Primary testicular lymphoma with bilateral adrenal mass: A case report

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Citation

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Abstract

Primary testicular lymphomas, which account for 5% of all testicular neoplasms, occur predominantly in men older than 50 years. The most common clinical presentation is a unilateral testicular mass. Bilateral involvement at initial presentation is rare except for lymphoblastic lymphoma. Orchiectomy and chemotherapy is the preferred treatment. A 50-year-old male presented with right scrotal swelling, clinically diagnosed as testicular tumor and CT scan revealed bilateral adrenal masses. High orchidectomy was performed. Histopathology reported a testicular lymphoma, and the patient was subjected to chemotherapy.

INTRODUCTION

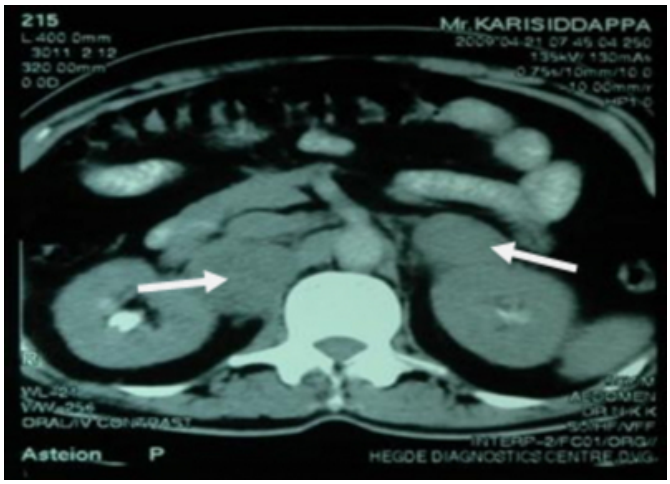
Malignant lymphoma commonly involves genitourinary organs secondarily; primary involvement is rare. More than 90% of testicular lymphomas are diffuse large B-cell lymphomas. Diagnosis usually requires inguinal orchiectomy and treatment consists of chemotherapy[1]. We present a case of unilateral testicular lymphoma with bilateral adrenal mass, which is a rare presentation of testicular lymphoma.

CASE SUMMARY

A 50-year-old male presented with pain in the right side of the scrotum for 15 days; the pain was of dull aching type, associated with swelling in the right side of the scrotum which had gradually increased in size. There was no history of fever or trauma. The patient also complained of pain in the abdomen, dull aching in nature, with no aggravating or relieving factors. There was no history of hematemesis or melena, and no history of chest pain, cough, or hemoptysis. On local examination, the patient had a swelling in the right side of the scrotum measuring 20x15cm, oval in shape, with smooth surface and hard in consistency; the right testis was not felt separately and the cord structure felt normally. On abdominal examination, vague fullness in the umbilical area was felt with no other organomegaly. On rectal examination, no abnormality was detected. Clinically, a right testicular tumor was diagnosed. Ultrasound of the scrotum showed a diffusely hypoechoic mass with multiple hyperechoic septae within it and increased vascularity on the right testis, suggestive of a testicular neoplasm. Tumor markers -fetoprotein (3.3ng/ml), -HCG (3mIU/ml) and LDH (110U/L) were all normal. Abdominal CT scan showed a hypoechoic mass lesions seen in the suprarenal region bilaterally, on the right side measuring 5.5x4.6cm and on the left 6.4x4.3cm, suggestive of bilateral adrenal metastasis with no obvious pre- or para-aortic lymphadenopathy. CT of the thorax and neck did not reveal any mediastinal and cervical lymphadenopathy. Complete blood count and peripheral smear were normal.

Figure 1

Fig. 1: CT scan showing bilateral adrenal mass



The patient underwent high orchidectomy on the right side. Histopathology revealed diffuse large B-cell lymphoma of the right testis. The tumor cells were LCA-positive, CD20-positive and CD3-negative. Medical oncology consultation was arranged with the following work-up; they opined that

these adrenal masses are more likely to be metastases, with the patient not having any symptoms and signs of primary adrenal tumors. Consequently, this patient was subjected to chemotherapy.

Figure 2

Figure 2: Diffuse sheets of intermediate lymphoid cells with convoluted nucleus, granular chromatin, prominent nucleolus and scattered larger atypical cells (H&E, x400)

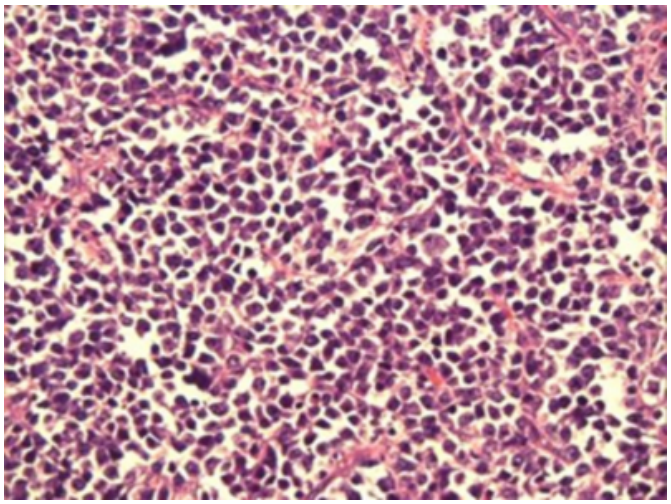
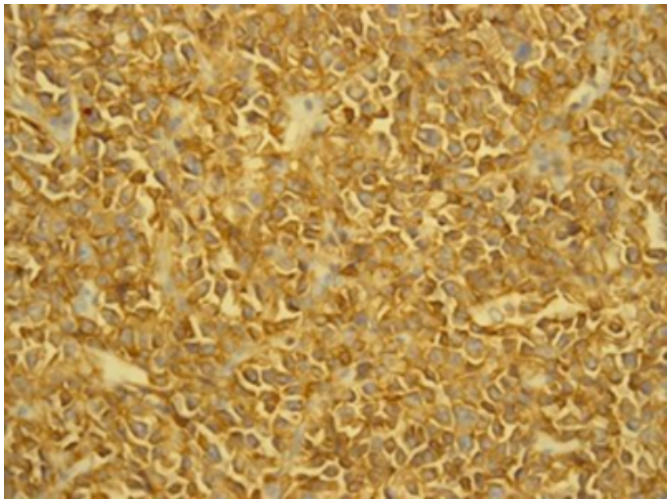


Figure 3

Figure 3: Tumor cells showing strong diffuse cytoplasmic membrane positivity for LCA (immunostain, x400)



DISCUSSION

Primary testicular non-Hodgkin lymphoma (TNHL) was first described as a clinical entity in 1866[2]. The most common primary testicular tumor in men older than 50 years is testicular lymphoma accounting for 5% of all testicular tumors[1]. Nearly 85% of these patients are 65 years or older at presentation[2].These tumors occur rarely in the paediatric age group and are commonly seen in prepubertal age. In contrast to testicular lymphomas in adults, of which 40% to 60% are primary (stage IE), the majority of testicular lymphomas in children represent secondary involvement of the testis by Burkitt's, diffuse large B-cell or lymphoblastic lymphoma[3]. Follicular lymphoma is the most frequently reported type of primary testicular lymphoma in the pediatric age group, whereas diffuse large B-cell lymphoma accounts for 80% to 90% of cases in adults [4]. The most common clinical presentation is a unilateral testicular mass. The incidence of bilateral testicular lymphoma is rare varying from 5% to 20%; the most common histological type is lymphoblastic lymphoma[3,4]. Symptoms like fever, night sweats and weight loss are rarely encountered with primary testicular lymphoma. Misdiagnosis can occur, especially in those cases in which presentation occurs at an age similar to that for germ cell tumors [4]. Scrotal sonography typically shows discrete hypoechoic lesions which are indistinguishable from germ cell neoplasms. Lymphoma may be multifocal, and in some cases diffuse effacement of the testis is evident with or without involvement of peritesticular soft tissues. Computerized tomography of the head, chest, abdomen and pelvis are required for staging and knowing extranodal involvement. Serum human chorionic gonadotropin, alpha-fetoprotein and lactate dehydrogenase levels are done to rule out germ cell tumor, and complete blood count and peripheral smear to know bone involvement. For diagnosis, inguinal orchidectomy is done and complete treatment requires chemotherapy. Orchidectomy alone is not recommended due to the frequent presence of occult metastases[1].Testicular NHL has shown tendencies to relapse in central nervous system (CNS), contra lateral testis and, less commonly, lung, skin, bone, adrenal glands, liver, gastrointestinal tract and nodal sites[5,6]. The histological features of testicular diffuse large B-cell lymphoma appear to be distinctly different from nodal diffuse large B-cell lymphoma. Up to 25% of patients with lymphoma have adrenal involvement at autopsy; primary adrenal lymphoma is rare[1]. In our case, the patient had bilateral adrenal masses. Primary (stage IE) testicular lymphoma has the worst prognosis of all extranodal lymphomas, with overall 5-year survival rates of 70% to 79%[3].

Conclusion: In a patient above 50 years of age presenting with scrotal swelling, with tumor markers for germ cell tumor being negative, one should suspect testicular lymphoma. These patients should be investigated initially with scrotal ultrasound followed by CT of the abdomen, pelvis, thorax and neck to rule out metastasis. High

orchitectomy is needed for conformation of diagnosis, after which the patient requires chemotherapy because of high risk of occult metastasis.

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