Case Report
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Paratesticular Liposarcoma: A Case Report

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Abstract

Paratesticular masses represent 2-3% of all scrotal masses and are usually benign tumors, most of them being adenomatoid tumors. Liposarcomas are rare malignant tumors originating from mesodermal tissue. About 200 cases have been reported in the literature. We encountered a case of paratesticular liposarcoma.
Keywords: Paratesticular liposarcoma, case report, scrotal masses

Introduction

Scrotal masses may be testicular or paratesticular in origin. Paratesticular masses are usually benign, and most of them are adenomatoid tumors. The paratesticular masses represent 2-3% of all scrotal masses (1). The anatomy of the paratesticular region includes the epididymis, spermatic cord, testicular tunica, epididymal and testicular appendix and traces of the residue. For this reason, the neoplasm arising from this region forms a heterogeneous tumor group (2). Scrotal ultrasonography is primarily used in the diagnosis of scrotal masses (3). We present a case with paratesticular liposarcoma.

Case Report

A 29-year-old man complained of mass in the scrotum was referred to our clinic. Two separate masses (the largest one is 3 cm in diameter) were detected independently of the left testicle on physical examination. Two adjacent sharply marginated lesions (partially echogenic and heterogeneous appearance) approximately 16x25 mm and 25x30 mm in size were reported in the left testis inferior in the ultrasonographic examination. No abnormality was detected in the tumor markers. Surgical removal of both the lesions was performed with scrotal incision. The lesions were found to be separate from the testis during the surgery. As the tumor markers are normal and the masses are separate from the testis, we considered it as a benign lesion and we performed mass excision in the first place. The pathological examination report was "compatible with atypical lipomatous tumor/well-differentiated (WDLPS) liposarcoma." Mouse double minute 2 homolog (MDM2) (-), S-100 and CDK4 (+) and Ki-67 positive staining stromal cells were detected in the immunohistochemical staining (Figure 1). The nearest surgical margin of the lesion was reported to be 1 mm. Magnetic resonance imaging (MRI) of the patient revealed left ectopic kidney and agenesis of the left seminal vesicle (Figure 2). Then, left orchiectomy and extended fat tissue excision from the paratesticular area to the perineum was performed with scrotal incision. The pathological examination revealed that the neoplasm was observed in a limited area within the mature fat tissues, and the surgical margin was reported to be intact. The patient was referred to the oncology council. The council decided that the patient to be transferred to the radiation oncology clinic for radiation therapy. No recurrence was detected at the 1-year follow-up. This case report was written after obtaining patient consent.

Discussion

Primary paratesticular neoplasms are very uncommon, mostly present in the spermatic cord (4). Liposarcomas are rare malignant tumors originating from mesodermal tissue (5). Paratesticular liposarcomas account for about 3-7% of paratesticular sarcomas (6). About 265 cases have been reported in the English literature (7). Paratesticular liposarcomas are usually seen in 50-60 years of age, but cases between 16 and 90 years of age have been reported in the literature (8).

Liposarcomas are often studied in four different groups. These are WDLPS or atypical lipomatous tumor, myxoid/round cell type, de-differentiated and pleomorphic type (9). WDLPS

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liposarcoma is a locally aggressive neoplasm and its recurrence rate is high (10,11).

Ultrasonography has a sensitivity of 95-100% in distinguishing extratesticular masses from intratesticular masses (10). However, ultrasonography provides little information on paratesticular sarcomas (5). Computed tomography and MRI can be more specific, fat components may be more easily distinguishable (3).

MDM2 and CDK4 are the most commonly used immunosensory agents in the diagnosis of liposarcoma (8,10). S-100 protein is positive in 90% of liposarcoma cases (10).

Radical orchiectomy and extensive excision of the surrounding tissues are recommended in the treatment (3,9,12). Inguinal orchiectomy cases with negative surgical margins, decreased morbidity and leads to ga goodprognosis (13). There is no additional benefit of routine lymphadenectomy (4,14). Liposarcomas are locally aggressive lesions and up to 50% recurrence rates have been reported (5). Even after orchiectomy, recurrence rates are reported as 25-37% (2). Some studies recommend radiotherapy for local control with the disease, but its effectiveness is uncertain (7,14). In cases with lymphatic invasion, high-grade tumors and positive surgical margins, cases

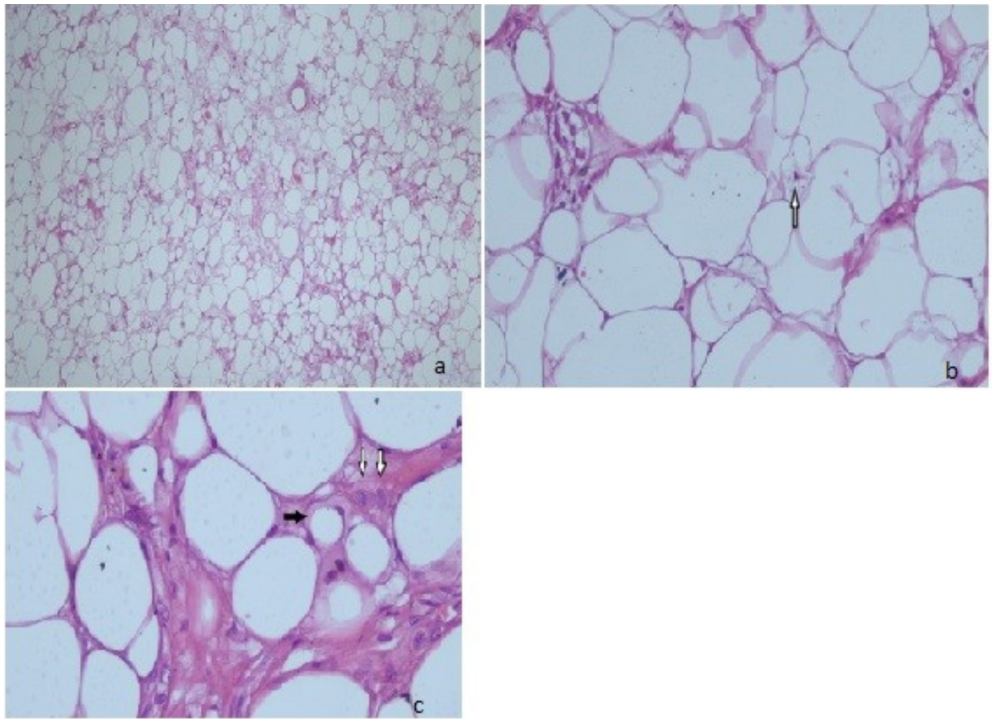

Figure 1. a. There are size and shape differences between adipocytes, fibrous areas (HE x40), b. Lipoblasts (arrow) (HE x200), c. Atypical stromal cells and lipoblasts

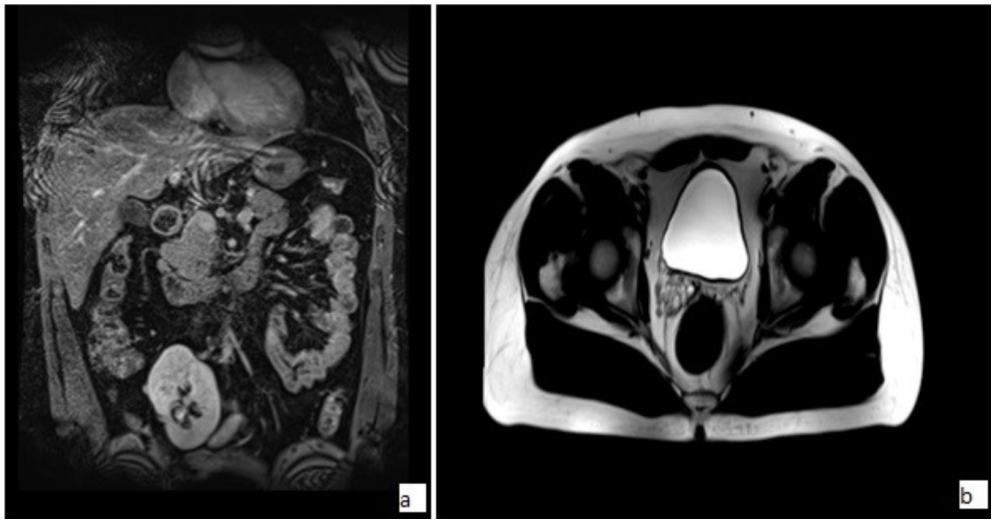

Figure 2. a. Ectopic left kidney in magnetic resonance imaging, b. Left seminal vesicle agenesis in magnetic resonance imaging

where radiotherapy and surgery were used together have been reported (15).

Responses to chemotherapy are generally low and gemcitabine and docetaxel are given in the first line chemotherapy. Eribulin is effective in advanced liposarcomas (11).

Some studies have reported that recurrence-free survival in paratesticular liposarcoma is 76% for 3 years and 67% for 5 years. In another study, 5-year survival was reported as 75% and recurrence was 50-70% (8). The 3-year recurrence-free survival rate was 79.8% in patients who underwent high inguinal orchiectomy, whereas it was 54.1% in patients who underwent tumor excision alone (7).

Conclusion

In conclusion, paratesticular liposarcomas should be kept in mind in the differential diagnosis of scrotal masses. After surgical excision, the possibility of recurrence should be considered.

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Ethics

Informed Consent: This case report was written after obtaining patient consent.

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Authorship Contributions

Critical Review: A.A., İ.O.K., Concept: A.A., Design: F.Ç., Supervision: E.K., Data Collection or Processing: A.A., Analysis or Interpretation: F.Ç., Literature Review: A.A., Writing: A.A.

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