Spermatocytic Tumor in a Young Patient-Not So Rare

Sir,

Spermatocytic seminoma has been renamed spermatocytic tumor by the 2016 edition of the World Health Organization classification of testicular tumors. It is not derived from testicular germ cell neoplasia *in situ* (GCNIS). Germ cell tumors derived from GCNIS have increased in incidence during the twentieth century, have been linked to the Western lifestyle, are more prone to occur in dysgenetic testes, and usually develop in young men. The incidence of Germ cell tumors unrelated to GCNIS on the other hand, has remained stable throughout the twentieth century. These tumors have not been linked to the Western lifestyle, sedentary habits, or obesity.[1]

A population-based estimate of spermatocytic tumors found 58 cases out of 9658 cases of testicular seminoma. The mean age at diagnosis was 53.5 years with a range of 19–92 years.[2] It is different from classic seminoma since it occurs only in testis, does not occur in combination with other forms of germ cell tumors, and has a favorable prognosis in most of the cases.

A 30-year-old male presented with a slowly enlarging left scrotal swelling for 2 years. Ultrasound revealed 7 cm × 5.8 cm × 5 cm left testicular multinodular mass. Tumor markers serum alpha fetoprotein, lactate dehydrogenase, and beta-human chorionic gonadotrophin levels were not elevated. A left-side high inguinal orchidectomy was done. On the cut section, the tumor measured 7 cm × 5 cm × 5 cm and was multinodular, gray white with few areas of mucoid/gelatinous change. However, no areas of hemorrhage or necrosis were seen.

On microscopy, the tumor was multinodular with edema filled spaces giving it a pseudoalveolar appearance [Figure 1a]. Three types of tumor cells were noted: (a) small cells with a narrow rim of cytoplasm resembling lymphocytes (b) intermediate cells with granular chromatin and eosinophilic cytoplasm (c) large cells with "spireme" chromatin [Figure 1b]. An intratubular growth pattern was prominent in some areas. No intratubular germ cell neoplasia or other germ cell tumor was seen. No fibrovascular septa, granuloma, or lymphocytic infiltrate was seen [Figure 2a and b]. No sarcomatous or anaplastic component was seen. On immunohistochemistry, the tumor was immunopositive for CD117 and negative for leukocyte common antigen [Figure 2c and d]. Based on these features, final histopathologic diagnosis of spermatocytic tumor was made. Postoperative computed tomography scan abdomen did not show any retroperitoneal lymph node deposits. The patient did not show any evidence of tumor recurrence or metastasis at 6 months follow-up.

In a recent review, the most consistent histologic finding in cases of spermatocytic tumor was tripartite cellular population (100% cases) followed by edema fluid (87% of cases). An intratubular tumor spread was seen in 64% of the cases.[3] Rarely sarcomatous transformation occurs in spermatocytic tumors making the prognosis poor.[4]

A recent systematic review of treatment outcomes of 146 patients (99% of which were treated by radical orchidectomy) concluded that the published literature does not support testis sparing surgery or adjuvant therapy. Patients who develop metastasis have a poor prognosis as spermatocytic tumor does not respond well to chemotherapy.[5]

To conclude, spermatocytic tumor should be kept in the differential diagnosis of testicular tumors even in the younger age group.

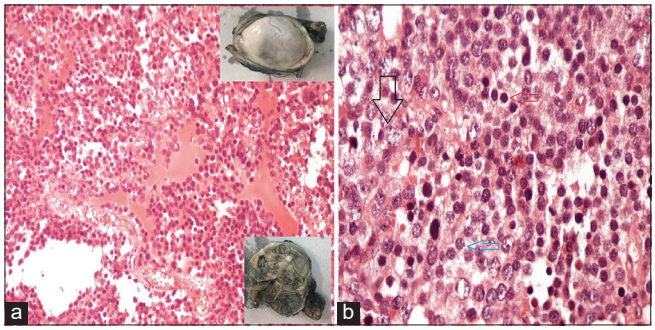

Figure 1: (a) H and E (×100) - the characteristic edema fluid giving the tumor pseudoalveolar appearance (upper and lower inset - gross appearance of the orchidectomy specimen with cut section showing mucoid areas due to the edema fluid). (b) H and E - characteristic tripartite appearance of tumor cells - small lymphocyte like cell (red arrow), an intermediate-sized cell with granular chromatin and moderate amount of cytoplasm (blue arrow) and large cells with spireme chromatin (black arrow)

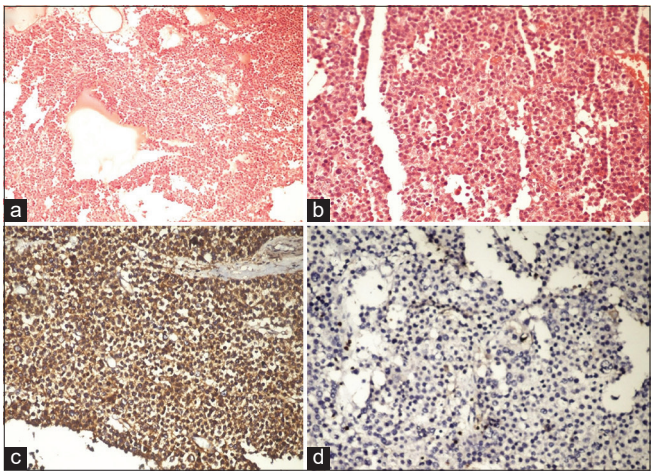

Figure 2: (a and b) H and E (×100) - no fibrovascular septa and no lymphocytic infiltration. (c) The tumor is immunopositive for CD117 (c, ×100) and negative for leucocyte common antigen (d, × 100)

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patients understand that their name and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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