic to clear cytoplasm, vesicular nuclei, prominent nucleoli, increased mitosis 10/hpf in mitotically active area and apoptotic bodies. There is large area of necrosis. Tumor cells abutting and encroaching blood vessels in the periphery, the tumor is traversing in between the seminiferous tubules and is also noted within the lumen of seminiferous tubule. The tumor is diffusely infiltrating the adjacent soft tissue, spermatic cord and there are a few interspread lymphocytes and plasma cells

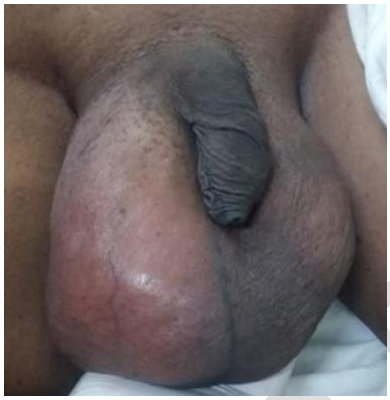

fig1: Right testicular mass

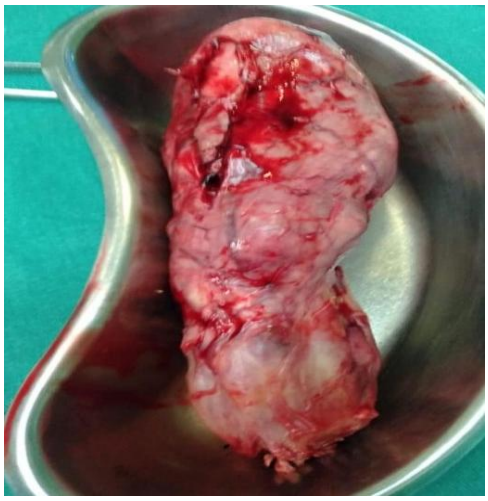

fig 2: Right high orchidectomy specimen

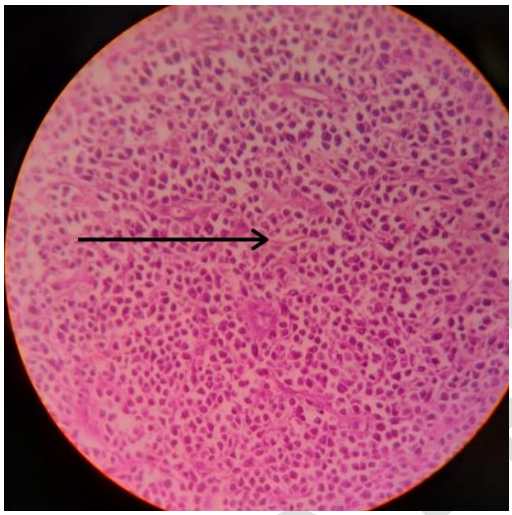

Fig 3 : Atypical cells with pale eosinophilic to clear cytoplasm

DISCUSSION:

DLBCLs may be divided into three prognostically distinct subtypes GCB-DLBCLs, activated B-cell-like DLBCLs and type 3. The immunohistochemical expression of CD10, BCL6 and MUM1 may be used to categorize DLBCLs into GCB and non-GCB types, the latter including activated B-cell-like types and type 3. The treatment for patients with primary testicular DLBCL may be divided into limited disease (stage I/II) and advanced disease (stage III/IV) treatments. Orchidectomy provides histological tissue for diagnosis and also removes a potential sanctuary site, as the blood-testis barrier renders testicular tumours inaccessible to systemic chemotherapy.

CONCLUSION:

It is important to identify primary testicular DLBCL correctly and to distinguish it from other entities due to differences in therapy, management and prognosis.

Disclaimer regarding Consent and Ethical Approval:

As per university standard guideline, participant consent and ethical approval have been collected and preserved by the authors

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