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Letter to the Editor

Primary testicular diffuse large B-cell lymphoma (germinal centre B-cell type) masquerading as spermatocytic seminoma: a morphological conundrum

Sir,

Diffuse large B cell lymphoma is usually known for proliferation for medium to large abnormal lymphoid cells. Intermixed polymorphous cells may be seen in occasional cases. This type of morphology when seen in testicular lymphoma in an adult male may be misinterpreted as spermatocytic seminoma as seen in the reported case of a 48-year-old male with slow growing testicular mass. Immunohistochemistry is a must to confirm diagnosis and hence impart correct treatment in these type of cases. Spermatocytic seminoma is CD117, SALL 4 positive whereas DLBCL will display LCA, CD20, CD10, and/or bcl-6, MUM1 expression.

Non-Hodgkin's lymphoma (NHL) accounts for approximately 1-5% of reported testicular tumors of which diffuse large B-cell type (DLBCL) shares a predominant number. However, according to Hans algorithm germinal centre B cell type (GCB) is infrequent among the DLBCLs seen in testis as non-GCB type are more frequent.[1] We herewith report an interesting case referred to us for review, diagnosed as spermatocytic seminoma in a middle-aged male presenting with testicular mass.

A 48-year-old male complained of left scrotal swelling which was gradually increasing in size since 4 years. There were no complaints of pain, tenderness or fever. As the swelling initially did not hamper his day-to-day activities the medical attention was sought late. There were no associated comorbid conditions and medical or surgical history. The inguinoscrotal ultrasound showed a space occupying lesion in left testis with left inguinal lymphadenopathy. The serum Beta- HCG, AFP levels were within normal limits. For this, the patient underwent high inguinal orchidectomy and histopathological examination performed was reported as spermatocytic seminoma.

The patient was referred to our centre for further management and 10 paraffin blocks and slides were reviewed for diagnosis. Haematoxylin and eosin stained sections showed diffuse sheets of cells without prominent fibrous septa (Figure 1a). The tumor cells were singly scattered, polymorphous, small to medium sized with high nucleocytoplasmic ratio, round nuclei with clumped chromatin and inconspicuous nucleoli. Prominent nucleoli and clear scant cytoplasm was also seen in some cells along with few giant cells (Figures 1b-f). No testicular tissue was identified in any of the sections submitted. The morphology alone was quite reminiscent of spermatocytic seminoma, however as non-Hodgkin's lymphoma (NHL) is always a differential in these cases. Hence, immunohistochemistry (IHC) was ordered which included CD117, SALL 4, PLAP (Figures 1g-i], inhibin and LCA. To our surprise, LCA came out to be diffusely positive in tumor cells rest all were negative. Further lymphoma panel displayed that the tumor cells were positive for CD20, CD10 with Ki67 of 60% and negative for MUM1 and CD3 (Figure 2a-f). The diagnosis was hence revised as DLBCL (GCB type). The patient was referred to haematology department for further management. Computed tomography (CT) thorax and abdomen did not reveal any other lymph nodes other than the inguinal.

Morphologically spermatocytic seminoma is a tumor disposed in sheets and composed of variable tumor cells which may be small, intermediate to large in size.[2] This case supports and highlights that whenever we have morphological differential of spermatocytic seminoma exclusion of NHL must be performed with use of immunohistochemistry.[3] Surgical removal and postoperative chemotherapy is standard management protocol. The prognosis is primarily determined by the stage of tumor.

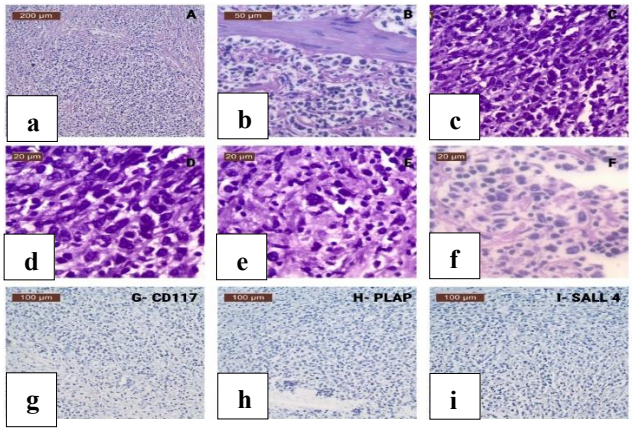

Figure 1 (a-i): Haematoxylin and eosin stained section shows a tumor disposed in diffuse sheets (H&E; Ax40) with variable sized cell (H&E; B&Cx400). Large, medium and small abnormal cells with prominent nucleoli can also be seen (H&E; D-Fx630). On further IHC these cells were negative for markers for spermatocytic seminoma namely CD117, PLAP and SALL-4 (DAB; G-Ix200).

Primary testicular DLBCL-GCB type are rare and may morphologically show variably sized abnormal lymphoid cells including cells with scant but clear cytoplasm and giant cells. In these scenario in a middle aged male both NHL and spermatocytic seminoma must be kept as close contenders and IHC confirmation is a must before signing out the diagnosis.

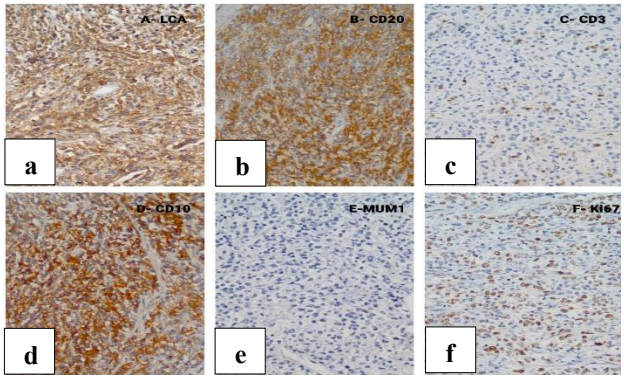

Figure 2 (a-f): Immunohistochemically the tumor cells displayed diffuse expression for LCA, CD20 and CD10. They were negative for MUM1 and CD3 was seen in intermixed lymphocytes. Ki67 index was around 60%. (DAB; A-Fx200).

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